slovenska pediatrija

suppl1/26

Revija pediatrov in specialistov šolske medicine Slovenije

letnik 33, leto 2026, supplement 1

STRONGER TOGETHER

For Better Health among Children, Adolescents and Young Adults

Joint International Paediatric, School and Adolescent Medicine and Health Congress

24 – 26 September 2026, Portorož, Slovenia

Slovensko zdravniško društvo
Združenje za pediatrijo

IAAH
International Association for Adolescent Health

EUSUHM
European Union for School and University Health and Medicine

SEKCIJA ZA ŠOLSKO, ŠTUDENTSKO IN ADOLESCENTNO MEDICINO PRI SZD

The Stronger Together Congress brings together:

- 9th Slovenian Congress of School Medicine;
- 9th Slovenian Paediatric Congress;
- 23rd EUSUHM Congress and
- 24th IAAH European Regional Conference.

Kongres Stronger Together združuje:

- 9. slovenski kongres šolske medicine;
- 9. slovenski pediatrični kongres;
- 23. kongres EUSUHM in
- 24. evropsko regionalno konferenco IAAH.

Slovensko zdravniško društvo
Združenje za pediatrijo

International Association for Adolescent Health

EUSUHM
European Union for School and University Health and Medicine

SEKCIJA ZA ŠOLSKO, ŠTUDENTSKO IN ADOLESCENTNO MEDICINO PRI SZD

Slovenska pediatrija, revija pediatrov Slovenije in specialistov šolske medicine Slovenije

naslov / *address:*
Pediatrična klinika, Bohoričeva ul. 20, 1525 Ljubljana
tel.: +396 1 52 23 801, fax: +396 1 52 29 357
e-mail: mihaela.jurcec@siol.net

Letna naročnina tiskane revije z DDV znaša 32,20 eur. Naročnino nakažite na TRR pri OTP banki št. 8156 0400 0027 7761 381 z oznako »za Slovensko pediatrijo«.

oblikovanje in prelom / *design and DTP:* Špela Goltes
tisk / *print:* Garamond, Ljubljana
naklada / *edition:* 700 izvodov / *copies*
september 2026 / *September 2026*

Slovenska pediatrija izide štirikrat letno. / *Slovenska pediatrija is published quaterly.*

slika na naslovnici / *cover image:* Špela Goltes

indeksirata / *indexed in:* Biomedicina Slovenica, COBISS

ISSN 1318-4423 tiskana izdaja / *print edition*
ISSN 2712-3960 spletna izdaja / *online edition*
www.slovenskapediatrija.si

NAVIGATING ADOLESCENCE WITH CHRONIC CONDITIONS

GROWING UP IN A CHANGING ENVIRONMENT

EMERGENCY MEDICINE

WORKSHOPS – ABSTRACTS

POSTER WALKS – ABSTRACTS

POSTER VIEWING SESSIONS – ABSTRACTS

Spoštovane kolegice in kolegi, dragi prijatelji,

dobrodošli na mednarodnem kongresu Stronger Together – Skupaj smo močnejši.

Pod skupnim naslovom Stronger Together – Skupaj smo močnejši združujemo štiri pomembna strokovna srečanja: 9. kongres Združenja za pediatrijo, 9. kongres Sekcije za šolsko, študentsko in adolescentno medicino, 23. kongres EUSUHM ter 24. evropsko regionalno konferenco IAAH. To sodelovanje je dokaz, da lahko s povezovanjem različnih strok, izmenjavo znanja in mednarodnim sodelovanjem ustvarimo veliko več, kot bi lahko vsak zase.

Otroci in mladostniki danes odraščajo v svetu, ki se hitro spreminja. Poleg bolezni, s katerimi smo se srečevali že v preteklosti, nas vsakodnevno spremljajo novi izzivi – vpliv digitalnih tehnologij, duševno zdravje, kronične bolezni, življenjski slog, okoljske spremembe ter vse večja potreba po kakovostni preventivi in podpori mladim pri prehodu v odraslo dobo. Ti izzivi presegajo meje posamezne specialnosti in pogosto tudi meje posamezne države.

Prav zato je sodelovanje tako pomembno. Pediatri, zdravniki šolske in adolescentne medicine, družinski zdravniki, psihologi, medicinske sestre, raziskovalci, učitelji in številni drugi strokovnjaki imamo skupen cilj – omogočiti otrokom in mladostnikom zdravo odraščanje ter najboljšo možno zdravstveno obravnavo. Le z odprtim sodelovanjem, izmenjavo znanja in izkušenj lahko ta cilj tudi dosežemo.

SLOVENSKA PEDIATRIJA
SLOVENIAN PAEDIATRICS
1865 · 1956 · 1994

Program kongresa odraža to raznolikost. Obravnavali bomo številna področja, od preventive, šolske in adolescentne medicine, urgentne pediatrije, kroničnih bolezni in športne medicine do duševnega zdravja, spolnega zdravja ter prehoda mladostnikov v zdravstveno obravnavo odraslih. Veseli me, da bomo lahko prisluhnili številnim uglednim domačim in tujim predavateljem ter predstavili najnovejša strokovna spoznanja in dobre klinične prakse.

Zbornik, ki je pred vami, je rezultat velikega dela številnih avtorjev, recenzentov in organizatorjev. Zahvaljujem se vsem, ki ste s svojim znanjem, časom in predanostjo prispevali k njegovi pripravi in izvedbi kongresa. Posebna zahvala velja članom organizacijskega in znanstvenega odbora ter našima mednarodnima partnerjema EUSUHM in IAAH za odlično sodelovanje in zaupanje.

Prepričan sem, da nam bodo dnevi, ki jih bomo preživeli skupaj, prinesli veliko novega znanja, spodbudili strokovne razprave in ustvarili nove priložnosti za sodelovanje. Še pomembneje pa je, da bomo odšli domov z novimi idejami, ki bodo koristile našim bolnikom – otrokom, mladostnikom in njihovim družinam.

Naj bo kongres priložnost za učenje, izmenjavo izkušenj, nova prijateljstva in krepitev strokovnih vezi. Predvsem pa naj nas opomni, da največ dosežemo takrat, ko sodelujemo.

Ker smo skupaj resnično močnejši.

Želim vam prijetno bivanje v Portorožu ter uspešno in navdihujoče strokovno srečanje.

Peter Najdenov, dr. med.
Predsednik Združenja za pediatrijo pri SZD

Dear Colleagues and Friends,

Welcome to the International Congress Stronger Together.

Under the theme Stronger Together, we are bringing together four major scientific meetings: the 9th Congress of the Slovenian Association for Paediatrics, the 9th Congress of the Section for School, Student and Adolescent Medicine, the 23rd Congress of the European Union for School and University Health and Medicine (EUSUHM), and the 24th European Regional Conference of the International Association for Adolescent Health (IAAH). This collaboration demonstrates that by bringing together different disciplines, sharing knowledge, and strengthening international cooperation, we can achieve far more than we could individually.

Children and adolescents are growing up in a rapidly changing world. Alongside the health challenges we have traditionally faced, we are now confronted with new issues, including the impact of digital technologies, mental health concerns, chronic diseases, changing lifestyles, environmental challenges, and the increasing need for effective prevention and well-coordinated support during the transition from paediatric to adult healthcare. These challenges extend beyond the boundaries of individual specialties and often beyond national borders.

This is precisely why collaboration is so important. Paediatricians, school and adolescent health physicians, family physicians, psychologists, nurses, researchers, educators, and many other professionals share a common goal—to help children and young people grow up healthy and to provide them with the highest standard of healthcare. Only through open cooperation, the exchange of knowledge, and shared experience can we successfully achieve this goal.

The scientific programme reflects this diversity. It covers a broad range of topics, including preventive paediatrics, school and adolescent medicine, paediatric emergency medicine, chronic diseases, sports medicine, mental health, sexual and reproductive health, and the transition of adolescents into adult healthcare. I am delighted that we have the opportunity to welcome distinguished national and international speakers who will share the latest scientific developments, clinical experience, and examples of best practice.

The proceedings you are holding are the result of the dedication and hard work of many authors, reviewers, and members of the organizing team. I would like to express my sincere gratitude to everyone who contributed their expertise, time, and commitment to the preparation of these proceedings and to the organization of the congress. My special thanks go to the members of both the Scientific and Organizing Committees, as well as to our international partners, EUSUHM and IAAH, for their trust, collaboration, and continued support.

I am confident that the days we spend together will provide new knowledge, stimulate inspiring discussions, and create valuable opportunities for future collaboration. More importantly, I hope that we will all return home with new ideas and renewed motivation that will ultimately benefit the children, adolescents, and families entrusted to our care.

May this congress be an opportunity to learn, to exchange experiences, to establish new friendships, and to strengthen our professional network. Above all, may it remind us that our greatest achievements come through working together.

Because together, we truly are stronger.

I wish you a productive, inspiring, and enjoyable congress, and a pleasant stay in Portorož.

Peter Najdenov, MD
President of the Slovenian Association for Paediatrics,
Slovenian Medical Association

Uvodnik predsednice Sekcije za šolsko, študentsko in adolescentno medicino SZD

Spoštovani udeleženci kongresa, dragi kolegi in vsi, ki ste sodelovali pri organizaciji skupnega kongresa štirih pomembnih združenj, ki skrbijo za ohranjanje zdravja otrok, šolskih otrok, mladostnikov in študentov.

V veliko zadovoljstvo mi je, da vas lahko nagovorim na kongresu STRONGER TOGETHER – MOČNEJŠI SKUPAJ, ki poteka ob 45. obletnici ustanovitve Sekcije za šolsko, študentsko in adolescentno medicino pri Slovenskem zdravniškem društvu. Sekcija je pobudnica in soorganizatorica tega pomembnega mednarodnega srečanja.

Tokrat smo združili moči EUSUHM, IAAH, Združenje za pediatrijo pri SZD ter Sekcija za šolsko, študentsko in adolescentno medicino pri SZD, saj verjamemo, da lahko s povezovanjem znanja, izkušenj in različnih strok skupaj naredimo največ za zdravje in dobrobit otrok, šolarjev, mladostnikov in študentov.

Stronger Together – močnejši skupaj zato ni le naslov našega kongresa, temveč tudi vodilo našega skupnega dela.

Skrb za zdravje šolskih otrok in mladostnikov ima v Sloveniji dolgo tradicijo. Tako kot drugod po Evropi se je tudi pri nas začela bolj sistematično razvijati konec 19. stoletja. Že od leta 1877 so na slovenskih tleh delovale stalne šolske zdravstvene komisije. Za začetek slovenske šolske medicine štejemo leto 1909, ko sta bila v Ljubljani imenovana prva šolska zdravnika, dr. Jernej Demšar in dr. Mavricij Rus. Istega leta je bil izdan tudi prvi pravilnik o delu šolske zdravstvene službe, o katerem je dr. Rus leta 1910 poročal v Liječniškem vjesniku, kar velja za prvo objavljeno poročilo o slovenski šolski medicini.

Pomemben korak je sledil leta 1923 z ustanovitvijo Higienskega zavoda in Zavoda za zdravstveno zaščito mater in dece v Ljubljani, leto kasneje pa še šolske poliklinike. Po letu 1926 se je z ustanavljanjem zdravstvenih domov po Sloveniji – v okviru katerih so delovale tudi šolske poliklinike in šolsko-zdravniške posvetovalnice – krepila sistematična skrb za zdravje šolskih otrok ter zgodnje odkrivanje telesnih in duševnih težav.

Leta 1930 je bil sprejet Zakon o zdravstveni zaščiti učencev, ki je zajemal preglede učencev dvakrat letno, zdravljenje, nadzor šolskih zgradb in učilnic, pouk ter telesno vzgojo in socialno pomoč učencem. Leta 1936 pa je bil pri Higienskem zavodu v Ljubljani ustanovljen tudi odsek za šolske zdravnike.

Po drugi svetovni vojni se je šolska medicina ponovno intenzivno razvijala v okviru javnega zdravstva po vsej Sloveniji. Posebno mesto pri tem pripada dr. Slavi Kristan Lunaček, ki je pomembno zaznamovala razvoj stroke. Leta 1953 je pod njenim vodstvom potekal prvi podiplomski tečaj šolske higiene, ki je kasneje prerasel v specializacijo iz šolske higiene, leta 1973 pa je nastala samostojna temeljna specializacija iz šolske medicine.

Leta 1981 je bila pri Slovenskem zdravniškem društvu ustanovljena Sekcija za šolsko in visokošolsko medicino, ki se je leta 2013 preimenovala v Sekcijo za šolsko, študentsko in adolescentno medicino pri SZD.

Sekcija že 45 let povezuje zdravnike različnih strok, ki skrbijo za zdravje šolajočih se otrok, mladostnikov in študentov. Večkrat letno organizira strokovna srečanja, od leta 1993 dalje pa na vsaka štiri leta tudi kongres. Na kongresu se podeljuje priznanje dr. Slave Lunaček v počastitev zdravnice, ki je izjemno prispevala k razvoju šolske medicine v Sloveniji.

Sekcija aktivno sodeluje tudi v mednarodnem prostoru. Od leta 1993 je članica EUSUHM, od leta 2000 pa ima svojega predstavnika v njegovem izvršilnem odboru. Prav tako je aktivna članica zveze IAAH. Slovenija je bila že doslej ponosna gostiteljica kongresa EUSUHM v Ljubljani leta 2003 ter evropskega srečanja IAAH v Portorožu leta 2008.

Po letu 1991 je sledila reorganizacija zdravstvene službe. Leta 2003 je bila ukinjena specializacija iz šolske medicine, leta 2005 pa tudi Enota za šolske otroke in mladino na IVZ (danes NIJZ). Pomemben korak naprej je bil v Sloveniji storjen leta 2021, ko so bili v okviru programa ZDAJ – Zdravje danes za jutri s prenovljenim Pravilnikom za izvajanje preventivnega zdravstvenega varstva na primarni ravni s strani NIJZ ponovno imenovani zdravniki šol.

Danes se soočamo z novimi izzivi ter spremenjenimi potrebami otrok in mladostnikov. Prav zato je vsestransko sodelovanje pomembnejše kot kdaj koli prej.

Verjamem, da bo letošnji kongres prinesel veliko novosti in dragocenih izmenjav izkušenj za čim boljšo oskrbo ter zdravje otrok, šolarjev, mladostnikov in študentov, ob tem pa tudi prijetno druženje vseh udeležencev.

Breda Prunk Franetič, dr. med.
Predsednica Sekcije za šolsko, študentsko in adolescentno medicino pri SZD

Introduction – Section for School, Student, and Adolescent Medicine

Esteemed congress participants, dear colleagues, and all who have participated in organizing the joint congress of four important associations dedicated to preserving the health of children, pupils, adolescents, and students.

It is a great pleasure to address you at the STRONGER TOGETHER congress, held on the occasion of the 45th anniversary of the founding of the Section for School, Student, and Adolescent Medicine within the Slovenian Medical Association. The Section is the initiator and co-organizer of this important international meeting.

This time, EUSUHM, IAAH, the Association of Paediatrics of the SMA, and the Section for School, Student, and Adolescent Medicine of the SMA have joined forces, believing that by combining our knowledge, experience, and diverse disciplines, we can achieve the most for the health and well-being of children, pupils, adolescents, and students.

Stronger Together is therefore not only the title of our congress, but also the guiding principle of our shared work.

Care for the health of school children and adolescents has a long tradition in Slovenia. As elsewhere in Europe, it began to develop more systematically towards the end of the 19th century. Permanent school health commissions were active on Slovenian soil as early as 1877. The origin of Slovenian school medicine dates back to 1909, when the first two school physicians, Dr. Jernej Demšar and Dr. Mavricij Rus, were appointed in Ljubljana. That same year, the first regulations governing the school health service were issued, on which Dr. Rus reported in 1910 in Liječnički vjesnik—marking the first published report on Slovenian school medicine.

An important step followed in 1923 with the establishment of the Hygiene Institute and the Institute for the Health Protection of Mothers and Children in Ljubljana, followed a year later by the school polyclinic. After 1926, with the establishment of community health centres across Slovenia—housing school polyclinics and school health advisory offices—systematic care for the health of school children and the early detection of physical and mental health issues were further strengthened.

In 1930, the Act on the Health Protection of pupils was adopted, covering biannual health checks for pupils, medical treatment, inspection of school buildings and classrooms, instruction and physical education, and social assistance. In 1936, a dedicated department for school physicians was established at the Hygiene Institute in Ljubljana.

Following the Second World War, school medicine again developed intensively within public healthcare across Slovenia. A special place in this development belongs to Dr. Slava Kristan Lunaček, who significantly shaped the field. In 1953, under her leadership, the first postgraduate course in school hygiene was conducted, which later evolved into a specialization in school hygiene, and in 1973 became an independent core specialization in school medicine.

In 1981, the Section for School and Higher Education Medicine was founded within the Slovenian Medical Association and was renamed in 2013 as the Section for School, Student, and Adolescent Medicine of the SMA.

For 45 years, the Section has brought together physicians from various specialties who care for the health of school-age children, adolescents, and students. It organizes professional meetings several times a year and, since 1993, an international congress every four years. At the congress, the Dr. Slava Lunaček Award is presented in honour of the physician who contributed so significantly to the development of school medicine in Slovenia.

The Section is also actively engaged internationally. It has been a member of EUSUHM since 1993 and has had a representative on its Executive Committee since 2000. It is also an active member of IAAH. Slovenia has previously been the proud host of the EUSUHM Congress in Ljubljana in 2003 and the European IAAH Meeting in Portorož in 2008.

Reorganization of the health service followed after 1991. In 2003, the specialization in school medicine was abolished, and in 2005, the Unit for School Children and Youth at the IVZ (now NIJZ) was also closed. An important step forward was taken in Slovenia in 2021, when, within the framework of the ZDAJ program ('Health Today for Tomorrow') and under the revised Rules on Primary Preventive Healthcare, school doctors were once again appointed by NIJZ.

Today, we face new challenges and evolving needs of children and adolescents. That is why comprehensive collaboration is more essential than ever before.

I believe that this year's congress will bring many innovations and valuable exchanges of experience for the best possible care and health of children, pupils, adolescents, and students, while also providing an enjoyable gathering for all participants.

Breda Prunk Franetič, MD
President of the Section for School, Student, and Adolescent Medicine, Slovenian Medical Association

NAGRAJENCI / AWARD RECIPIENTS

Miroslava Cajnkar Kac

Priznanje dr. Slave Lunaček – utemeljitev

asist. dr. Mojca Juričič, dr. med.

Priznanje dr. Slave Lunaček je najvišje priznanje Sekcije za šolsko, študentsko in adolescentno medicino pri Slovenskem zdravniškem društvu. Podeljuje se na kongresih šolske, študentske in adolescentne medicine.

Komisija za dodelitev priznanja dr. Slave Lunaček je soglasno sprejela sklep, da na letošnjem kongresu STRONGER TOGETHER – MOČNEJŠI SKUPAJ, v okviru katerega poteka tudi 9. Slovenski kongres šolske, študentske in adolescentne medicine, priznanje prejme Miroslava Cajnkar Kac, dr. med., specialistka šolske medicine.

Življenjepis

Miroslava Cajnkar Kac je bila rojena 16. junija 1955 v Mariboru. Na Medicinski fakulteti v Ljubljani je diplomirala leta 1981, specialistični izpit iz šolske medicine pa je opravila novembra 1991 v Ljubljani. Poklicno pot je začela v ZD Gornja Radgona, kjer je zaključila tudi specializacijo. Januarja 1997 se je zaposlila v ŠD ZD Slovenj Gradec, novembra 2003 pa je pridobila koncesijo na področju zdravstvenega varstva otrok, šolarjev in mladostnikov. Vsa leta, razen zadnjih nekaj, je sodelovala tudi v dežurni službi ZD Slovenj Gradec. Kot koncesionarka in specialistka šolske medicine je po pogodbi izvajala sistematske preglede za ZD Slovenj Gradec. Več kot dvajset let je bila del kolegic in kolegov, ki so prihajali kot pomoč na delo v Mladinskem zdravilišču in letovišču Rdečega križa na Debelem rtiču. Nekaj časa je poučevala predmet pediatrija na Srednji zdravstveni šoli v Slovenj Gradcu. Bila je aktivna članica odborov Sekcije za šolsko, študentsko in adolescentno medicino (SŠŠAM). SŠŠAM je predstavljala tudi v izvršilnem odboru (Executive Committee – EC) Evropskega združenja za šolsko in univerzitetno medicino in zdravje (EUSUHM). Članica EC EUSUHM je bila od leta 2011 do 2019. V tem času je sodelovala tudi v organizacijskih odborih kongresov EUSUHM v Londonu (2013), Tallinnu (2015), Leuvnu (2017) in Rotterdamu (2019). Zadolžena je bila tudi za urejanje spletne strani združenja.

Zelo aktivna je bila pri izvajanju in promociji vseh obveznih cepljenj v okviru sistematskih pregledov šolarjev, dijakov in študentov. Poseben izziv ji je predstavljala uvedba prostovoljnega cepljenja proti okužbam s HPV v šolskem letu 2009/10. Pri promociji cepljenja je aktivno sodelovala že od samega začetka, med drugim v oddaji Studio ob sedemnajstih na Prvem programu Radia Slovenija, skupaj s prof. Marjetko Uršič Vrščaj in prim. dr. Alenko Kraigher. Sodelovala je na številnih strokovnih srečanjih, povezanih s cepljenjem proti okužbam s HPV: na vsakoletnih septembrskih srečanjih SŠŠAM o HPV, s predavanji za zdravnike v okviru Koroškega zdravniškega društva, za ginekologe na Zdravniški zbornici Slovenije, za zdravnike v okviru preventivnega programa ZORA, za specialiste javnega zdravja na njihovih letnih srečanjih ter za medicinske sestre na različnih lokacijah. Vsa leta je sodelovala tudi na pogovorih o HPV s starši na šolah. Napisala je več prispevkov za različne medije ter sodelovala v pogovornih oddajah na lokalni in širši ravni. Velik uspeh je predstavljalo cepljenje dečkov

proti HPV, saj so jih v Mestni občini Slovenj Gradec začeli cepiti že šest let pred vključitvijo v nacionalni program.

En mandat je bila predsednica Regijskega odbora Koroško-vzhodne regije pri Zdravniški zbornici Slovenije in en mandat članica Odbora za zasebnike, prav tako pri ZZS. V stanovskem glasilu ISIS je objavljala članke s strokovnih srečanj SŠŠAM, EUSUHM in IAAH ter o dogajanju na področju šolske medicine v Sloveniji, Avstriji in na Hrvaškem. Sodelovala je na več novinarskih konferencah v okviru Onkološkega inštituta in presejalnega programa ZORA. Aktivna je tudi pri Koroškem društvu za boj proti raku. Leta 2003 je v učbeniku za študentke in študente predšolske vzgoje Začetno naravoslovje z metodiko prispevala poglavje z izbranimi temami s področja pediatrije, vključno s cepljenji.

Poleg moža in sedaj že odraslih treh otrok ji življenje bogatijo knjige, včasih pa tudi sama napiše kakšno drobno zgodbo iz življenja. Rada ima glasbo, naravo, hojo, planine, otroke, šolarje in vse srčne ljudi.

Miroslava Cajnkar Kac

Dr. Slava Lunaček Award

assist. Mojca Juričič, MD, PhD

The Dr. Slava Lunaček Award is the highest-ranking award by the Section for School, Student and Adolescent Medicine of the Slovenian Medical Association. It is awarded at the Congresses of School, Student and Adolescent Medicine.

The Commission for the Dr. Slava Lunaček Award unanimously decided that, at this year's STRONGER TOGETHER Congress, which also hosts the 9th Slovenian Congress of School, Student and Adolescent Medicine, the award will be given to Miroslava Cajnkar Kac, MD, specialist in school medicine.

Biography

Miroslava Cajnkar Kac was born on 16 June 1955 in Maribor. She graduated from the Faculty of Medicine in Ljubljana in 1981 and passed her specialist examination in school medicine in Ljubljana in November 1991. She began her professional career at the Gornja Radgona Community Health Centre, where she also completed her specialization. In January 1997, she joined the School Health Department of the Slovenj Gradec Community Health Centre. In November 2003, she obtained a concession for the provision of healthcare to children, schoolchildren, and adolescents. For many years, apart from the last few years, she also participated in the on-call service of the Slovenj Gradec Community Health Centre. As a concession holder and specialist in school medicine, she performed systematic examinations for the Community Health Centre under contract. For more than 20 years, she was a part of the colleagues who came to help with work at the Youth Health Resort and Red Cross Resort on Debeli rtič. For some time, she taught paediatrics at the Secondary Nursing School in Slovenj Gradec. She was an active member of the committees of the Section for School, Student and Adolescent Medicine (SŠŠAM). She also represented SŠŠAM on the Executive Committee (EC) of the European Union for School and University

Health and Medicine (EUSUHM). She was a member of the EC EUSUHM from 2011 to 2019 and during this period also served on the organizing committees of EUSUHM Congresses in London (2013), Tallinn (2015), Leuven (2017) and Rotterdam (2019). She was also responsible for maintaining the association's website.

She was highly active in the implementation and promotion of all mandatory vaccinations as part of systematic examinations of schoolchildren, secondary school students, and university students. The introduction of voluntary HPV vaccination in the 2009/10 school year was a particular challenge for her. She was actively involved in its promotion from the very beginning, including an appearance on Studio ob sedemnajstih, broadcast on the First Programme of Radio Slovenia, together with Prof. Marjetka Uršič Vrščaj and Primarius Alenka Kraigher. She participated in numerous professional meetings on HPV vaccination, including the annual September meetings of SŠŠAM on HPV, lectures for doctors within the Carinthian Medical Association, for gynecologists at the Medical Chamber of Slovenia, for doctors involved in the ZORA screening programme, for public health specialists at their annual meeting, and for nurses at various locations. Throughout the years, she also participated in discussions on HPV with parents at schools. She has written numerous articles for various media and participated in talk shows at both local and national level. A major achievement was the introduction of HPV vaccination for boys in the Municipality of Slovenj Gradec, where boys began to be vaccinated six years before vaccination was included in the national programme.

She served one term as President of the Regional Board for the Koroška-East Region of the Medical Chamber region of the Medical Chamber of Slovenia and one term as a member of its Committee for Private Practitioners. In the professional journal ISIS, she published articles on SŠŠAM, EUSUHM and IAAH professional meetings, as well as on developments in school medicine in Slovenia, Austria and Croatia. She participated in several press conferences organized by the Institute of Oncology and the ZORA screening programme. She is also active in the regional Carinthian Society for the Fight against Cancer. In 2003, she contributed a chapter on selected paediatric topics, including vaccination, to the textbook for students of preschool education, Začetno naravoslovje z metodiko (Introductory Natural Science with Methodology).

In addition to her husband and her three now-grown children, her life is enriched by books, and she occasionally writes short life stories herself. She loves music, nature, walking, the mountains, children, schoolchildren and all warm-hearted people.

Špela Žnidaršič Reljič

Utemeljitev za podelitev Ambrožičevega priznanja za življenjsko delo

Denis Baš, dr. med.

Špela Žnidaršič Reljič, specialistka pediatrije, je več kot tri desetletja svoje poklicno življenje posvetila otrokom in mladostnikom ter razvoju primarne pediatrije v Sloveniji. Njeno delo zaznamujejo strokovnost, predanost bolnikom, zavezanost preventivi ter pripravljenost prevzemati odgovornost za razvoj stroke tudi zunaj okvira vsakodnevnega kliničnega dela. S svojim delovanjem je pomembno prispevala k izboljšanju zdravstvenega varstva otrok in mladostnikov ter utrjevanju vloge primarne pediatrije v slovenskem zdravstvenem sistemu.

Kot pediatrinja v Zdravstvenem domu dr. Adolfa Drolca Maribor že od leta 1993 opravlja preventivno in kurativno dejavnost za šolske otroke in mladostnike. Ob rednem kliničnem delu je razvijala tudi področje pulmologije in alergologije. V Mariboru je ustanovila Šolo za otroke z astmo, vodila pulmološko ambulanto ter vrsto let izvajala izobraževanja za otroke z astmo in njihove družine. Pomemben del njenega dela predstavlja tudi sodelovanje v Društvu pljučnih in alergijskih bolnikov Slovenije, kjer že vrsto let organizira izobraževanja in prispeva k izboljšanju obravnave otrok z boleznimi dihal.

Njeno delo pa že dolgo presega okvire ambulante. Od ustanovitve Sekcije za primarno pediatrijo pri Združenju za pediatrijo Slovenskega zdravniškega društva leta 2017 je njena podpredsednica in vodja Skupine za cepljenje, od leta 2023 pa tudi vodja Skupine za preventivo. V teh vlogah je aktivno sodelovala pri številnih strokovnih in organizacijskih spremembah, ki so pomembno vplivale na razvoj primarne pediatrije v Sloveniji.

V sodelovanju s strokovnimi združenji ter državnimi institucijami je sodelovala pri pripravi in uveljavitvi številnih smernic, priporočil in sistemskih rešitev. Med pomembnejšimi dosežki so posodobitve cepilnega programa, uvedba novih javno financiranih cepljenj, priprava smernic Programa ZDAJ za izvajanje preventivnih pregledov otrok in mladostnikov, priporočil za ukrepanje v vrtcih ob nujnih stanjih, priporočil za medicinsko indicirane diete ter številnih drugih strokovnih dokumentov, ki danes predstavljajo pomembno podlago za delo primarnih pediatrov.

Posebej pomemben je njen prispevek na področju cepljenja. Dolga leta si prizadeva za izboljšanje precepljenosti otrok in mladostnikov, za strokovno utemeljeno komunikacijo o cepljenju ter za izboljšanje zakonodaje in organizacije cepljenja v Sloveniji. Sodelovala je pri pripravi sprememb Zakona o nalezljivih boleznih, bila članica več nacionalnih delovnih skupin ter predstavnica Slovenije v evropskem projektu Overcoming Obstacles to Vaccination pod okriljem HaDEA, v okviru katerega je sodelovala pri pripravi in izvedbi pilotnega projekta aktivnega vabljenja na cepljenje proti okužbam s HPV. Njeno delo je prispevalo tudi k uvedbi pomembnih sprememb slovenskega cepilnega programa, med drugim razširitvi cepljenja proti HPV, klopnemu meningoencefalitisu, pnevmokoknim okužbam in drugih preventivnih programov.

Pomemben del njenega strokovnega delovanja predstavlja tudi izobraževanje. Organizirala je številna strokovna srečanja, sodelovala kot predavateljica na domačih in mednarodnih strokovnih dogodkih, objavila številne strokovne prispevke ter kot mentorica prenaša svoje znanje na specializante pediatrije, družinske medicine in študente medicine. S sodelovanjem v medijih ter pri pripravi strokovnih vsebin pomembno prispeva tudi k zdravstvenemu opismenjevanju staršev in širše javnosti.

V času epidemije covida-19 je sodelovala pri pripravi smernic za organizacijo preventivnega zdravstvenega varstva in cepljenja otrok ter mladostnikov, s čimer je pomembno prispevala k ohranjanju kakovostne preventivne obravnave otrok tudi v izjemno zahtevnih razmerah.

Ob vseh nacionalnih in strokovnih dejavnostih pa ostaja predvsem predana pediatrinja, ki vsakodnevno skrbi za otroke, mladostnike in njihove družine. Sodelavci jo poznajo kot povezovalno, odgovorno in vedno pripravljeno pomagati, pri svojem delu pa dosledno postavlja dobrobit otrok na prvo mesto. Prav ta sposobnost povezovanja neposrednega dela z bolniki z razvojem stroke je ena izmed njenih največjih odlik.

Pediatrinja Špela Žnidaršič Reljič je skozi celotno poklicno pot povezovala klinično delo z razvojem stroke. Njeno delo je pomembno zaznamovalo področje preventive, cepljenja, strokovnega izobraževanja in organizacije primarne pediatrije ter pustilo trajen pečat v slovenski pediatrični stroki.

Zaradi dolgoletnega, predanega in pomembnega prispevka k razvoju primarne pediatrije ter preventivnega zdravstvenega varstva otrok in mladostnikov je Špela Žnidaršič Reljič prejemnico Ambrožičevega priznanja za življenjsko delo v letu 2026.

Špela Žnidaršič Reljič

Citation for the Ambrožič Lifetime Achievement Award

Denis Baš, MD

Špela Žnidaršič Reljič, Consultant paediatrician, has devoted more than three decades of her professional life to the care of children and adolescents and to the advancement of primary care paediatrics in Slovenia. Throughout her career, she has been distinguished by clinical excellence, unwavering commitment to her patients, dedication to preventive medicine, and a readiness to assume responsibility for the development of the profession beyond the scope of daily clinical practice. Through her sustained efforts, she has made a significant contribution to improving healthcare for children and adolescents and to strengthening the role of primary care paediatrics within the Slovenian healthcare system.

Since 1993, Špela Žnidaršič Reljič has provided both preventive and curative healthcare for school-aged children and adolescents at the Dr. Adolf Drolc Community Health Centre in Maribor. Alongside her clinical practice, she has developed expertise in paediatric pulmonology and allergology. She established the School for Children with Asthma in Maribor, led the paediatric pulmonary outpatient clinic, and for many years organized educational programmes for children with asthma and their families. Her longstanding involvement with the Slovenian Association of Patients with Lung and Allergic Diseases has further contributed to improving the care of children with respiratory disorders through patient education and professional outreach.

Her contribution, however, extends well beyond clinical practice. Since the establishment of the Slovenian Society of Primary Care Paediatricians of the Slovenian Paediatric Association within the Slovenian Medical Society in 2017, she has served as its Vice-President and Head of the Vaccination Working Group, and since 2023 she has also chaired the Working Group on Prevention. In these leadership roles, she has played a key part in numerous professional and organizational initiatives that have significantly shaped the development of primary care paediatrics in Slovenia.

Working in close collaboration with professional organizations and national institutions, Špela Žnidaršič Reljič has contributed to the development and implementation of numerous national guidelines, recommendations, and healthcare policies. Among her most important achievements are updates to the national immunization programme, the introduction of new publicly funded vaccinations, the development of the ZDAJ Programme guidelines for preventive health examinations of children and adolescents, recommendations for the management of medical emergencies in kindergartens, recommendations on medically indicated diets, and many other professional documents that now provide an essential framework for primary paediatric care throughout Slovenia.

Her contribution to immunization has been particularly noteworthy. Over many years, she has worked tirelessly to improve vaccination coverage among children and adolescents, promote evidence-based communication on vaccination, and strengthen

both the legislative and organizational framework for immunization in Slovenia. She has participated in drafting amendments to the Communicable Diseases Act, served on several national expert working groups, and represented Slovenia in the European Commission's HaDEA project Overcoming Obstacles to Vaccination. Within this initiative, she contributed to the development and implementation of Slovenia's pilot programme for active invitation to HPV vaccination. Her work has also supported major advances in the national immunization programme, including the expansion of HPV vaccination, tick-borne encephalitis vaccination, pneumococcal vaccination, and other preventive vaccination programmes.

Education has remained a central pillar of her professional career. She has organized numerous scientific meetings, lectured extensively at national and international conferences, authored many professional publications, and mentored residents in paediatrics and family medicine, as well as medical students. Through regular media engagement and the development of educational resources, she has also made an important contribution to improving health literacy among parents and the wider public.

During the COVID-19 pandemic, Špela Žnidaršič Reljič contributed to the development of national guidelines for the organization of preventive healthcare services and childhood immunization, helping to ensure the continuity and quality of preventive paediatric care under exceptionally challenging circumstances.

Despite her extensive professional and national responsibilities, she has remained, above all, a dedicated paediatrician devoted to the everyday care of children, adolescents, and their families. Her colleagues know her as a collaborative, reliable, and supportive physician who consistently places the well-being of children at the heart of her work. Her ability to combine compassionate patient care with a sustained commitment to advancing the profession is among her defining strengths.

Throughout her career, Dr. Špela Žnidaršič Reljič has successfully integrated clinical practice with professional leadership and the advancement of paediatric medicine. Her work has had a lasting impact on preventive healthcare, immunization, professional education, and the organization of primary care paediatrics, and will continue to shape paediatric practice in Slovenia for years to come.

In recognition of her longstanding, dedicated, and outstanding contribution to the advancement of primary care paediatrics and preventive healthcare for children and adolescents, Špela Žnidaršič Reljič is the recipient of the Ambrožič Lifetime Achievement Award for 2026.

Nataša Bratina

Utemeljitev za podelitev Derčevega priznanja za življenjsko delo v slovenski pediatriji

doc. dr. Mojca Žerjav Tanšek, dr. med.

Čeprav je predstavitev prof. dr. Nataša Bratine namenjena uradni priložnosti ob obeleženju njenega dolgoletnega medicinskega dela in dosežkov, pa bom njen življenjepis pisala predvsem kot njena neposredna sodelavka v zadnjih 36 letih na Kliničnem oddelku za endokrinologijo, diabetes in presnovne bolezni Pediatrične klinike Univerzitetnega kliničnega centra Ljubljana. Najino dolgotrajno sodelovanje ne dopušča samo naštevanja o usposobljenosti, objavah, mentorstvih, koordinaciji in prostovoljstvu, ampak tudi o neumorni energiji, vztrajnosti v neugodnih razmerah, občutku poslanstva in neuklonljivega prepričanja, da moramo pediatri poskrbeti za dobro otroka, tudi ko vsi ostali »dvignejo roke«. Tudi ob njeni aktivnosti pri obravnavi pravic otrok in staršev v zdravniških komisijah.

Prof. dr. Nataša Bratina, dr. med., je šolanje začela v Kamniku, nadaljevala pa na Medicinski fakulteti v Ljubljani, kjer je diplomirala leta 1988, opravila magisterij medicine z nalogo o družinski hiperholesterolemiji leta 1995 ter nastopila pozicijo kot asistentka na Katedri za pediatrijo MF. Postala je specialistka pediatrije leta 1997 in zaključila z doktoratom znanosti leta 2006 na Medicinski fakulteti Univerze v Ljubljani. Na Katedri za pediatrijo Medicinske fakultete je postala docentka leta 2011, na mesto izredne profesorice je bila imenovana leta 2017, pred tremi leti pa za redno profesorico. Podoktorsko usposabljanje je opravila v mednarodno priznanem centru, ki vodi otroke s sladkorno boleznijo tipa 1 (DM1) v Hannovru.

Če poiščemo ključne strokovne besede, ki povezujejo njeno strokovno in raziskovalno delo v njenem aktivnem življenju, so v ospredju: DM1 z zdravljenjem, poznimi zapleti in novimi tehnologijami; pediatrična endokrinologija; presejalni testi in vse oblike izobraževanja iz teh področij. Veliko njenih ur je bilo vloženih v izobraževanje pediatrov, medicinskih sester, dietetikov, specializantov in gostujočih zdravnikov iz tujine ter drugih strokovnjakov na eni strani, še mnogo več pa v izobraževanje otrok in mladostnikov z DM1, njihovih šolskih učiteljev, vodičev v kolonijah, socialnih delavcev v timskih obravnavah otrok z DM1 in splošne javnosti. Sodobna tehnologija zdravljenja DM1 z inzulinskimi črpalkami in kontinuiranim subkutanim merjenjem glukoze je v veliki meri spremenila vodenje bolezni, vendar pa tudi te tehnologije potrebujejo veliko znanja, predvsem pa izkušenj z vsemi mogočimi zapleti, zlorabami in anksioznostjo uporabnikov teh tehnologij. Kilometrina prof. Bratine je na tem področju neprecenljiva, njena razpoložljivost za reševanje teh problemov pa tudi po vseh teh letih nič manjša.

Skupaj sva s sodelavci z oddelka sodelovali na več kot 30 dvotedenskih programih obnovitvene rehabilitacije za otroke z DM1 in v večini jih je prof. Bratina tudi sama vodila – tako pripravljalno, organizacijsko in tudi pri sami izvedbi v Mladinskem zdravilišču Debeli rtič. Morda se opis te dejavnosti zdi skoraj malo romantičen, vendar je bila odgovornost za ogrožajoče nočne hipoglikemije, komunikacija z zaskrbljenimi in od otrok po telefonu

vznemirjenimi starši in koordinacija vodičev vse prej kot enostavna. Kdor tega ne ponovi tridesetkrat, ne more razumeti obsega te naloge.

Raziskovalno se prof. Bratina posveča predvsem sladkorni bolezni pri otrocih, tehnologijam za zdravljenje sladkorne bolezni, epidemiologiji DM1 in genetiki sladkorne bolezni tipa 1 ter preprečevanju kroničnih zapletov te bolezni. Na teh področjih je vodila številne nacionalne in mednarodne raziskovalne projekte oziroma v njih sodelovala; med drugim je proučevala glikemično variabilnost, epigenetiko, diabetično retinopatijo in presejanje za dislipidemije pri otrocih. Je avtorica ali soavtorica več kot 130 recenziranih mednarodnih znanstvenih objav in je pomembno prispevala k mednarodnemu sodelovanju v okviru raziskav, zlasti pri vzpostavljanju registrov sladkorne bolezni pri otrocih in študijah izidov zdravljenja. S svojim delom je prispevala k boljšemu razumevanju zapletov sladkorne bolezni, kakovosti oskrbe ter dolgoročnih izidov pri otrocih in mladostnikih s DM1.

Prof. Bratina je aktivno vključena v dodiplomsko in podiplomsko izobraževanje na področju medicine ter deluje kot mentorica doktorskim študentom in mladim raziskovalcem. V mednarodnem prostoru je priznana zaradi svojega prispevka k raziskavam, sodelovala je v DIAMOND WHO projektu, raziskovalni skupini SWEET, EURODIAB in EUBIROD. Deluje tudi kot recenzentka strokovnih člankov v različnih slovenskih in mednarodnih medicinskih revijah.

Pri vsem strokovnem delu pa je našla čas tudi za predsedovanje Slovenskemu pediatričnemu združenju, Razširjenemu strokovnemu kolegiju za področje pediatrije in v zadnjih letih Svetu za izobraževanje ZZS. Deset let je bila nacionalna koordinatorica za področje specializacije iz pediatrije.

Naj zaključim, kot sem začela: po vseh dolgih, intenzivnih strokovnih letih ostaja njena energija še vedno neustavljiva in nam sodelavcem postavlja visok kriterij, kdaj je dan »dovolj poln«. Ko začne dan s tekom pred šesto uro zjutraj ali telefonsko vodi zdravljenje bolnika s težko ketoacidozo pozno ponoči, je tudi njen naslednji dan enako aktiven. Predanost delu in učinkovito opravljeno strokovno delo ostajata njeno vodilo že celo medicinsko kariero – enako velja za delo z bolniki kot za sodelovanje s kolegi in kolegicami pri delu. Zato njen naslov »Moja diabetologinja 2025« najlepše zaokroži tole predstavitev.

Nataša Bratina

Citation for the Derč Lifetime Achievement Award in Slovenian Paediatrics

assoc. prof. Mojca Žerjav Tanšek, MD, PhD

Although this presentation of Professor Nataša Bratina is intended for a formal occasion marking her many years of medical work and professional achievements, I will write her biography primarily from the perspective of someone who has worked closely alongside her for the past 36 years at the Department of Endocrinology, Diabetes and Metabolic Diseases of the University Children's Hospital, University Medical Centre Ljubljana. Such a long period of collaboration cannot be described merely by listing qualifications, publications, mentorships, coordination roles, and voluntary activities. It is equally a story of tireless energy, perseverance in difficult circumstances, a profound sense of mission, and an unwavering conviction that, as paediatricians, we must safeguard the well-being of the child even when everyone else has "given up". This commitment is also reflected in her work advocating for the rights of children and their parents within medical commissions.

Prof. Nataša Bratina, MD, PhD, began her education in Kamnik and continued at the Faculty of Medicine in Ljubljana, where she graduated in 1988. In 1995, she completed a master's degree in medicine with a thesis on familial hypercholesterolaemia and took up a position as an assistant at the Department of Paediatrics of the Faculty of Medicine. She became a specialist in paediatrics in 1997 and completed her PhD at the Faculty of Medicine, University of Ljubljana, in 2006. She was appointed Assistant Professor at the Department of Paediatrics in 2011, Associate Professor in 2017, and Full Professor three years ago. She completed her postdoctoral training at an internationally renowned centre for the care of children with type 1 diabetes in Hannover.

If we were to identify the key professional themes connecting her clinical and research work throughout her active career, several stand out: type 1 diabetes (T1D), including its treatment, long-term complications and new technologies; paediatric endocrinology; screening programmes; and all forms of education related to these fields. She has devoted countless hours to educating paediatricians, nurses, dietitians, residents, visiting physicians from abroad and other professionals. Even more time, however, has been dedicated to educating children and adolescents with T1D, their schoolteachers, counsellors at children's camps, social workers involved in multidisciplinary care, and the general public.

Modern technologies for the treatment of T1D, including insulin pumps and continuous glucose monitoring, have profoundly changed diabetes management. Yet these technologies themselves require extensive knowledge and, above all, experience in dealing with the wide range of potential complications, misuse and anxiety that may accompany their use. Professor Bratina's accumulated experience in this field is invaluable, and even after all these years, her readiness to help solve such problems remains undiminished.

Together with colleagues from our department, we have participated in more than 30 two-week rehabilitation programmes for children with T1D, most of which Professor Bratina herself led – from preparation and organ-

isation to their actual implementation at the Debeli Rtič Youth Health Resort. This activity may perhaps sound almost idyllic when described in retrospect, but the responsibility for potentially life-threatening nocturnal hypoglycaemia, communication with worried parents calling because they were anxious about their children, and the coordination of camp counsellors were anything but simple. Unless one has done this thirty times, it is difficult to appreciate the true magnitude of the task.

Professor Bratina's research focuses primarily on diabetes in children, diabetes treatment technologies, the epidemiology and genetics of type 1 diabetes, and the prevention of chronic complications. In these areas, she has led or participated in numerous national and international research projects. Her work has included studies of glycaemic variability, epigenetics, diabetic retinopathy, and screening for dyslipidaemia in children. She is the author or co-author of more than 130 peer-reviewed international scientific publications and has made an important contribution to international research collaboration, particularly in establishing childhood diabetes registries and conducting studies of treatment outcomes. Through her work, she has contributed to a better understanding of diabetes complications, quality of care, and long-term outcomes in children and adolescents with T1D.

Professor Bratina is actively involved in undergraduate and postgraduate medical education and serves as a mentor to doctoral students and young researchers. Internationally, she is recognised for her contributions to research and has participated in the WHO DIAMOND Project, the SWEET research network, EURODIAB, and EUBIROD. She also serves as a reviewer for scientific papers submitted to various Slovenian and international medical journals.

Alongside all her clinical, research and educational commitments, she has also found time to serve as President of the Slovenian Paediatric Association, Chair of the National Medical Expert Board for Paediatrics, and, in recent years, Chair of the Education Council of the Medical Chamber of Slovenia. For ten years, she served as the national coordinator of the paediatric specialist training programme.

Let me conclude as I began. After all these long and intensive professional years, her energy remains unstoppable, setting a high standard for all of us who work alongside her as to when a day can truly be considered "full". Whether she begins her day with a run before six in the morning or guides the treatment of a patient with severe ketoacidosis by telephone late at night, the following day is invariably just as active.

Dedication to her work and the determination to perform it efficiently and to the highest professional standard have guided her throughout her entire medical career – both in caring for patients and in collaborating with colleagues.

It therefore seems particularly fitting that the title "My Diabetologist 2025" should bring this presentation to a close, encapsulating in just a few words the recognition she has earned from those for whom all this work ultimately matters most – her patients.

Irena Cetin-Lovšin

Utemeljitev za podelitev priznanja za strokovno delo v bolniškem pediatričnem zdravstvu v Sloveniji

Alenka Stepišnik

Irena Cetin-Lovšin je končala osnovno šolo in gimnazijo v rodnem Kopru. Že v srednji šoli jo je zanimalo skoraj vse – literatura, umetnost, glasba in naravoslovje. Prevladalo je slednje, skupaj z željo po delu z ljudmi, zato se je vpisala na Medicinsko fakulteto Univerze v Ljubljani, kjer je diplomirala leta 1984. Po končanem študiju se je vrnila na Obalo in svojo poklicno pot začela na Infekcijskem oddelku v Piranu. Delo z odraslimi je ni zares pritegnilo, zato se je odločila za specializacijo iz pediatrije – odločitev, ki je pomembno zaznamovala njeno življenje in življenja številnih generacij malih bolnikov.

Zaposlila se je na otroškem oddelku najprej v Kopru, leta 1997 pa je sledila selitev v prostore sedanje Splošne bolnišnice Izola. Kmalu je prevzela vodenje oddelka in postala njegova dolgoletna predstojnica. Vedno je bila polna energije, idej in načrtov. Pod njenim vodstvom je pediatrični oddelek strokovno rasel, se razvijal in sledil sodobnim smernicam pediatrične obravnave. Ni se zadovoljila z ustaljenim načinom dela, ampak je vedno iskala poti, kako otrokom ponuditi boljšo, hitrejšo in kakovostnejšo obravnavo.

Med prvimi je prepoznala pomen ultrazvočne diagnostike in jo začela s pridom uporabljati že zgodaj na svoji profesionalni poti. Ker je bila pot do sodobne in drage medicinske opreme pogosto dolga in negotova, je znala vztrajati in poiskati rešitve. S trmo prave Istrijanke je oddelku pridobila sodoben ultrazvočni aparat, najsodobnejši inkubator, monitorje in drugo opremo, ki je pomembno prispevala k razvoju pediatrične službe na Obali.

Svoje znanje je ves čas izpopolnjevala doma in v tujini ter skrbela, da je ostajala v toku z najnovejšimi strokovnimi dognanji. Njeno delo nikoli ni bilo omejeno zgolj na vsakodnevno klinično obravnavo. Sodelovala je pri organizaciji številnih strokovnih srečanj, predavala na kongresih in bila ena glavnih pobudnic posebne izdaje Zdravniškega vestnika ob 100-letnici rojstva prim. Branka Šalamuna. Svoje znanje in izkušnje je predajala tudi prihodnjim generacijam zdravstvenih delavcev – poučevala je na Srednji zdravstveni šoli Izola in na Fakulteti za vede o zdravju Univerze na Primorskem.

Njena prva strokovna ljubezen je bila neonatologija in porodnišnica je imela vedno prav posebno mesto v njenem poklicnem življenju. A njeno delo je že zdavnaj preraslo posamezno področje. Z leti je postala pediatrinja z izjemno širokim kliničnim znanjem in izkušnjami, ki jih uporablja pri obravnavi otrok na različnih področjih sekundarne pediatrije.

Vedno je pripravljena svoje obsežno znanje nesebično deliti s sodelavci. Spodbuja nas k dodatnemu izobraževanju, strokovnim izpopolnjevanjem v tujini in aktivnemu sodelovanju na strokovnih srečanjih. Ob njej rastemo tudi mi. Včasih je zahtevna, vendar predvsem zato, ker od vseh, tako kot od sebe, pričakuje največ. In verjame, da lahko vedno naredimo še korak naprej.

Dobro se zaveda, da uspešna obravnava otroka nikoli ni delo posameznika. Za dobrim zdravljenjem stojijo zdrav-

niki, medicinske sestre, laboratorijski delavci, strežnice, čistilke in številni drugi, ki vsak na svoj način prispevajo k temu, da je za malega bolnika dobro poskrbljeno. Prav občutek za pomen sodelovanja, spoštovanja različnih poklicev in timskega dela ostaja eden od temeljev njenega delovanja.

Kot predana zdravnica je velik del svojega življenja posvetila pediatriji in svojim bolnikom. Pri delu jo od nekdaj vodita strokovna radovednost in predvsem občutek odgovornosti do otroka in njegove družine. Zna prisluhniti, zna vztrajati in zna poiskati rešitev tudi takrat, ko ta na prvi pogled ni jasna.

Ob vsem tem pa Irena ni samo zdravnica. Prosti čas, ki ga zaradi predanosti delu ni vedno veliko, najraje preživlja z ljubljeno družino. Posebno veliko energije in veselja ji danes prinaša igra z njenima dvema vnukinjama. Ni pozabila niti na glasbo – svojo ljubezen do violine še naprej neguje z igranjem v Obalnem komornem orkestru. Zelo rada ima tudi morje in ribolov, ki ji ponujata drugačno vrsto miru in sprostitve. V zadnjih letih pa je, po zaslugi svojega moža, vzljubila tudi pohode v gore.

Danes je ne prepoznavamo le kot izkušeno pediatrinjo in dolgoletno predstojnico Otroškega oddelka Splošne bolnišnice Izola, temveč kot zdravnico, ki je s svojim delom pomembno zaznamovala razvoj pediatrične službe na Obali. Njena strokovnost, vztrajnost, radovednost, nepopustljivost in pripravljenost pomagati so pustile sled pri številnih otrocih, njihovih družinah in pri vseh nas, ki imamo privilegij z njo sodelovati.

Za vse, kar je v vseh teh letih naredila za pediatrijo, za svoje bolnike in za svoje sodelavce, smo ji iskreno hvaležni.

Hvaležni smo, da je bila in ostaja naša učiteljica, sodelavka, mentorica in prijateljica.

Irena Cetin-Lovšin

Citation for the Award for Professional Excellence in Inpatient Paediatric Healthcare in Slovenia

Alenka Stepišnik

Irena Cetin-Lovšin completed primary school and secondary school in her native Koper. Even during her school years, she was interested in almost everything – literature, art, music, and natural sciences. In the end, science prevailed, together with her desire to work with people, and she enrolled at the Faculty of Medicine, University of Ljubljana, graduating in 1984. After completing her studies, she returned to the Slovenian coast and began her professional career at the Department of Infectious Diseases in Piran. Working with adults did not truly appeal to her, so she decided to specialise in paediatrics – a decision that would profoundly shape both her own life and the lives of many generations of young patients.

She joined the paediatric department, initially in Koper, before the department moved in 1997 to the premises of what is now Izola General Hospital. She soon took over its leadership and became its long-standing Head of Department. She was always full of energy, ideas, and plans. Under her leadership, the paediatric department grew professionally, continued to develop, and kept pace with modern standards of paediatric care. She was never content simply to follow established routines but constantly sought new ways to provide children with better, faster, and higher-quality care.

She was among the first to recognise the importance of ultrasound diagnostics and began making extensive use of it early in her professional career. Observing modern and expensive medical equipment was often a long and uncertain process; she knew how to persevere and find solutions. With the determination of a true Istrian, she succeeded in acquiring a modern ultrasound machine, a state-of-the-art incubator, monitors, and other equipment for the department, all of which made an important contribution to the development of paediatric services on the Slovenian coast.

Throughout her career, she continuously expanded her knowledge through further training both in Slovenia and abroad, ensuring that she remained abreast of the latest developments in her field. Her work was never limited to everyday clinical practice. She participated in organising numerous professional meetings, lectured at congresses, and was one of the principal initiators of a special issue of the Slovenian Medical Journal marking the centenary of the birth of Primarius Branko Šalamun. She also passed her knowledge and experience on future generations of healthcare professionals, teaching at the Secondary School of Nursing in Izola and at the Faculty of Health Sciences of the University of Primorska.

Her first professional passion was neonatology, and the maternity ward has always held a very special place in her professional life. Yet her work has long since grown beyond any single field. Over the years, she has become a paediatrician with exceptionally broad clinical knowledge and experience, which she applies in caring for children across the many areas of secondary paediatrics.

She is always willing to share her extensive knowledge generously with her colleagues. She encourages us to pursue further education, undertake professional training abroad, and participate actively in professional meetings. We grow professionally alongside her. At times she can be demanding, but above all because she expects the very best from everyone, just as she does from herself. And she believes that there is always another step forward to be taken.

She is keenly aware that the successful care of a child is never the work of one person alone. Behind good treatment stand physicians, nurses, laboratory staff, hospital attendants, cleaners, and many others, each contributing in their own way to ensuring that a young patient receives the best possible care. Her appreciation of the importance of cooperation, respect for different professions, and teamwork remains one of the foundations of her work.

As a dedicated physician, she has devoted a large part of her life to paediatrics and to her patients. Her work has always been guided by professional curiosity and, above all, by a profound sense of responsibility towards the child and the child‘s family. She knows how to listen, how to persevere, and how to find a solution even when, at first sight, none seems obvious.

Yet Irena is much more than a doctor. The free time that her dedication to work has not always left her in abundance is most happily spent with her beloved family. Today, playing with her two granddaughters brings her particular joy and renewed energy. Nor has she forgotten music – she continues to nurture her love of the violin by playing in the Coastal Chamber Orchestra. She is also very fond of the sea and fishing, which offers her a different kind of peace and relaxation. And in recent years, thanks to her husband, she has also discovered a love of hiking in the mountains.

Today, we recognise her not only as an experienced paediatrician and the long-standing Head of the Paediatric Department at Izola General Hospital, but also as a physician whose work has played an important role in shaping the development of paediatric services on the Slovenian coast. Her expertise, perseverance, curiosity, determination, and willingness to help have left a lasting mark on countless children and their families, as well as on all of us who have had the privilege of working alongside her.

For everything she has done over all these years for paediatrics, for her patients, and for her colleagues, we are sincerely grateful.

We are grateful that she has been, and continues to be our teacher, colleague, mentor, and friend.

Damjan Osredkar

Utemeljitev za podelitev Matajčevega priznanja za znanstveno-raziskovalno delo v slovenski pediatriji

Združenje za pediatrijo danes podeljuje nagrado za raziskovalne dosežke kolegu, ki je svojo poklicno pot zaznamoval z izjemno raziskovalno radovednostjo in sposobnostjo povezovanja raziskovalnega ter kliničnega dela. Raziskovalna pot profesorja Damjana Osredkarja kaže, kako se lahko iz posameznega kliničnega vprašanja razvije raziskovalna zgodba z mednarodnim dosegom in zelo konkretnim pomenom za bolnika.

Damjanova raziskovalna radovednost se je očitno prebudila zelo zgodaj – že kot dijak današnje Gimnazije Bežigrad je raziskoval radon v bivalnem okolju. Raziskovanje je nadaljeval v študentskih letih, ko je v raziskovalni nalogi preučeval gibalne vzorce normalnih in nevrološko ogroženih novorojenčkov. Za to delo je leta 1997 prejel Prešernovo priznanje Medicinske fakultete Univerze v Ljubljani. Že takrat se je začrtala smer njegove nadaljnje raziskovalne poti – zanimanje za razvijajoče se možgane.

Po diplomi se je zaposlil kot mladi raziskovalec na nevrološkem oddelku Pediatrične klinike v Ljubljani ter raziskoval na področju amplitudno integrirane elektroencefalografije in spremljanja možganske aktivnosti novorojenčkov. Temu področju sta bila posvečena tako njegov magistrski študij kot doktorska disertacija. Že v tem obdobju je želel svoje znanje in raziskovalno delo nadgraditi v tujini. Raziskoval je v Wilhelmina Children's Hospital v Utrechtu, nato pa kot Fulbrightov štipendist nadaljeval podoktorski študij na Univerzi v Kaliforniji v San Franciscu pri profesorici Donni Ferriero, eni vodilnih raziskovalk hipoksično-ishemične poškodbe možganov, neonatalne možganske kapi in možnosti nevroprotektivnega zdravljenja. Kasneje je svoje znanje poglabljal na Univerzi v Oslu pri profesorici Marianne Thoresen, kjer je nadaljeval raziskovanje hipoksično-ishemične možganske okvare novorojenčka ter dejavnikov, ki vplivajo na učinkovitost nevroprotektivnega zdravljenja, med drugim tudi vpliva pridružene okužbe oziroma vnetja.

Njegova raziskovalna pot se je nato vse izraziteje usmerjala tudi na področje redkih nevroloških in živčno-mišičnih bolezni. Kot predstojnik Kliničnega oddelka za otroško, mladostniško in razvojno nevrologijo je dejavno vključil celoten oddelek v mednarodne raziskovalne mreže, registre in klinične študije ter povezoval strokovnjake različnih področij. Pod njegovim vodstvom je bila v Sloveniji izvedena tudi prva genska nadomestna terapija pri otroku s spinalno mišično atrofijo in uvedena številna nova tarčna zdravljenja redkih bolezni.

Morda pa njegovo raziskovalno pot najlepše ponazarja razvoj genskega nadomestnega zdravljenja za sindrom CTNNB1. Zgodba se je začela ob enem samem otroku, prvem diagnosticiranem v Sloveniji, in vprašanju njegove družine, ali je mogoče bolezen, za katero ni bilo vzročnega zdravljenja, zdraviti drugače. Nam sodelavcem se je zdelo, da je to vprašanje za velike mednarodne raziskovalne centre ali mogočno farmacevtsko industrijo. Damjan pa je mislil drugače. Menil je, da ni nemogoče razviti genskega nadomestnega zdravljenja tudi v našem okolju.

Damjan Osredkar

Citation for the Matajc Research Achievement Award in Slovenian Paediatrics

Iz tega vprašanja je v nekaj letih nastala mednarodna raziskovalna mreža, ki je povezala družine, klinike in raziskovalce. Od razvoja in izbire ustreznega genskega konstrukta, raziskav na celičnih in živalskih modelih ter varnostnih študij je projekt prišel do prve klinične raziskave genskega nadomestnega zdravljenja CTNNB1. Decembra 2025 je bil na Pediatrični kliniki v Ljubljani zdravljen prvi otrok na svetu. Ta zgodba najlepše pokaže Damjanov pristop k raziskovanju – kako lahko klinično vprašanje preraste v raziskovalni projekt z mednarodnim dosegom in se nazadnje vrne tja, kjer se je začelo: k bolniku.

Profesor Damjan Osredkar ima poleg znanja, raziskovalne žilice in poguma tudi izjemno vztrajnost. Kot izvrsten športnik in maratonec z osebnim rekordom pod tremi urami zna vztrajati do cilja, a na poti nikoli ne pozabi na druge – spodbuja jih, jim pomaga in se iskreno veseli njihovih uspehov.

The Slovenian Association for Paediatrics is today presenting its Award for Research Achievement to a colleague whose professional career has been distinguished by exceptional scientific curiosity and a remarkable ability to bridge research and clinical practice. Professor Damjan Osredkar's research career demonstrates how a single clinical question can develop into a research journey with international impact and, above all, tangible benefits for patients.

Damjan's scientific curiosity clearly emerged at an early age. While still a student Bežigrad Grammar School, he was already investigating radon in the residential environment. He continued his research during his medical studies, examining movement patterns in healthy newborns and newborns at neurological risk. For this work, he received the Prešeren Award from the Faculty of Medicine, University of Ljubljana, in 1997. Even at that early stage, the direction of his future research was becoming clear: an interest in the developing brain.

After graduating, he joined the Department of Neurology at the University Children's Hospital Ljubljana as a young researcher, focusing on amplitude-integrated electroencephalography and the monitoring of brain activity in newborns. Both his master's studies and doctoral dissertation were devoted to this field. Already during this period, he sought to broaden his knowledge and research experience internationally. He conducted research at the Wilhelmina Children's Hospital in Utrecht and later, as a Fulbright Scholar, pursued postdoctoral studies at the University of California, San Francisco, under Professor Donna Ferriero, one of the leading researchers in hypoxic-ischaemic brain injury, neonatal stroke, and neuroprotective therapies. He subsequently further developed his expertise at the University of Oslo with Professor Marianne Thoresen, continuing his research into neonatal hypoxic-ischaemic brain injury and the factors influencing the effectiveness of neuroprotective treatment, including the impact of concomitant infection and inflammation.

His research increasingly expanded into the field of rare neurological and neuromuscular diseases. As Head of the Department of Child, Adolescent and Developmental Neurology, he actively involved the entire department in international research networks, registries, and clinical trials, while bringing together experts from different disciplines. Under his leadership, Slovenia also performed its first gene replacement therapy in a child with spinal muscular atrophy, and numerous new targeted treatments for rare diseases were introduced.

Perhaps the most compelling example of his research journey, however, is the development of gene replacement therapy for CTNNB1 syndrome. The story began with a single child—the first diagnosed with the condition in Slovenia—and a question from the child's family: could a disease for which no causal treatment existed be treated in a different way? To us, his colleagues, this seemed like a question for major international research centres or the powerful pharmaceutical industry. Damjan thought differently. He believed that developing a gene replacement therapy was not beyond the reach of our own environment.

Within just a few years, that question gave rise to an international research network bringing together families, clinicians, and researchers. From the development and selection of an appropriate gene construct, through studies in cellular and animal models and safety testing, the project progressed to the first clinical trial of CTNNB1 gene replacement therapy. In December 2025, the world's first child received this treatment at the University Children's Hospital Ljubljana. This story perhaps best illustrates Damjan's approach to research: how a clinical question can grow into a research project with international reach and ultimately return to where it began—to the patient.

In addition to his knowledge, scientific curiosity, and courage, Professor Damjan Osredkar possesses extraordinary perseverance. An accomplished athlete and marathon runner with a personal best of under three hours, he knows how to persist until he reaches the finish line. Yet along the way, he never forgets those around him—he encourages them, supports them, and takes genuine pleasure in their achievements.

HISTORY FOR THE FUTURE: SHAPING SCHOOL AND ADOLESCENT MEDICINE IN EUROPE

School Medicine in Slovenia: Historical Roots and European Context

Zvonka Zupanič Slavec

Background: School medicine in Slovenia developed from Enlightenment era European public health traditions that introduced systematic health supervision of schoolchildren. The Slovene lands remained within the Austro-Hungarian sanitary system until 1918, shaped by the Generalsanitätsnormativum of 1770, which provided a unified preventive and administrative framework.

Methods: This historical analysis examines key regulatory, institutional and conceptual milestones in the development of Slovenian school medicine from 1909 to the present, with particular attention to organisational reforms and public health paradigms.

Results: On the basis of the Habsburg sanitary system, the first formal school health service was established in Ljubljana in 1909. After the dissolution of the monarchy, development in the Kingdom of Yugoslavia was reshaped by Andrija Štampar, who replaced the hygienic administrative model with a social medicine approach that defined children's health as a product of living conditions and state responsibility. School polyclinics were reorganised into community based primary care centres integrating prevention, treatment, health education, home nursing and social support, a model adopted by the Hygiene Institute of Ljubljana from 1923 onward. Štampar's concept later informed WHO programmes and the Alma Ata Declaration of 1978.

Conclusions: Although school medicine was gradually absorbed into paediatric practice after 1991, its professional legacy endures in contemporary school, student and adolescent medicine.

Zvonka Zupanič Slavec (contact person)
Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: zvonka.zupanic-slavec@mf.uni-lj.si

EUSUHM Congresses Through the Years: A Visual and Narrative Journey

Vesna Jureša

Background: The main motive and driving desire behind this publication was the realization that there are increasingly fewer people who know and remember how School and University Health and Medicine was established and developed as an entity.

Methods: All the items of this collection are stored in my archive, waiting to be fully digitized. The greatest part of the materials is in paper form and not easily available in special libraries.

Results: Although the main congress themes, concepts, and contents changed in the course of time, they have always been dedicated to students at all levels of education and the young. Since 1981 the congresses have been biannual, with the exception of 2021, when the congress was moved to the year 2022 due to the Covid-19 pandemic. It is my sincere hope that this publication, rich in visual materials rather than in words, will give its readers an idea of the plethora of topics addressed, as well as of the general spirit prevailing. The carefully organized materials shown include program title pages, notifications regarding congress organization and the organizing committees, themes and programs, title pages of the conference proceedings, invitations, certificates of attendance, photographs, as well as assorted memorabilia such as conference bags, city maps, badges, picture postcards, souvenirs, and the like – all in the hope that many of the attendees will recognize themselves in the pictures, to bring back pleasant memories not only of the working aspects of the congresses, but also of happy moments spent in the company of colleagues and friends.

Conclusions: This publication is dedicated to all who provide care for students and young people: doctors of School Medicine, who have always been advocates and representatives of that population, and all our dedicated collaborators from the system of health, education, and social welfare.

Vesna Jureša (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: vjuresa@snz.hr

History of Youth Health in the Netherlands and Developing the Position of the Youth Health Nurse

Betty Bakker-Camu, Vera Klamer

Background: Youth health care in the Netherlands originated in 1901 with infant and toddler care initiated by general practitioners and supported by Cross Associations, followed by the introduction of school health services under municipal responsibility from 1904. Over time, youth health care evolved into an integrated preventive system and was formally embedded in national legislation, culminating in its inclusion for children aged 0–18 years in the Public Health Act in 2008. The focus shifted from hygiene and mortality prevention toward a comprehensive preventive system addressing physical, psychosocial, and developmental health through systematic monitoring, screening, health education, and parental support. monitoring of physical, psychosocial, and developmental health.

Method: Within this context, the professional role of nurses evolved from a supportive function to that of autonomous practitioners with defined responsibilities, necessitating clear professional profiles. The introduction of nursing specialists in youth health care around 2013 marked a further step toward integrated medical and nursing leadership.

Results: The revised Area of Expertise of the Youth Health Nurse (2025) reflects advances in nursing leadership, evidence-based practice, and digital innovation.

Conclusions: Strengthening the position of youth health care within preventive services and clearly defining professional roles remain essential for future sustainability and effectiveness.

Betty Bakker-Camu (contact person)
EUSUHM; Dutch Nurses and Caregivers Association, Amsterdam, Netherlands
e-mail: betty.bakker@adviezorg.nl

Vera Klamer
Dutch Nurses and Caregivers Association, Amsterdam, Netherlands

The History of Hungarian School Healthcare

Adrienne Zsófia Nagy, Éva Zsuzsanna Mezei

Introduction: The Fodor József Society of School Healthcare is celebrating its 60th anniversary in 2026. From this occasion, we've recently reviewed the society's history for a national audience and found it both strengthening and educational in light of present-day challenges. To answer an expressed interest, we are now widening the scope of our review to provide a comprehensive picture of the history of school healthcare in Hungary.

Methods: We searched historical documents, textbooks on school health, and laws about it. Results: From the beginning of institutionalised education, the organisers of schools were concerned about their students' health. It has always been their interest to prevent the spread of diseases, and they recognised the role of health education and preventive measures, besides the need to care for sick students. The arrangements to fulfil these complex tasks changed over time but always needed specialised professionals.

Conclusions: We believe as Winston Churchill famously emphasised: "The farther back you can look, the farther forward you are likely to see."

Adrienne Zsófia Nagy (contact person)
Fodor József Iskolaegészségügyi Társaság (Hungarian Society of School Healthcare), School Health Services, Budapest, Hungary
e-mail: sulidokibp@gmail.com

Éva Zsuzsanna Mezei
Fodor József Iskolaegészségügyi Társaság (Hungarian Society of School Healthcare), School Health Services, Eger, Hungary

SLOfit: Integrating National Physical Fitness Surveillance into Paediatric Healthcare

Gregor Jurak, Bernarda Vogrin,
Polonca Truden Dobrin, Gregor Starc

Physical fitness is a premier health marker in childhood, yet data collection barriers often limit its clinical use. Slovenia leads this field through a longitudinal surveillance system tracking school-aged children's fitness annually since 1982. Over the last decade, this system has evolved into SLOfit, supported by the My SLOfit web application. The platform generates personalized trend reports using evidence-based, health-risk criterion zones and population-referenced centiles. It assesses 24-hour movement behaviour and provides SLOfit Advice, a platform offering evidence-based tips on fitness and lifestyle improvement. Leveraging Big Data, the application also provides AI-based growth prediction. To bridge the gap between education and healthcare, parents can grant paediatricians direct data access. This allows clinicians to monitor long-term fitness trajectories and utilize fitness data as a "vital sign" to identify sedentary-related pathologies during routine check-ups. SLOfit demonstrates how national fitness data can be transformed into actionable healthcare insights. Future efforts focus on establishing national regulations to integrate SLOfit directly into the e-health electronic medical record, ensuring a lifelong perspective on physical health from childhood to adulthood.

Gregor Jurak (contact person)
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia
e-mail: gregor.jurak@fsp.uni-lj.si

Bernarda Vogrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia; Faculty of Medicine, University of Maribor, Maribor, Slovenia

Polonca Truden Dobrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Gregor Starc
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Building Global Workforce Capacity in Adolescent Healthcare: The Paths of Pioneers Around the World

Richard Churchill, Melis Kızılkan, Melissa Kang

Introduction: The purpose of this study is to articulate various means of developing and strengthening adolescent healthcare provision.

Methods: This retrospective, qualitative study used transcripts of publicly available interview videos. The interviews, led by the IAAH Education Committee, have been conducted with pioneers and leaders in adolescent healthcare globally. Inductive thematic analysis identified common themes with respect to education and training in adolescent health. Results: Pioneers' journeys centered around elevating education and training of the workforce. Themes from inductive analysis were (1) Scientific curiosity and serendipidity 'sparking' careers; (2) Starting small and staying connected (3) The universality of 'nuts and bolts' of growing the field; (4) Overcoming challenges takes time and patience. Themes were matched against the recommendations of the IAAH Policy Statement on the Education and Training of Healthcare Providers.

Conclusions: Despite different healthcare systems and levels of maturity of adolescent health as a speciality, building capacity in the healthcare workforce can be achieved through a number of key steps.

Richard Churchill (contact person)
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada
e-mail: richard.churchill@nhs.net

Melis Kızılkan
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada; Hacettepe University Medical School, Ankara, Turkey

Melissa Kang
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada; School of Medicine, University of Sydney, Syndey, Australia

From Policy to Practice: Developing a Toolkit to Support the Implementation of the Iaah Policy Statement on Education and Training of Healthcare Professionals in Adolescent Health

Richard Churchill, Melis Kızılkan, Melissa Kang

All healthcare professionals who encounter adolescents within their work should be adequately trained to undertake their role. In 2022 the IAAH published a policy statement focussed on enhancing the education and training of healthcare professionals in adolescent health globally. It recognised that, in many areas, such training is inadequate or does not result in improved outcomes for young people. The Statement also described the roles and responsibilities of various stakeholders to improve the situation. Since publication of the statement, the IAAH Education Committee has been identifying practical steps and collating resources to support professionals aspiring to promote enhanced training in their country or region. This presentation will outline the contents of this 'toolkit' and consider how it might be used in different settings.

Richard Churchill (contact person)
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada
e-mail: richard.churchill@nhs.net

Melis Kızılkan
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada; Hacettepe University Medical School, Ankara, Turkey

Melissa Kang
Education Committee, International Association for Adolescent Health (IAAH), Quebec, Canada; School of Medicine, University of Sydney, Syndey, Australia

TACKLING OBESITY TOGETHER

Child With Severe Obesity: Genetic Determinants and Emerging Treatment Challenges

Primož Kotnik

Background: Early-onset and severe obesity is a key clinical indicator of an underlying monogenic disorder. Advances in molecular genetics have expanded our understanding of the rare genetic causes of paediatric obesity, particularly disorders affecting the leptin–melanocortin pathway and have enabled the development of precision therapies for selected patients.

Objective: The objective of this presentation is to summarize the genetic basis of paediatric obesity and review current and emerging pharmacological treatment options.

Results: Monogenic obesity is most commonly caused by pathogenic variants affecting the hypothalamic leptin–melanocortin pathway, including the LEP, LEPR, POMC, PCSK1, and MC4R genes. These disorders are characterized by early-onset severe obesity, hyperphagia, and endocrine abnormalities. Children presenting with rapid weight gain before five years of age, severe hyperphagia, or other suggestive clinical features should undergo genetic testing using next-generation sequencing or whole-exome sequencing. Early molecular diagnosis enables precision medicine, genetic counselling, and the implementation of individualized lifestyle and multidisciplinary interventions, which are the basis of treatment. The MC4R agonist setmelanotide has demonstrated substantial and sustained reductions in hyperphagia and body weight in patients with POMC, PCSK1, and LEPR deficiencies, as well as Bardet–Biedl syndrome, representing the first targeted therapy for selected genetic forms of obesity. In addition, GLP-1 receptor agonists, including liraglutide and semaglutide, have shown significant efficacy in reducing body weight in adolescents with common obesity and are increasingly being used in children and adolescents with severe obesity.

Conclusions: Although evidence in monogenic obesity remains limited, emerging studies suggest that these agents may provide additional benefits in selected patients when combined with comprehensive multidisciplinary care. Further research is needed to define their role across different genetic obesity syndromes.

Primož Kotnik (contact person)
Department of Paediatric Endocrinology, Diabetes and Metabolism, Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: primoz.kotnik@mf.uni-lj.si

Nutritional Programming in Action: How Slovenia Is Transforming Early-Life Nutrition into a Strategy Against Obesity and Chronic Noncommunicable Diseases

Evgen Benedik

Parental health and nutrition before conception, as well as nutrition during the first 8,000 days, from conception through young adulthood, contribute to lifelong metabolic health. Maternal nutrition and gestational weight gain, infant-feeding practices, and dietary patterns may shape metabolic trajectories through mechanisms such as epigenetic regulation, endocrine and metabolic signalling, and gut microbiome development, influencing susceptibility to obesity, type 2 diabetes, and cardiovascular disease. This presentation highlights how Slovenia translates life-course prevention principles into practice through Program ZDAJ-Zdravje danes za jutri (Health Today for Tomorrow), the national preventive healthcare programme for children and adolescents managed by the National Institute of Public Health. Its implementation is supported by Slovenia's nationally regulated, specialist-led, prevention-oriented paediatric primary healthcare system, which provides systematic preventive examinations and longitudinal follow-up from infancy through adolescence. The programme's digital platform provides evidence-based health information from pregnancy through adolescence, while preventive activities are delivered through primary healthcare services, including Health Promotion Centres and Health Education Centres. Delivery involves coordination among paediatricians, nurses, physiotherapists, psychologists, dietitians, kinesiologists, and other healthcare professionals. By linking paediatric primary healthcare infrastructure with digital information and multidisciplinary support, Slovenia's approach offers a potentially transferable framework for strengthening population-wide prevention.

Evgen Benedik (contact person)
Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Biotechnical faculty, University of Ljubljana, Ljubljana, Slovenia
e-mail: evgen.benedik@bf.uni-lj.si

Strategies for the Prevention and Reduction of Weight Stigma Among Children and Adolescents in Austria

Judith Benedics, Franziska Rafolt

Background: Data from the latest COSI survey in Austria show that, 18% of boys and girls are overweight, 16% of boys and 8% of girls are obese. Children and adolescents affected by overweight or obesity often suffer long-term and multifactorial health disadvantages in terms of morbidity, mortality and health-related quality of life. For young people, educational institutions play an essential role in strategic health promotion, regardless of their social background. It is therefore important to implement health-promoting and preventative measures in the immediate environment of children and young people in order to provide all children with equal educational opportunities. However, educational settings not only offer potential for the broadest possible health promotion and prevention measures for young people. They also harbour the risk of reproducing weight prejudices and manifesting stigmatisation towards children and adolescents affected by obesity or overweight.

Methods: Established educational health promotion and preventive measures in Austria include school medical examinations and support from school psychologists and social workers. By providing targeted training for these professionals, the Federal Ministry aims to reduce weight stigmatisation in the education sector and raise awareness. In addition, a follow-up study on a systematic review of strategies to reduce the stigmatisation of overweight individuals in healthcare focuses on the stigmatisation of young people affected by overweight or obesity in the education sector. The results will be available in September 2026.

Conclusions: Eliminating weight stigma contributes to equal access to health and education and promotes the sustainable positive development of children and adolescents. Recognising education as a key factor influencing health and implementing measures to destigmatise weight in the education system is in line with the Health in All Policies (HiAP) approach. It represents an important step towards achieving Austria's health goals and contributes to the implementation of the national child and youth health strategy as well as the WHO/Unicef child and adolescents strategy for health and wellbeing.

Judith Benedics
Department of Maternal, Child, Women's and Gender Health,

Weighty Data: An Interactive Body Mass Index Dashboard Supporting Policymakers

Alexandra Seghers, Anouk Vanlander

Federal Ministry of Labour, Social Affairs, Health, Care and Consumer Protection, Vienna, Austria

Franziska Rafolt (contact person)
Department of Maternal, Child, Women's and Gender Health, Federal Ministry of Labour, Social Affairs, Health, Care and Consumer Protection, Vienna, Austria
e-mail: franziska.rafolt@gesundheitsministerium.gv.at

In Flanders, the Centers for Pupil Guidance systematically monitor the health of all school-aged children. A useful indicator is the Body Mass Index (BMI), that has been linked to health risks at the group level, and is therefore often used to assess the weight status of populations. For the period 2010–2024, height and weight measurements recorded in electronic student files were analyzed, and BMI was calculated. Using international references, BMI values were classified into five categories: severe underweight, underweight, normal weight, overweight, and obesity. Group-level results are displayed in an interactive dashboard hosted by the Flemish Department of Care. The dashboard incorporates all systematic contact moments and reports the prevalence of different BMI categories across target age groups, residential regions, and school years. The data reveal a steady increase in overweight and obesity, higher prevalence among older students, and notable geographical variation. An additional report examines associations between BMI categories and poverty risk indicators, with plans to integrate these findings into the dashboard. This epidemiological surveillance system with user-friendly dashboard supports targeted preventive health policy by providing accessible insights into the BMI status and health needs of children in Flanders.

Alexandra Seghers (contact person)
Flemish Scientific Association for Youth Health Care (Vlaamse Wetenschappelijke Vereniging voor Jeugdgezondheidszorg), Leuven, Belgium
e-mail: alexandra.seghers@vwvj.be

Anouk Vanlander
Flemish Scientific Association for Youth Health Care (Vlaamse Wetenschappelijke Vereniging voor Jeugdgezondheidszorg), Leuven, Belgium

Adolescents Exposure to Social Media Content on GLP-1 Receptor Agonists as Anti-Obesity Medication: A Content, Quality and Reliability Analysis of Tiktok Platform

Anastasia Gavriilidou, Eleni P. Kotanidou, Antonios Gardikiotis, Assimina Galli-Tsinopoulou

Background: Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) can be used as anti-obesity medication for adolescents >12 years, who failed to respond to lifestyle-behavioural intervention. TikTok serves as major adolescent social media platform for health literacy. The study analyzed TikTok content presented to adolescents regarding GLP-1 RAs as anti-obesity medication.

Methods: Three TikTok accounts without prior search-history were created to simulate adolescents (male, female, unspecified gender). Five hashtags were used: semaglutide, liraglutide, GLP-1, obesity and weight loss. For each hashtag, the 100 most popular video per account underwent content analysis (total videos 1.500; cumulative views: 196.895.308; total likes: 63.843.056). Quality and reliability were assessed using the Global Quality Score (GQS) and the modified-DISCERN tool.

Results: In total sample 0.5% of the content originated from scientific organization, while 99.5% was offered by individuals. Creators' background was unknown (43.4%), influencer (15.7%), fitness trainer (12.4%) and physician (3.6%). The 24.7% of content was motivational/inspirational, 23% testimonial-based, 15.5% promotional, 13.6% humorous, and 7% scientific/educational. Reference to scientific evidence was identified in 5.8% of the content. Quality assessment indicated GQS poor quality (87.3%). Content reliability with modified-DISCERN was extremely low (0/5 score:68.1% vs 5/5 score:0%).

Conclusions: Adolescents' health literacy on anti-obesity medication through TikTok is characterized by low quality and poor reliability.

Anastasia Gavriilidou
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

Eleni P. Kotanidou (contact person)
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece
e-mail: epkotanidou@auth.gr

Antonios Gardikiotis
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

Assimina Galli-Tsinopoulou
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

YOUNG DOCTORS

Universal Dried Blood Spot Screening for Congenital Cytomegalovirus is Feasible and Improves Detection Over Selective Screening: A Nationwide Pilot

Nika Eržen, Jernej Kovač, Barbka Repič Lampret, Urh Grošelj, Aneta Soltirovska Šalamon, Gregor Nosan

Background: Congenital cytomegalovirus (cCMV) is the most common congenital viral infection and a leading cause of sensorineural hearing loss and neurodevelopmental impairment. Universal dried blood spot (DBS)-based screening has gained increasing attention, but its implementation remains debated. We evaluated the feasibility of universal DBS screening for cCMV in Slovenia and compared its detection rate with historical selective screening.

Methods: In this prospective nationwide pilot study, 5,556 newborns underwent DBS screening for cCMV between May and September 2023. CMV DNA was detected by quantitative PCR, with positive results confirmed by urine PCR within 21 days, followed by clinical evaluation. Detection rates were compared with national registry data from 2003–2022.

Results: cCMV was confirmed in 10 of 13 screen-positive newborns, yielding a lower-bound birth prevalence of 1.80 per 1,000 live births (95% CI, 0.98–3.31), significantly higher than the historical detection rate of 0.09 per 1,000 ($p<0.001$). All cases were clinically unsuspected at birth and passed newborn hearing screening. Six infants were classified as symptomatic and received valganciclovir. No clinically suspected cCMV cases occurred following a negative DBS result.

Conclusions: Universal DBS screening was feasible within Slovenia's newborn screening program, substantially improved cCMV detection, and supports consideration of population-based newborn screening.

Nika Eržen
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Jernej Kovač
Clinical Institute of Special Laboratory Diagnostics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Barbka Repič Lampret
Clinical Institute of Special Laboratory Diagnostics, University Medical Centre Ljubljana, Ljubljana, Slovenia

Urh Grošelj
Department of Endocrinology, Diabetes and Metabolic Diseases, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; Centre for Rare Diseases, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Aneta Soltirovska Šalamon
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gregor Nosan (contact person)
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: gregor.nosan@kclj.si

Clinical Presentation of Hospitalized Children With Rotavirus Infection

Andrej Lipužič

Acute gastroenteritis due to rotavirus infection is one of the most common reasons for hospitalization of children, particularly in the age group up to 5 years. Rotavirus remains a key cause of clinically significant infections that may lead to dehydration, electrolyte imbalances, and the need for hospital treatment. In a retrospective analysis, we included 359 children hospitalized at the Klinika za infekcijske bolezni in vročinska stanja between the beginning of 2022 and the end of 2024, in whom rotavirus was confirmed in stool samples using a molecular method (polymerase chain reaction, PCR). The median age of children at admission was 2.5 years, with most cases occurring in children aged 1–4 years, slightly more often in boys. The incidence of the disease showed a distinct seasonal pattern, with the highest number of cases in winter and early spring. The most common symptoms at admission were diarrhea, vomiting, and fever. In most patients, dehydration was the main reason for hospitalization, while 12 children (3%) were admitted due to neurological symptoms. A smaller proportion of hospitalized children presented with electrolyte and acid-base disturbances. The average duration of hospitalization was approximately 3 days, with only a few patients requiring treatment in the intensive care unit. Only 7.8% of children had been vaccinated against rotavirus; among them, we observed a somewhat milder clinical course, though without differences in the length of hospitalization. The low vaccination coverage indicates room for improvement, as broader vaccine uptake could significantly reduce the disease burden, prevent severe complications, and contribute to lowering the socio-economic impact of rotavirus infection in children.

Andrej Lipužič (contact person)
Zdravstveni dom dr. Julija Polca Kamnik, Kamnik, Slovenia

Genetic Background of Cerebral Palsy

Ula Arkar Silan, Ana Trebše, Anja Troha Gergeli, Jernej Kovač, Mihael Rogač, Robert Šket, Tina Bregant, David Neubauer, Borut Peterlin, Damjan Osredkar

Introduction: Cerebral palsy (CP) is a permanent disorder of movement and/or posture caused by a non-progressive injury to the developing brain. In addition to traditional risk factors such as prematurity and adverse prenatal or perinatal events, genetic contributions to CP are increasingly recognized, with recent studies demonstrating substantial diagnostic yields.

Methods: Children born after 2003 and included in the Slovenian National Cerebral Palsy Registry without an established genetic diagnosis were invited to participate. Whole-exome sequencing was performed, followed by targeted evaluation of 110 genes associated with CP. Variants were interpreted according to the American College of Medical Genetics and Genomics guidelines.

Results: The study included 136 children. Clinically relevant genetic variants were identified in 9 participants (6.6%). These comprised pathogenic, likely pathogenic, and variants of uncertain significance considered likely clinically relevant. Affected genes were ATL1, CTNNB1, DYRK1A, KMT2A, PROC, SPAST, ZC4H2, and ZSWIM6.

Conclusions: Genetic analysis identified definite, probable, or possible genetic causes in a subset of Slovenian children with CP. These findings improved understanding of CP etiology, as well as counseling and clinical management. As disease-modifying treatments continue to emerge, defining the genetic background of CP is becoming increasingly important for individualized care.

Ula Arkar Silan (contact person)
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: ula.arkar@kclj.si

Ana Trebše
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

The Utility of Newer Methods and Biological Markers in the Management of Children With Cardiovascular Risk

Mirjam Močnik, Sonja Golob Jančič,
Martina Filipič, Nataša Marčun Varda

Background: The doctoral thesis focused on ultrasound elastography, a newer ultrasound method that enables assessment of tissue elasticity, as well as newer markers of renal or cardiovascular damage, to assess premature atherosclerosis and cardiovascular risk in different patient groups.

Methods: We included 129 subjects in the study: 46 paediatric patients with chronic kidney disease, 50 patients with hypertension, and 33 healthy subjects who served as a control group. Several anthropometric measurements, blood pressure, pulse wave velocity, and body composition assessment were carried out, and ultrasound elastography of the liver and kidneys was performed, with blood and urine collected for basic and additional investigations of newer biological markers.

Results: Reduced liver elasticity was observed in both research groups, aggravated by excess body weight. With excess body weight, the elasticity of the kidneys was also reduced, indicating a negative effect of clustering cardiovascular risk factors. When evaluating newer biological markers, the potential use of the salusin-β molecule in cardiovascular risk assessment was evident, as was the need for further research on the role of the interleukin-2 receptor and uromodulin in certain patient groups.

Conclusions: Ultrasound elastography and newer biological markers offer additional potential for cardiovascular risk stratification in children.

Mirjam Močnik (contact person)
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia
e-mail: mirjammocnik91@gmail.com

Sonja Golob Jančič
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Martina Filipič
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Nataša Marčun Varda
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Anja Troha Gergeli
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jernej Kovač
Clinical Institute of Special Laboratory Diagnostics, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Mihael Rogač
Clinical institute of genomic medicine, University Medical Centre Ljubljana, Ljubljana, Slovenia

Robert Šket
Clinical Institute of Special Laboratory Diagnostics, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tina Bregant
Center for education, rehabilitation, and training (CIRIUS) Kamnik, Kamnik, Slovenia

David Neubauer
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Center for Developmental Neuroscience, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Borut Peterlin
Clinical institute of genomic medicine, University Medical Centre Ljubljana, Ljubljana, Slovenia

Damjan Osredkar
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Center for Developmental Neuroscience, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Children With Food-Induced Anaphylaxis and Mast Cell Disorders

Tadej Pungertnik, Tina Vesel Tajnšek, Matija Rijavec, Anja Koren Jeverica, Tadej Avčin, Peter Korošec

Introduction: Food-induced anaphylaxis amongst children is increasing in prevalence. Recent data suggests that mast cell disorders such as hereditary α-tryptasemia (HαT) and KIT p.D816V mutation are associated with more severe anaphylaxis in venom and drug allergy. Our aim to assess the association of HαT and KIT p.D816V with food-induced anaphylaxis in children.

Methods: From August 2022 to July 2024 we prospectively recruited children with systemic allergic reactions referred to a single tertiary paediatric centre and children with no chronic comorbidities as healthy controls. All had their TPSAB1 gene locus genotyped and KIT p.D816V somatic mutation frequency was measured.

Results: 129 individuals were diagnosed with food-induced anaphylaxis (36 with SGSAR 2 and 93 with SGSAR 3–5 grades). The prevalence of HαT in healthy controls was 3.4% and 8.5% in food anaphylaxis group, and was highest in peanut allergy (16.1%, p = .045). Anaphylaxis severity was not associated with α-tryptase carrier status. Only one KIT p.D816V positive individual was identified, with hazelnut anaphylaxis (SGSAR 2).

Conclusions: HαT was associated with peanut-induced anaphylaxis and was overall more prevalent in children with food-induced anaphylaxis than in the general population (~4.7%) or healthy controls. KIT p.D816V was rare and did not co-occur with HαT.

Tadej Pungertnik (contact person)
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: tadej.pungertnik@kclj.si

Tina Vesel Tajnšek
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Matija Rijavec
University Clinic of Respiratory and Allergic Diseases, Golnik, Slovenia, Ljubljana, Slovenia

Anja Koren Jeverica
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Peter Korošec
University Clinic of Respiratory and Allergic Diseases, Golnik, Slovenia, Ljubljana, Slovenia; Faculty of Pharmacy, University of Ljubljana, Ljubljana, Slovenia

SUPPORTING YOUTH MENTAL HEALTH – FROM PUBLIC HEALTH TO PRACTICE

Project: "Early Identification of Mental Health Problems and Preventive Work with Adolescents"

Domen Kralj, Sandra Mihelič Jaidzeka, Jerneja Kožar, Polonca Truden Dobrin, Ana Šemrov, Nuša Zadravec Šedivy, Vita Poštuvan

Introduction: Early identification of mental health difficulties in adolescence significantly contributes to early intervention and reduces the risk of developing mental disorders in adulthood. Within a project conducted at the National Institute of Public Health, we piloted a mental health screening protocol for secondary school students as part of routine preventive health examinations.

Methods: Implementation took place in three local settings (Nova Gorica, Celje, and Murska Sobota). A total of 253 students completed screening tools for anxiety (GAD-7) and depression (PHQ-9) in a school setting. Results were reviewed by designated school physicians, who – based on the identified level of risk – conducted an additional screening interview and referred adolescents to further care as needed.

Results: Moderate or severe anxiety was identified in 12.3% of students, moderate or severe depression in 14.2%, and acute risk in 1.2%. GAD-7 and PHQ-9 scores were statistically significantly associated with the risk assessment from the screening interview ($p < 0.001$). We identified 14.4% of students with clinically significant symptoms who had not yet received any professional support. A total of 26.0% of students were referred for further care.

Conclusions: Mental health screening within routine preventive health examinations is implementable. However, further evaluation is needed to assess the organisational, staffing, and time burden on practitioners.

Domen Kralj (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: domen.kralj@nijz.si

Sandra Mihelič Jaidzeka
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Jerneja Kožar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Polonca Truden Dobrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Ana Šemrov
Faculty of Arts, University of Ljubljana, Ljubljana, Slovenia

Nuša Zadravec Šedivy
Slovenian Centre for Suicide Research, University of Primorska, Koper, Slovenia

Vita Poštuvan
Slovenian Centre for Suicide Research, University of Primorska, Koper, Slovenia

Adverse and Positive Childhood Experiences' Association With Health-related Quality of Life: a Cross-sectional Study

Maarten Remmers, Stijn Michielse, Christian Hoebe, Rianne Reijs

Introduction: Adverse Childhood Experiences (ACEs) might increase the risk for lower health-related quality of life (HRQoL). Globally, 60.1% of adults experienced ≥1 ACEs. Positive Childhood Experiences (PCEs) might buffer against consequences of childhood adversity. We aimed to explore the relationship and interaction between ACEs, PCEs and HRQoL in a general, western population.

Methods: We conducted a digital survey in a general, Dutch population. We assessed demographics (age, sex, cultural background, educational level of respondent and parents, and childhood poverty), 10 PCEs, 13 ACEs, and HRQoL. The associations between ACEs, PCEs and HRQoL were analysed using multivariable linear regression analysis.

Results: 8947 respondents completed the questionnaire. In average, respondents had experienced 1.0 ACEs, and 4.3 PCEs. 54% reported no ACEs and 9.9% reported 4-13 ACEs. 0-5 PCEs, 6-8 PCEs and 9-10 PCEs were reported by 33%, 39% and 29%, respectively. Higher ACE scores were associated with lower mental (B=-1.95, p<.001) and physical (B=-2.02, p<.001) HRQoL, while the PCE-score was associated with higher mental (B=1.91, p<.001) and physical (B=1.10, p<.001) HRQoL. PCEs did not moderate the association between ACEs and HRQoL.

Conclusions: ACEs and PCEs have opposing associations with HRQoL. PCEs might be an independent, influenceable factor.

Maarten Remmers (contact person)
Department of Social Medicine, Living Lab Public Health Mosa, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Youth Health Care, Public Health Service Limburg-North, Venlo, The Netherlands
e-mail: m.remmers@maastrichtuniversity.nl

Stijn Michielse
Department of Health Policy & Development, Team Research and Monitoring, Public Health Service South Limburg, Heerlen, The Netherlands; School for Mental Health and Neurosciences, Maastricht University, Maastricht, The Netherlands; Department of Clinical Psychology, Open University of The Netherlands, Heerlen, The Netherlands

Christian Hoebe
Department of Social Medicine, Living Lab Public Health Mosa, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Health Policy & Development, Living Lab Public Health Mosa, Public Health Ser-vice South Limburg, Heerlen, The Netherlands; Department of Medical Microbiology, Infectious Diseases and Infection Prevention, Care and Public Health Research Institute, Maastricht University Medical Centre, Maastricht, The Netherlands

Rianne Reijs
Department of Social Medicine, Living Lab Public Health Mosa, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, the Netherlands

Using "Super Skills for Life" Programme to Prevent Anxiety and Depression in Adolescents

Cecilia A. Essau

Background: Anxiety and depression affect around 20% of adolescents, often emerging before age 14 and contributing to poor academic performance and suicidal behaviour. Schoolbased interventions can reduce barriers to care, including cost and stigma, yet most targeted programmes have been conducted in highincome countries and show methodological limitations. There is a need for rigorous schoolbased prevention research in lowresource settings such as Malaysia. This ongoing study evaluates the effectiveness of the Super Skills for Life (SSL) psychosocial intervention in reducing anxiety and depression and improving wellbeing among adolescents aged 12–14.

Methods: This twoarm randomised controlled trial compares SSL with a studyskills control condition using 1:1 cluster randomisation at classroom level. Adolescents with moderate to severe anxiety or depression on the Depression Anxiety and Stress Scale-21 are eligible.

Results: Preliminary findings show significant reductions in anxiety and depression from baseline to 2month followup, with a significant gender effect for anxiety. Videobased behavioural analysis also indicates improvements in eye gaze, vocal quality, speech length, comfort, and conversational flow.

Conclusions: These preliminary results suggest that a manualised CBTbased intervention can be effectively delivered by school staff in routine school settings.

Cecilia A. Essau (contact person)
School of Psychology, University of Roehampton, London, United Kingdom
e-mail: c.essau@roehampton.ac.uk

Strengthening Preventive Youth Mental Health: Co-Creating Guidelines with Parents and Young People

Marianne de Wolff, Meinou Theunissen

Background: The burden of mental disorders among children and adolescents has increased over the past 30 years, particularly for anxiety, depression, and conduct disorders [1]. In the Netherlands, Youth Health Care (YHC) provides free, accessible preventive care (0–18 years). YHC professionals use evidence-based guidelines to ensure high-quality, consistent care. Actively incorporating the perspectives of parents and young people is essential to strengthen guidelines' applicability in practice.

Method: In 2025, the youth mental health guidelines were thoroughly revised. Scientific evidence was updated, and parents and young people were more actively involved than before. Focus groups identified needs and priorities and later provided feedback on draft guidelines. An external expert supported integration of cultural sensitivity.

Results: The updated guidelines offer diversity-sensitive recommendations better aligned with families' needs. Parents want to know where to ask questions about behaviour without their child immediately receiving a diagnosis. Young people prefer not to be labelled and need clear information on recognizing stress, mental health problems, and how getting help works.

Conclusions: Actively involving parents and young people in the revision process aligns guidelines more closely with families' real-life needs. This collaborative approach strengthens relevance, acceptance, and practical usability, ultimately improving preventive care for children and adolescents.

Marianne de Wolff (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: marianne.dewolff@tno.nl

Meinou Theunissen
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Behavioural Impacts of Food Allergies and Intolerances in Children and Adolescents: A Cohort Study

Gregorio Torchia

Food allergies and intolerances are increasingly prevalent among paediatric populations, with potential implications extending beyond physical health. This retrospective cohort study investigates the association between food-related hypersensitivities and behavioural outcomes in children and adolescents. A total of 43 participants aged 6–17 years were followed over a three-year period. Clinical diagnoses of food allergies and intolerances were confirmed through standardised testing and dietary assessments. Behavioural outcomes were measured using validated parent- and self-reported questionnaires, focusing on anxiety, attention, social interaction, and emotional regulation. Results indicated that children with food allergies exhibited significantly higher levels of anxiety and social withdrawal compared to non-affected peers ($p < 0.01$). Those with food intolerances showed an increased prevalence of attention difficulties and irritability ($p < 0.05$). Notably, the coexistence of multiple food sensitivities was associated with more pronounced behavioural challenges. Adjustments for confounding factors, including socioeconomic status and comorbid conditions, did not alter these findings. This study highlights the importance of recognising behavioural dimensions in managing paediatric food allergies and intolerances. Early multidisciplinary interventions may improve both psychological well-being and quality of life in affected individuals.

Gregorio Torchia (contact person)
Nutritional Clinic Nutripanda, Edinburgh, United Kingdom
e-mail: g.torchia@nutripanda.com

The Role of School Medicine Specialist in Screening For ADHD, Conduct Disorder and Oppositional Defiant Disorder

Branka Puškarić-Saić, Daniela Franulić, Lara Dadić

Background and aims: Attention deficit and hyperactivity disorder (ADHD) is growing in prevalence worldwide, whereas it is still underdiagnosed and not fully accepted as a diagnosis and behaviour is often attributed to immaturity and lack of parental authority over the child. ADHD is a neurodevelopmental disorder with impairment in the development of the prefrontal cortex and can be diagnosed as early as preschool age and into later adulthood. The earlier it is diagnosed; the earlier treatment can begin. As a school medicine specialist evaluates a child's behaviour before entering the schooling system by observing the child, their role could be crucial in early detection of ADHD, as well as conduct disorder and oppositional defiant disorder. The aim of this presentation is to show the important role of school medicine specialists in diagnosing these disorders early and potentially reducing referrals to psychiatric hospitals for diagnostics, which often cause negative parental attitudes and long waiting lists due to limited capacities.

Methods: Different diagnostic tools for the detection of ADHD, conduct disorder, and oppositional defiant disorder were reviewed. Elements from these questionnaires and observation protocols can be performed during the routine check-up of a child for enrolment in the schooling system.

Results: A universal school-medicine-based algorithm should be created, and a screening questionnaire/diagnostic tool for ADHD, conduct disorder, and oppositional defiant disorder should be developed and validated for implementation in regular screening when evaluating a child's readiness for school. Consequently, there would be fewer referrals to psychiatric clinics for diagnostics, which currently involve waiting times of at least three months. Children could instead be directly referred to appropriate therapy, allowing earlier intervention because school medicine specialists would have completed the initial diagnostic process.

Conclusions: The role of school medicine specialists is still underrated in the diagnosis of these disorders, even though it could be crucial for timely intervention for affected children and for reducing pressure on psychiatric hospitals.

Branka Puškarić-Saić
Andrija Štampar Teaching Institute of Public Health,

School of Medicine, University of Zagreb, Zagreb, Croatia; Medical Faculty, University Zagreb, Zagreb, Croatia; Primary Healthcare Centre Zagreb, Zagreb, Croatia

Daniela Franulić (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Medical Faculty, University Zagreb, Zagreb, Croatia
e-mail: daniela.franulic@stampar.hr

Lara Dadić
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Medical Faculty, University Zagreb, Zagreb, Croatia; Primary Healthcare Centre Zagreb, Zagreb, Croatia

Health Behaviours Among Young People With Autism Spectrum Disorder and Intellectual Disabilities, With a Particular Focus on Mental Well-being in Hungary

Ágota Barabás, Péter Takács, Mariann Móré, Anita M. Grestyák, Attila Cs. Nagy, Renáta J. Erdei

Introduction: People with disabilities typically have poorer health and lower self-rated health. They have a greater need for health care, often experience health problems more frequently, face greater difficulties in accessing health care, and are frequently excluded from health promotion. The aim of the study was to assess the health behaviours and mental well-being of young people aged 12–18 with intellectual disabilities and autism spectrum disorders in the Northern Great Plain region of Hungary.

Materials and Methods: A cross-sectional questionnaire survey was conducted with the participation of 185 young people. We used a customized questionnaire based on the Health Behaviour in School-aged Children (HBSC) survey, which assessed dietary habits, oral hygiene, physical activity, mental well-being, and self-reported health status. We classified the sample into three groups: the ID1 group (with learning disabilities), the ID2 group (with intellectual disabilities), and the ID+ASD group, which includes young people with both intellectual disabilities and autism spectrum disorder.

Results: Dietary habits were unfavourable. The ID1 group reported significantly higher rates of anxiety several times a week (17.8% vs 5.6% and 6.9%, $p < 0.001$), sleep difficulties (28.8% vs. 7.4% and 15.5%, $p = 0.032$), and dizziness (9.6% vs. 1.9% and 3.4%, $p = 0.022$) compared to the other two groups.

Conclusions: To improve the mental well-being of affected children, the introduction of psychological support and mental health programs is recommended. It is recommended to incorporate mental well-being screening into school health screenings. It is recommended to develop health promotion programs for young people with disabilities based on specific methodological principles (adapted for better understanding).

Ágota Barabás (contact person)
Department of Health Methodology and Prevention, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary
e-mail: barabas.agota@etk.unideb.hu

Péter Takács
Department of Health Informatics, Faculty of Health Sciences,

Predictors of Remission and Relapse in Adolescents With Anorexia Nervosa and Atypical Anorexia Nervosa

Eylem Şerife Kalkan, Nur Mutlu,
Melis Pehlivantürk Kizilkan,
Demet Aygün Ari, Sinem Akgül

Predictors of remission and relapse in adolescents with anorexia nervosa (AN) and atypical AN (AAN) remain unclear. This study aimed to evaluate remission and relapse outcomes and identify their clinical predictors in adolescents with AN/AAN. Medical records of adolescents aged 12-18 years with AN/AAN followed for at least one year were retrospectively reviewed. Remission was defined as achieving ≥85% of ideal body weight with stable vital signs, resumption of menstruation, and absence of food restriction, binge-eating/purging for ≥12 weeks. Relapse was defined as symptom recurrence after 12-week remission with ≥15% weight loss. A total of 133 adolescents were included (86.5% female; mean age 14.7±1.6 years) with a mean follow-up of 27.0±11.7 months. During follow-up, 85.7% achieved remission and 28.1% relapsed. Patients who achieved remission were younger, had shorter hospitalization at presentation, fewer hospitalizations at follow-up, and greater maximum weight gain. Younger age was the only variable associated with relapse. In multivariable logistic regression analysis, younger age, hospitalization at follow-up, and greater maximum weight gain independently predicted remission. These findings underscore the importance of early detection, close monitoring and adequate weight restoration to improve outcomes in adolescents with AN/AAN in particular younger youth.

Eylem Şerife Kalkan (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: eylemkalkan@hacettepe.edu.tr

Nur Mutlu
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Melis Pehlivantürk Kizilkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Demet Aygün Ari
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

University of Debrecen, Debrecen, Hungary; Department of Health Informatics, Faculty of Health Sciences, University of Debrecen, Nyiregyhaza, Hungary

Mariann Móré
Faculty of Health Sciences, Institute of Social and Sociological Sciences, University of Debrecen, Nyiregyhaza, Hungary

Anita M. Grestyák
Department of Health Methodology and Prevention, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Attila Cs. Nagy
Department of Health Informatics, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary; Department of Health Informatics, Faculty of Health Sciences, University of Debrecen, Nyiregyhaza, Hungary

Renáta J. Erdei
Department of Health Methodology and Prevention, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Moderating Effects of Age and Treatment Adherence in Therapist-Guided Internet-Delivered Cognitive Behavioural Therapy for Anxiety and Depression Among Young Adults – A Nationwide Retrospective Cohort Study

Noora Seilo, Sakari Lintula,
Samuli Saarni, Suoma Saarni

Introduction: Among people younger than 25 years, mental health problems, particularly anxiety and mood disorders, are the leading cause of disability-adjusted life-years, accounting for 45 % of the global burden of disease. The need for early, effective, and accessible treatments has been emphasized, and digital mental health programs have emerged as a promising solution. This study aims to examine whether treatment outcomes of therapist-guided internet-delivered cognitive behavioural therapy (iCBT) for anxiety and depression di-er between young adults (18-25 years) and older age groups and whether treatment adherence mediates these effects.

Methods: Participants were 32.297 adults who began an iCBT program for depressive disorder (DD) or generalized anxiety disorder (GAD) between 2014 and 2025. Primary outcome measures were Patient Health Questionnaire-9 for DD and a 7-item anxiety scale (GAD-7) for GAD. Non-linear associations between age, adherence and pre-post outcome measurement differences were modelled using tensor product splines.

Results: Age was associated with outcome measurement differences so that younger age predicted smaller decrease in outcome measures. This association was independent of adherence, which was also associated with outcome measurement differences.

Conclusions: Findings suggest that adapting iCBT programs to better meet the needs of young adults should be considered and strategies to enhance treatment adherence may improve outcomes in this age group.

Noora Seilo (contact person)
Tampere University, Tampere, Finland
e-mail: noora.seilo@tuni.fi

Sakari Lintula
University of Helsinki, Helsinki, Finland

Samuli Saarni
Tampere University, Tampere, Finland; Psychiatry Department, Helsinki University Hospital, Helsinki, Finland; The Wellbeing Services County of Pirkanmaa, Tampere, Finland

Suoma Saarni
Tampere University, Tampere, Finland; Psychiatry Department, Helsinki University Hospital, Helsinki, Finland; The Well-Being County of Päijät-Häme, Lahti, Finland

Child and Adolescent Mental Health and Psychological Wellbeing: A Comprehensive Mapping of Prevalences, Trends, and Emerging Challenges Across 30 European Countries

Eleonora Doz, Viola Nuvoli, Giorgia Morosini,
Francesca Iris Bellotti, Simona Ponte,
Marianna Zanette, Marzia Lazzerini

Background: Child and adolescent mental health is a growing public health concern worldwide. Across Europe, increasing prevalence and declining wellbeing are reported, but evidence remains fragmented. This study aimed to provide an integrated overview of child and adolescent mental health epidemiology across 30 European countries.

Methods: We searched for epidemiological data via websites of international organisations (WHO, UNICEF, OECD, EU), academic databases (PubMed, Scopus, Web of Science, PsycArticles), Google, and consulting experts in the field. Data were analysed at country level and aggregated to assess overall prevalence, trends, sex differences, and regional variability.

Results: Forty-eight data sources were identified. Approximately 7% of children and 25% of adolescents live with a mental disorder, most commonly anxiety, depression, and behavioural conditions. Prevalence has increased over time, with greater impact among adolescents and girls. Digital-related risks are rising, including excessive internet use (25%), problematic social media use (11%), and problematic gaming (12%). Substantial variability exists across countries, with inconsistencies in measurement.

Conclusions: These findings highlight the urgent need for coordinated action in paediatric and community settings. Strengthening surveillance, improving early identification, and implementing evidence-based, scalable interventions are essential to address the mental health needs and emerging challenges of children and adolescents.

Eleonora Doz (contact person)
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy
e-mail: eleonora.doz@burlo.trieste.it

Viola Nuvoli
Clinical Department of Medical, Surgical and Health Sciences, University of Trieste, Trieste, Italy

Giorgia Morosini
Department of Life Sciences, University of Trieste, Trieste, Italy

Francesca Iris Bellotti
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Bullying and Health Lifestyle Behaviours in Adolescents

Emine Gülfem Anaç, Sinem Akgül,
Melis Pehlivantürk Kızılkan, Zeynep Tüzün Gün

Peer bullying may impair emotional regulation and coping in adolescents, potentially disrupting healthy lifestyle behaviours and increasing social media addiction. This study aimed to determine the prevalence of bullying involvement among adolescents and evaluate its associations with healthy lifestyle behaviours, and social media addiction. This cross-sectional study included 503 adolescents aged 13–18 years. Healthy lifestyle behaviours were assessed using the Adolescent Health Promotion Scale–Short Form; social media addiction with the Social Media Addiction Scale for Adolescents, and bullying involvement with the Traditional Peer Bullying Scale. The median age was 14 years (IQR=3), and 52.9% of participants were female. Overall, 15.5% were uninvolved, 10.1% victims, 18.9% bullies, and 55.5% bully-victims. Healthy lifestyle scores were higher among uninvolved adolescents and victims and lowest in bully-victims ($p<0.0001$). Social media addiction levels were highest in bully-victims and lowest among uninvolved adolescents ($p<0.001$). Bully-victims showed the most unfavourable profile, possibly related to multiple stressors. The coexistence of victimization and perpetration may weaken adaptive coping and increase engagement in risk behaviours. These findings suggest that bullying screening in adolescent health assessments should be considered not only a psychosocial measure but also a critical indicator of broader lifestyle and behavioural risks.

Emine Gülfem Anaç (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: emine.anachacettepe.edu.tr

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Melis Pehlivantürk Kızılkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Zeynep Tüzün Gün
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Simona Ponte
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Marianna Zanette
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Marzia Lazzerini
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Intersectoral Collaboration in Addressing School Bullying

Éva Zsuzsanna Mezei, Magdolna Tóthné Juhász, Anikó Feketéné Fontos

Background: In August 2025, the József Fodor Society of School Health Care launched an intersectoral pilot program in a Hungarian city to improve the identification and management of school bullying.

Methods: The program was based on the ENABLE methodology, adapted to national conditions and led by a psychologist with expertise in the subject. School doctors and nurses completed a two-day intensive training course. Subsequently, they delivered presentations to teaching staff and organized practice-oriented consultations for form teachers. They clarified definitions, competencies, and the roles of case management teams. An anti-bullying protocol template, information leaflets for parents, and guides for teachers were provided.

Results: 4 school doctors, 8 nurses, and 5 schools participated. Staff training was completed in every school, and case management teams were established. Parents were informed through meetings and guides, while students discussed acceptance and reporting mechanisms during lessons. The program supports the mental health of 3,300 students.

Conclusions: School health professionals can effectively facilitate institutional action against bullying.

Éva Zsuzsanna Mezei (contact person)
Fodor József Iskolaegészségügyi Társaság (Hungarian Society of School Healthcare), School Health Services, Budapest, Hungary
e-mail: mezeie63@gmail.com

Magdolna Tóthné Juhász
Fodor József Iskolaegészségügyi Társaság (Hungarian Society of School Healthcare), School Health Services, Budapest, Hungary

Anikó Feketéné Fontos
Fodor József Iskolaegészségügyi Társaság (Hungarian Society of School Healthcare), School Health Services, Budapest, Hungary

STRENGTHENING PREVENTIVE CARE FOR CHILDREN AND ADOLESCENTS

Universal Screening for Familial Hypercholesterolemia in Preschool Children and Their Families in Slovenia (FH-FAMILIES)

Mia Becker, Jan Kafol, Barbara Cugalj Kern, Bernarda Vogrin, Matej Mlinarič, Jaka Šikonja, Jernej Završnik, Ana Drole Torkar, Tadej Battelino, Jernej Kovač, Urh Grošelj

Background: Familial hypercholesterolemia (FH) is a common inherited metabolic disorder, occurring in about 1 in 300 people. Evidence suggests childhood is the best time for FH detection, enabling early intervention and parent screening.

Methods: Our research is prospective, non-interventional and cohort and it was conducted from 2023 to 2026. The study begins at the primary level, where children aged 5–6 undergo routine blood screening and families complete a brief questionnaire on cardiovascular history. Those with elevated cholesterol or positive family history are referred to University Children's Hospital Ljubljana for further evaluation. At the tertiary level, genetic testing confirms diagnosis, followed by cascade screening of first-degree relatives.

Results: The study collected data from 4,770 children (2,535 males and 2,235 females), with cholesterol levels measured in 4,193. Forty-one children were referred to tertiary care for further assessment. Genetic testing confirmed positive results in 22 children: 19 had FH-related pathogenic variants. Extrapolation to the preschool population suggests a genetically confirmed FH prevalence of about 1:220.

Conclusions: Early preschool screening effectively detects FH, reveals higher-than-expected prevalence, and enables timely treatment and family-wide cascade screening. This strategy has the potential to significantly reduce long-term cardiovascular risk at both the individual and population level.

Mia Becker (contact person)
Primary Healthcare Centre Maribor, Maribor, Slovenia; Faculty of medicine, University of Maribor, Maribor, Slovenia
e-mail: mia.becker101@gmail.com

Jan Kafol
Department of Vascular Diseases, Division of Internal Medicine, University Medical Centre Ljubljana, Ljubljana, Slovenia

Barbara Cugalj Kern
Clinical Institute for Special Laboratory Diagnostics, University Children's Hospital,
University Medical Centre Ljubljana, Ljubljana, Slovenia

Bernarda Vogrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia; Faculty of Medicine, University of Maribor, Maribor, Slovenia

Matej Mlinarič
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jaka Šikonja
Department of Endocrinology, Diabetes and Metabolic Diseases, Division of Internal Medicine, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Slovenia

Jernej Završnik
Primary Healthcare Centre Maribor, Maribor, Slovenia

Ana Drole Torkar
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tadej Battelino
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Jernej Kovač
Clinical Institute for Special Laboratory Diagnostics, University Children's Hospital,
University Medical Centre Ljubljana, Ljubljana, Slovenia

Urh Grošelj
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Optimal Timing for Neonatal Hearing Screening in Well-babies

Lisanne Vonk, Paula van Dommelen, Iris Eekhout,
Noëlle N. Uilenburg, Paul H. Verkerk, Kitty van der Ploeg

Background: In the Netherlands, preventive child healthcare (PCHC) has been carrying out neonatal hearing screening in well-babies since 2006. Aim of this study was to examine the relationship between age of newborns and the false positive referral rate of the first hearing screening using transient evoked otoacoustic emission test (OAE), to identify the most efficient timing for OAE screening. Additionally, we investigated the relationship between type of OAE screening device (Echoscreen (ES)I/II versus ESIII) and the referral rate during the first screening.

Methods: We used data from the Dutch universal well-baby neonatal hearing screening programme by PCHC between 2013 and 2023. Multilevel logistic regression analyses were performed to estimate the probability of a referral in 2023 for newborns screened in 2022 and 2023.

Results: We included a total of 1,663,646 newborns for 2013-2022 and 323,507 newborns for 2022-2023. The lowest false positive referral rates were found between days five and thirteen, ranging from 3.3-3.9%. ESIII significantly increased the probability of a referral compared to ESI/II (odds ratio = 1.84, 95% confidence interval = 1.65-2.06).

Conclusions: Timing of neonatal hearing screening significantly impacts false positive referral rate. Furthermore, the likelihood of a referral is significantly higher when using the ESIII compared to the ESI/II.

Lisanne Vonk (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: l.vonk@maastrichtuniversity.nl

Paula van Dommelen
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Iris Eekhout
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Noëlle N Uilenburg
Dutch Foundation for the Deaf and Hard of Hearing Child, Amsterdam, The Netherlands

Paul H. Verkerk
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Kitty van der Ploeg
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

20 Years of Neonatal Hearing Screening by Child Health Services in the Netherlands

Kitty van der Ploeg, Joske Hoes, Noëlle Uilenburg, Lisanne Vonk, Paul Verkerk, Saskia Vasenna, Lion van den Bosch

In 2026, the Netherlands marks 20 years of neonatal hearing screening (NHS) conducted by Child Health Services (CHS). The program began in 2002 and achieved nationwide coverage by 2006. The NHS is offered to every newborn, except NICU infants, who follow another protocol established in 1998. Municipal funding ensures the screening is free for families, aiming to detect permanent hearing loss (≥40dB) in one or both ears early enough to enable intervention before six months of age. The Dutch protocol consists of maximally three rounds: two rounds of OAE testing followed by AABR. Most screenings occur during home visits, often combined with newborn bloodspot screening. Over two decades, more than three million newborns have been screened, with over 4,000 cases of hearing loss identified. The program's strengths include consistently high participation (>99% since 2006) and nearly complete followup after referral for diagnostic assessment. Challenges included temporary suspension during COVID19 and recent equipment shortages, both requiring substantial operational efforts. The program's longterm success is attributed to the dedication and collaboration of professionals across the Dutch hearing healthcare field, strong regional coordination by CHS, national coordination by the RIVM, standardized protocols, and expertise from the NSDSK. TNO monitors the NHS. Ongoing evaluation and research remain essential for future optimization.

Kitty van der Ploeg (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: kitty.vanderploeg@tno.nl

Joske Hoes
National Institute for Public Health and the Environment, Bilthoven, The Netherlands

Noëlle Uilenburg
Dutch Foundation for the Deaf and Hard of Hearing Child, Amsterdam, The Netherlands

Lisanne Vonk
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Paul Verkerk
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Saskia Vasenna
Child Health Service Organisation in the province South of Holland (Jong JGZ), Dordrecht, The Netherlands

Lion van den Bosch
National Institute for Public Health and the Environment, Bilthoven, The Netherlands

Development and Pilot Test of a Training Intervention for School Nurses in Germany to Address Critical Health Literacy

Jana Kaden, Birte Berger-Höger

Background: Critical health literacy (CHL) is essential for informed health choices. Schools are key settings for developing this competence early. School nurses could play a central role if they have the necessary competences. Therefore, we aimed to develop and pilot-test a training intervention on CHL for school nurses.

Methods: We developed a blended learning training programme oriented on the Six-Step-Approach for Medical Curriculum Development, and the MRC-Framework for Developing and Evaluating Complex Interventions. It was qualitatively pilot tested with school nurses in autumn 2025 regarding feasibility, acceptance and knowledge increase. Data were analysed using content analysis.

Results: Seven school nurses from different school types participated in the 30-unit (each 45 minutes) online- training. The educational content included evidence-based practice, risk communication and shared decision-making. Overall, the training was accepted and feasible regarding comprehensibility and usability. Participants reported knowledge and competence increase. Some found further professional education difficult to balance with their other work responsibilities. School nurses reflected the acquired competencies supportive for their professional practice and in addressing CHL at school.

Conclusions: The training is feasible and was well accepted. Further steps are necessary to evaluate its effectiveness. There is a need for the support of continuing professional education.

Jana Kaden (contact person)
Department Evaluation and Implementation Research in Nursing Science, Institute for Public Health and Nursing Research, University of Bremen, Bremen, Germany
e-mail: jana.kaden@uni-bremen.de

Birte Berger-Höger
Department Evaluation and Implementation Research in Nursing Science, Institute for Public Health and Nursing Research, University of Bremen, Bremen, Germany

Artificial Intelligence-based Decision Support for Guidelines in Preventive Youth Healthcare

Jacqueline Deurloo, Imme Moeskops, Olivier Blanson Henkemans

Background: Decision support systems (DSS) can support consistent application of evidence-based guidelines. Dutch preventive youth healthcare (PYHC) professionals use thirty-five national guidelines. Each guideline has a registration protocol based on the Basic DataSet (BDS), a national standard on how data is registered. Effective DSS require structured, interoperable data representations and the ability to translate textual data and guideline content into actionable clinical decisions.

Methods: We developed a Large Language Model (LLM)-driven DSS, using PYHC guidelines, BDS and registration protocols. Fourteen cases were used to compare clinical, guideline-based and LLM classifications and followup advice.

Results: The LLM accurately classified normal versus abnormal findings in all cases. LLM generated classifications fully matched guideline-based classifications (100% accurate), while follow up agreement was moderate (average 75% accurate) due to contextual factors such as missing history, professional experience, and regional variations.

Conclusions: The use of guidelines, registration protocols and data standards aids in applying generative AI in effective DSS development. This supports consistent registration, improves guideline implementation, and enhances clinical decision support. Human expertise remains essential for contextual assessment. A similar approach may be applicable in other healthcare domains, such as clinical and mental health care, provided that differences between AI and professional judgment are transparently addressed.

Jacqueline Deurloo (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands; GGD Hollands Noorden, Alkmaar, The Netherlands
e-mail: jacqueline.deurloo@tno.nl

Imme Moeskops
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands; SBOH, Utrecht, The Netherlands

Olivier Blanson Henkemans
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Smile! You're on CCTV: Exploring Critical and Sensitive Periods in the Lifelong Trajectories for Oral Diseases

Aleksander Sobczyk

This ubiquitous sign usually appears to remind us about constant observation and pressure to behave properly. But it also, perhaps unwarily, highlights that mouth is not purely a health matter, but something that is constantly socially monitored with a set of acceptable norms attached. The dental-medical divide seen in how we finance care, organize services, and prioritize treatment has turned oral health into a luxury rather than a basic necessity, making our smile the publicly visible marker of inequality. The chronic, cumulative, and common nature of oral diseases makes childhood and adolescence the critical and sensitive periods in their lifelong trajectories. Research shows that oral health habits adopted in childhood persist into adolescence and beyond. Adolescents face oral health challenges that differ from those of other age groups, shaped by distinct biological, behavioural, and social factors. Yet, dentists can't fight this battle alone. This session aims to draw the attention of other professionals to engage in screening for oral health issues, identify at-risk populations, promote the link between oral and systemic health, and advocate for including dental care into UHC.

'Smile, you're on CCTV' tries to capture a society that monitors appearances but overlooks the circumstances that shape them.

Aleksander Sobczyk (contact person)
University Dental Center, Wroclaw, Poland
e-mail: oleksobczyk@gmail.com

Referral Criteria for Preschool Education

Paula van Dommelen, Laurens P. van Buren, Jooske Verburg, Paul H. Verkerk

Preschool education (PE) targets children aged 2.5-4 years who need additional developmental support. In the Netherlands, PE referral criteria are set by municipalities. Until early 2024, referrals in the city of Utrecht were based on low parental education level and migration background, with optional referral by a Youth Healthcare (YHC) professional. This study examined whether development-based referral criteria, using the Dutch Development Instrument (DDI) and YHC assessments of speech and language development, better predict developmental delays than background characteristics alone. Electronic YHC records of children born between 2011-2014 were analysed. Special education between 4-12 years was the primary outcome, and schools for severe communication problems was secondary. Referral based solely on parental education and migration background showed limited sensitivity (55% for special education and 62% for communication focused schools) with an overall referral rate of 18%. Including YHC professional assessment improved sensitivity (75% and 85%), but increased referrals to 26%. The best performance was achieved using DDI milestones and YHC speech language assessment, combined with sex and parental education, yielding sensitivities of 78% and 96% and a referral rate of 17%. These findings indicate that development focused referral criteria more accurately identify children at risk of developmental delays and should play a central role in PE referral strategies.

Paula van Dommelen (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: paula.vandommelen@tno.nl

Laurens P. van Buren
Youth Health Care, Public Health, Municipality of Utrecht, Utrecht, The Netherlands

Jooske Verburg
Youth Health Care, Public Health, Municipality of Utrecht, Utrecht, The Netherlands

Paul H. Verkerk
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

What do High School Graduates Know About Human Papillomavirus Vaccination?

Vera Musil, Ivna Župić

Background: Human Papillomaviruses (HPV) vaccine can prevent infection that may lead to cancer. The aim of this study was to explore knowledge and perceptions regarding HPV vaccination.

Methods: A cross-sectional study was conducted on a sample of final year students (aged 18 and above, N=282) of high schools (gymnasium, four-year, three year) in Sinj. Data were obtained by anonymous questionnaire "Knowledge, attitudes and intention to HPV vaccination".

Results: The research encompassed 44.7% students (71.4% female), 20.6% of them received HPV vaccine. Higher vaccination rate was present among male (36.1% male vs. 14.4% female; P=0.008) and in gymnasium (23.3%). Average level of knowledge (36.14 points) was low (significantly lower than 50 points; P<0.001), 7.25 points higher in female compared to male, the highest in gymnasium (49.92 points) and the lowest in three-year schools (35.24 points; P=0.016.). Average level of attitude was high (3.36 points, P<0.001), higher in male than in female (3.81 vs. 3.60 points), the highest in gymnasium and the lowest in three-year schools (3.72 vs. 3.52 points). Average intention for HPV vaccination among not-vaccinated increased (P<0.001).

Conclusions: The results contribute to data about knowledge and attitude that could be used to motivate target groups for HPV vaccination.

Vera Musil (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia
e-mail: vmusil@snz.hr

Ivna Župić
Department of Maxillofacial Surgery, University Hospital of Split, Split, Croatia

The Influence of Health Education on HPV Vaccination Coverage

Ivana Kotromanovic Simic, Vera Musil, Darko Kotromanovic, Ivan Vukoja, Jelena Kovacevic, Nika Lovrincevic Pavlovic, Petra Puz Britvic, Ivan Miskulin

Human papillomavirus (HPV) infection is one of the most prevalent sexually transmitted infections worldwide, strongly associated with cervical cancer and other HPV-related malignancies; adequate knowledge and positive attitudes towards HPV vaccination are essential for improving vaccination coverage in school-age populations. This non-randomised clinical trial investigated HPV vaccination coverage, knowledge, and attitudes among 170 eighth-grade primary school students (76.9% participation rate) from four elementary schools in Osijek-Baranja County, Croatia, during the 2022/2023 school year; participants were divided into a subject group (n=79) who received a structured health education intervention and a control group (n=91) who did not. A specifically designed questionnaire was used to assess self-reported knowledge, evaluated knowledge levels, and attitudes towards HPV vaccination and infection, administered at baseline, immediately after education, and at four- and eight-weeks post-education in the subject group, while the control group completed the questionnaire at baseline and at eight weeks. HPV vaccination coverage of the observed generation was 62.0%, representing a 15.1 percentage point increase compared to the preceding generation (46.9%), and girls were significantly more vaccinated than boys; at baseline, no significant differences in evaluated knowledge or attitudes were observed between groups. By eight weeks post-education, the subject group demonstrated significantly higher self-assessed and evaluated knowledge compared to the control group, with a significantly higher proportion of subjects believing they would contract HPV-related cancer if unvaccinated, while positive gains in susceptibility and effectiveness domains were sustained throughout the follow-up period. These findings confirm that targeted health education delivered by school medicine physicians produces a lasting positive impact on HPV vaccination coverage, knowledge, and attitudes in adolescent populations, underscoring the critical role of school medicine in preventive public health interventions.

Ivana Kotromanovic Simic
Faculty of Medicine, University of Osijek, Osijek, Croatia

Vera Musil
Andrija Štampar Teaching Institute of Public Health, School

Human Papillomavirus Vaccination Coverage 2023-2025 and HPV Updated Vaccination Regulation in Estonia

Kristina Galdupaite

of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia

Darko Kotromanovic
Faculty of Medicine, University of Osijek, Osijek, Croatia

Ivan Vukoja
Faculty of Medicine, University of Osijek, Osijek, Croatia

Jelena Kovacevic
Faculty of Medicine, University of Osijek, Osijek, Croatia

Nika Lovrincevic Pavlovic
Faculty of Medicine, University of Osijek, Osijek, Croatia

Petra Puz Britvic
Faculty of Medicine, University of Osijek, Osijek, Croatia

Ivan Miskulin (contact person)
Faculty of Medicine, University of Osijek, Osijek, Croatia
e-mail: ivan.miskulin@mefos.hr

Introduction: Based on the latest research data, an updated National Immunization Schedule (NIS) against human papillomavirus (HPV) came into force in Estonia on February 1, 2024. Vaccination with a single dose of all 12-14-year-olds began at state expense. Also, catch-up target group for HPV vaccination are adolescents aged 15-18. Vaccination is organized and performed at schools by school nurses. Parental consent is required. 2018-2023 NIS regulated immunization against HPV as two doses' scheme available only for 12-14-year-old girls. The update was introduced to increase the overall number of vaccinated healthy people aged 12-18 and to interrupt HPV transmission.

Methods: Data analytics, data sources The Health and Welfare Information Systems Center (TEHIK) digital School Health Information System (eKTIS).

Results: National HPV coverage data (TEHIK) – year 2023 girls 12-14 y.o 56%, boys 0.3%; year 2024 girls 12-14 y.o 55.9%, boys 41.5%; year 2025 girls 12-14 y.o 56.2%, boys 48.5%.

Tallinn School Health Foundation HPV coverage data (eKTIS) – year 2023 girls 12-14 y.o 78%; year 2024 girls 12-14 y.o 63.7%, boys 62.6%; year 2025 girls 12-14 y.o 68%, boys 60.9%.

Conclusions: National coverage in immunization against HPV for girls aged 12-14 is consistently above 55%. National coverage for boys aged 12-14 increased from 0.3% (2023) to 48.5% (2025) due to NIS update.

Kristina Galdupaite (contact person)
Tallinn School Health Foundation, Tallinn, Estonia
e-mail: kristina.galdupaite@kth.ee

Parental Hesitancy in Decision-Making on HPV Vaccination

Marija Posavec, Tatjana Petričević Vidović, Branka Puškarić Saić

Despite nearly two decades of experience and extensive scientific evidence confirming the effectiveness and safety of the HPV vaccine, vaccination coverage rates in many European countries, including Croatia, remain below the level required to achieve a significant public health benefit. The aim of this study was to understand the reasons behind parental hesitancy to vaccinate their child against HPV, with the practical objective of improving communication between healthcare professionals and parents of students within vaccination cohorts. The study was conducted using an anonymous online questionnaire among parents of 8th-grade students during the academic year 2024/2025. The key distinction between parents who had vaccinated their child and those who were hesitant was about the decision related to vaccine safety and the voluntary nature of vaccination. A statistically significant difference between the groups was observed in the concordance of both parents' attitudes toward HPV vaccination. The identified differences in attitudes and perceptions related to HPV vaccination should be taken into consideration when designing educational activities targeting parents in order to increase their readiness to make a vaccination decision.

More effective parental education, emphasizing vaccine safety and national experience in the implementation of vaccination, as well as encouraging consensus within the family, could contribute to increasing HPV vaccination uptake.

Marija Posavec (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: marija.posavec@stampar.hr

Tatjana Petričević Vidović
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Branka Puškarić Saić
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Medical Faculty, University Zagreb, Zagreb, Croatia; Primary Healthcare Centre Zagreb, Zagreb, Croatia

Vaccination Coverage of Children and Adolescents in Slovenia in the Period 2015-2024

Martina Juder Kogler, Sandra Simonović, Nadja Šinkovec Zorko, Marta Grgič Vitek, Zoran Simonović

Introduction: The vaccination programme for children and adolescents up to 26 years of age covers immunisation against diphtheria, tetanus, pertussis, poliomyelitis, Haemophilus influenzae type B (HiB) infections, hepatitis B (HBV), measles, mumps, and rubella (MMR), pneumococcal infections, human papillomaviruses (HPV), tick-borne encephalitis, varicella, and influenza. The aim of this paper is to present the vaccination coverage of preschool and school-aged children in Slovenia in the period 2015-2024.

Methods: Data on the vaccination coverage of preschool children (2015–2019) and school-aged children (2015–2021) were obtained from reports submitted to the Cepljenje.net application. For the subsequent period, data from the Slovenian electronic vaccination registry (eRCO) were used; the vaccination coverage of preschool and school-aged children with the second dose of the MMR vaccine was estimated based on a random sample of individuals eligible for vaccination, followed by additional verification.

Results: In the period 2015-2024, preschool vaccination coverage with the third dose of the hexavalent vaccine against diphtheria, tetanus, pertussis, poliomyelitis, HiB, and HBV ranged from 86.4% to 95.2%, with the first dose of the MMR vaccine from 92.3% to 95.8%, and with the second dose against pneumococcal infections from 48.8% to 69.7%. School-aged vaccination coverage with the second dose of the MMR vaccine ranged from 88.2% to 94.3%, with the fifth dose against diphtheria, tetanus, and pertussis in the 3rd grade from 79.9% to 94.9%, while the coverage with the second dose against HPV infections in the 6th grade ranged from 39.3% to 59.3% (girls) and 22.6% to 24.4% (boys in 2021-2024).

Conclusions: In Slovenia, vaccination coverage remains high for most mandatory vaccinations, while it is lower against pneumococcal infections, HPV, and influenza.

Martina Juder Kogler (contact person)
National Institute of Public Health, Infectious Diseases Unit, Regional Office Maribor, Maribor, Slovenia
e-mail: martina.juder@nijz.si

Sandra Simonović
National Institute of Public Health, Infectious Diseases Unit, Regional Office Ljubljana, Ljubljana, Slovenia

Determinants of Vaccination Decision-Making Among Adolescents from Protestant Communities: A Participatory Action Study

Annelot van Rooij, Suzanne Prins, Lotte Smits, Vera van Uem, Martijn Spoelstra

Background: Vaccination uptake among adolescents from orthodox Protestant communities in the Netherlands is low and declining, while adolescents increasingly make autonomous vaccination decisions. This study explored determinants influencing vaccination decision-making among adolescents aged 16–18 years from Protestant communities and aimed to inform the development of a tailored intervention to support informed choice.

Methods: A qualitative participatory action research design was used. Data were collected through focus group discussions and, where relevant, additional interviews with adolescents in two regions. The study examined how adolescents experience vaccination, how they navigate social influences from parents, peers, and social media, and whether they feel informed and free in their decision-making. Adolescents also participated in sessions exploring determinants and contributing to intervention development.

Results: The study generated insights into adolescents' perspectives, social contexts, and information needs regarding vaccination. The participatory design also provided insight into the feasibility of engaging adolescents from these communities in research and yielded practical lessons from this participatory approach.

Conclusions: The findings support the development of context-sensitive strategies to support informed vaccination decision-making and offer insights for participatory research involving adolescents in sensitive public health topics.

Annelot van Rooij
GGD Ijsselland, Zwolle, The Netherlands

Suzanne Prins
GGD Twente, Enschede, the Netherlands

Lotte Smits
GGD Ijsselland, Zwolle, The Netherlands

Vera van Uem
GGD Ijsselland, Zwolle, The Netherlands

Martijn Spoelstra (contact person)
GGD Ijsselland, Zwolle, The Netherlands
e-mail: m.spoelstra@ggdijsselland.nl

Nadja Šinkovec Zorko
National Institute of Public Health, Centre for Infectious Diseases, Ljubljana, Slovenia

Marta Grgič Vitek
National Institute of Public Health, Centre for Infectious Diseases, Ljubljana, Slovenia

Zoran Simonović
National Institute of Public Health, Infectious Diseases Unit, Regional Office Maribor, Maribor, Slovenia

Dutch Translation and Adaptation of the Canadian CARDTM-method: Providing Procedural Comfort During Childhood Vaccinations

Daniël C. M. Huijten, Veja Widdershoven, Anna Taddio, Piet L. J. M. Leroy, Christian J. P. A. Hoebe, Rianne P. Reijs

Background: Vaccination still causes considerable fear, pain, and stress in children, commonly referred to as vaccination-related distress (VRD). The most effective strategies to mitigate VRD are preventing it from occurring and addressing it if present. A scientifically validated method is the Canadian CARDTM-method (Comfort-Ask-Relax-Distract). To apply this method within Dutch vaccination care, a structured, evidence based cultural adaptation was conducted.

Methods: Using an iterative and participatory approach, ten steps were completed: preparation, forward translation, reconciliation, backward translation, translation review, harmonization, cognitive debriefing, review, professional examination, and finalization.

Results: The translation steps indicated that while different words were often used, conceptual equivalence was generally maintained, with a mean discrepancy rate of 59.2% (SD = 19.6). The adapted Dutch version was named FAVO, a term linked to 'favourite,' reflecting the aim to create positive, preferred vaccination experiences (in Dutch, 'fijn' means pleasant, 'afleiden' means distract, 'vragen' means ask, and 'ontspannen' means relax). Cognitive debriefing with seven children and eight parents confirmed its clarity and relevance, yielding seventy improvement suggestions. Eighteen healthcare professionals expressed overall positive evaluations and provided additional recommendations.

Conclusions: The FAVO-method was well received by children, parents, and healthcare professionals and appears suitable for applying in Dutch vaccination care.

Daniël C. M. Huijten
Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands; Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

Veja Widdershoven
Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands; Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

Anna Taddio
Clinical Social and Administrative Pharmacy, Leslie Dan Faculty of Pharmacy, University of Toronto, Ontario, Canada; Child Health Evaluative Sciences, The Hospital for Sick Children Toronto, Ontario, Canada

Piet L. J. M. Leroy
Department of Paediatrics, Maastricht University Medical Centre, Maastricht, The Netherlands; School of Health Professions Education, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands

Christian J. P. A. Hoebe
Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands; Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Medical Microbiology, Infectious Diseases and Infection Prevention, Care and Public Health Research Institute, Maastricht University Medical Centre, Maastricht, The Netherlands; WHO Collaborating Centre Regions for Health and Cross Border Public Health, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands

Rianne P. Reijs (contact person)
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; WHO Collaborating Centre Regions for Health and Cross Border Public Health, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands; Living Lab Public Health Mosa, Public Health Service South Limburg, Heerlen, The Netherlands
e-mail: rianne.reijs@ggdzl.nl

Development and Evaluation of a Personalized Digital System for Childhood Obesity Prevention: The BIO-STREAMS Study Protocol

Martin Bigec, Jernej Dolinšek, Izidor Mlakar, Sonja Golob Jančič, Ivan Vidmar, Mojca Podgoršek, Evgenija Homšak, Vesna Savič, Kaja Golja, Marko Fajfar, Natalija Golob

Background: Childhood obesity represents a major public health challenge driven by complex interactions between biological, behavioural, and environmental factors. The BIO-STREAMS study aims to develop and evaluate an AI-driven, data-integrated approach for personalized prevention and management of obesity in children and adolescents.

Methods: The study employs a mixed-methods design, combining co-creation workshops with a prospective longitudinal intervention. Approximately 1050 participants will be enrolled and stratified according to metabolic status. The intervention is delivered through an advanced digital ecosystem integrating artificial intelligence, real-time personalized recommendations, and multimodal data from a federated European biobank.

Results: Primary outcomes include system acceptability and usability, as well as the identification of biological pathways associated with intervention response. Secondary outcomes include changes in anthropometric, behavioural, and psychological parameters.

Conclusions: By leveraging multidimensional data integration and adaptive algorithms, the study is expected to enable precision prevention strategies and improve understanding of obesity heterogeneity. This scalable, AI-driven framework has strong potential for clinical implementation and broader application in paediatric populations.

Martin Bigec (contact person)
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia
e-mail: martin.bigec@gmail.com

Jernej Dolinšek
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Izidor Mlakar
Faculty of Electrical Engineering and Computer Science, University of Maribor, Maribor, Slovenia

Sonja Golob Jančič
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Ivan Vidmar
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Mojca Podgoršek
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Evgenija Homšak
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Vesna Savič
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Kaja Golja
Faculty of Electrical Engineering and Computer Science, University of Maribor, Maribor, Slovenia

Marko Fajfar
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

Natalija Golob
Department of Paediatrics, University Medical Centre Maribor, Maribor, Slovenia

DIABETES

Automated Insulin Delivery Systems in Europe: Insights from the dt-report and the Slovenian Context

Simona Klemenčič, Nataša Bratina, Dominic Ehrmannn, Norbert Hermanns, Bernhard Kulzer, Lutz Heinemann, Timm Roos, Tadej Battelino

Background: The dt-report is an international project that aims to evaluate the level of digitalization in diabetes with a focus on diabetes technology. Both, people with diabetes (PWD), and healthcare professionals (HCP) are asked to share their perspectives and experiences.

Methods: The dt-report is an online survey conducted annually in November – December. Data is collected in several countries across Europe: Slovenia (SI), Germany (DE), Austria (AT), Switzerland (CH), Spain (ES), Italy (IT), Poland (PL), and Romania (RO). The following analyses focus on AID systems, and the perceptions and attitudes of PWD. Results are presented for all participants from all countries and separately for participants from Slovenia (SI).

Results: A total of 6,823 PWD participated (70% DE; 10% IT; 7% AT; 5% PL; 2% SI; 2% ES; 2% CH; 1% RO) with 49% being female. The survey included adults with diabetes and parents of children with diabetes (62% type 1 (T1D); 29% type 2 (T2D); 5% parents of children with diabetes). Overall, 65.2% of people with T1D and 81.0% of children with T1D that participated were using an AID system, the corresponding number for SI was 66.7% for adults and 71.4% for children. On average, 59.2% stated that they would recommend their AID system, whereas in SI this number was significantly higher with 78.4%.

Overall, 30.5% indicated that they would accept a slightly lower Time in Range (TIR) for the convenience of not having to log meals. In SI, only 21.6% would accept a slightly lower TIR. Asked about the daily time spent on managing diabetes, PWD reported 43 (SD=49) minutes. This was significantly lower in SI with 30 (SD=42) min. Interestingly, PWD using an AID system reported more time spent on their diabetes management (M=52 min, SD=54) than PWD without an AID system (M=33 min, SD=41). It is noteworthy, that this tendency is the other way around in Slovenia (M=26, SD=46 vs M=35, SD=46).

Conclusions: The dt-report allows benchmarking between European countries regarding uptake and attitudes towards diabetes technology such as AID. Slovenia participants differed in their willingness for fully closed loop but reported less time spent on diabetes management compared to other European countries.

Simona Klemenčič (contact person)
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: simona.klemencic@kclj.si

Nataša Bratina
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Dominic Ehrmannn
Research Institute Diabetes Academy Mergentheim, Bamberg, Germany; Diabetes Center Mergentheim, Bad Mergentheim, Germany

Norbert Hermanns
Research Institute Diabetes Academy Mergentheim, Bamberg, Germany; Diabetes Center Mergentheim, Bad Mergentheim, Germany

Bernhard Kulzer
Research Institute Diabetes Academy Mergentheim, Bamberg, Germany; Diabetes Center Mergentheim, Bad Mergentheim, Germany

Lutz Heinemann
Research Institute Diabetes Academy Mergentheim, Bamberg, Germany; Diabetes Center Mergentheim, Bad Mergentheim, Germany

Timm Roos
Research Institute Diabetes Academy Mergentheim, Bamberg, Germany; Diabetes Center Mergentheim, Bad Mergentheim, Germany

Tadej Battelino
Department of Paediatric Endocrinology, Diabetes and Metabolism, Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

PRIMARY PAEDIATRICS

Childhood Immunization in Slovenia: Programs and Perspectives

Denis Baš, Špela Žnidaršič Reljič, Marta Grgič Vitek

Childhood immunization is a cornerstone of public health efforts to prevent infectious diseases and reduce their burden in children. This article presents recent updates of the Slovenian Program of Vaccination and Protection with Medicines. The article is based on a review of the Slovenian national immunization schedule and current public health policies. The Slovenian program includes nine mandatory vaccinations against major childhood infectious diseases, including diphtheria, tetanus, pertussis, Haemophilus influenzae type b infection, poliomyelitis, hepatitis B, measles, mumps, and rubella. In addition, recommended publicly funded vaccinations are available against human papillomavirus (both gender) and influenza, for some cohorts also for pneumococcal disease, tick-borne encephalitis, and, since 2025, also against varicella. Further expansion of preventive strategies includes planned protection of infants younger than six months with long-acting monoclonal antibodies against respiratory syncytial virus during the 2026/2027 season, while rotavirus vaccination has been placed on the priority list for potential inclusion in the national immunization program for 2027. These updates result from collaboration between paediatricians, particularly the Slovenian Society of Primary Care Paediatricians, and the National Institute of Public Health. Maintaining high vaccination coverage, addressing vaccine hesitancy, and strengthening communication with the public remain key challenges.

Denis Baš (contact person)
Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia; Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, Ljubljana, Slovenia
e-mail: bas.denis@gmail.com

Špela Žnidaršič Reljič
Primary Healthcare Centre dr. Adolfa Drolca, Maribor, Slovenia; Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, Ljubljana, Slovenia

Marta Grgič Vitek
Centre for Communicable Diseases, National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Primary Care Paediatrics - a Bridge Between the Child, Society and the Health System

Vanja Kogoj Jug, Alenka Koren, Larisa Kragelj, Anja Radšel, Katja Dejak Gornik, Denis Baš

In Slovenia, paediatricians provide health care for children and adolescents up to the age of 19. Paediatric care is organized on three levels: primary, secondary and tertiary care. Child's first chosen physician is the primary care paediatrician, who provides both curative care and preventive services, including routine health checks during the preschool period, and later follows the child as designated school physician during the school years. High-quality and comprehensive care for children and adolescents in Slovenia requires close cooperation among all three levels of paediatric care - primary, secondary and tertiary - both in the field of individual patient management and professional education, as well as in the development and implementation of clinical guidelines. In 2026, representatives from all three levels of paediatric care jointly prepared the Paediatric Recommendations, aimed to improve health literacy among parents, children and adolescents, while also serving as a practical tool for paediatricians in everyday clinical practice. Primary care paediatricians, organized within the Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, play an important role in improving population health literacy through cooperation with national institutions such as the Ministry of Health, the Ministry of Education, the National Institute of Public Health and the Medical Chamber of Slovenia, as well as with educational institutions, non-governmental organizations and the media. Primary care paediatrics is therefore an important bridge between health system, child, family and wider society.

Vanja Kogoj Jug (contact person)
Primary Healthcare Centre Nova Gorica, Nova Gorica, Slovenia
e-mail: vanja.kogojjug@gmail.com

Alenka Koren
Pediatrija Borštnikova, Maribor, Slovenia

Larisa Kragelj
Juventina, Ljubljana, Slovenia

Anja Radšel
Primary Healthcare Centre Medvode, Medvode, Slovenia

Katja Dejak Gornik
Primary Healthcare Centre Ljubljana, Ljubljana, Slovenia

Denis Baš
Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia; Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, Ljubljana, Slovenia

Screens in Childhood: Risks, Opportunities, and Challenges for the Paediatric Profession

Mateja Vintar Spreitzer, Anja Radšel, Denis Baš

Screen use in childhood and adolescence represents an important public health challenge, as excessive or developmentally inappropriate exposure is associated with numerous adverse outcomes in the areas of sleep, physical health, cognitive development, self-regulation, and psychosocial functioning. Recent evidence consistently emphasizes the importance of the context of screen use, rather than exposure duration alone. Risks are greatest with passive exposure, developmentally inappropriate and rapidly changing content, evening use, and digital habits that displace sleep, physical activity, play, and direct social interactions; conversely, high-quality, age-appropriate content, when accompanied by active co-viewing during early development, can support learning. Contemporary reviews and paediatric recommendations therefore shift the focus from quantifying screen time to assessing content quality, the context of use, co-use with parents, the promotion of self-regulation, appropriate scheduling of exposure throughout the day, and the inclusion of digital breaks. An overview of recent systematic reviews, meta-analyses, longitudinal and neuroimaging studies, alongside current recommendations from paediatric and public health organizations, forms a key basis for counselling. Special attention is given to tools for the early identification of risky patterns of use, as well as to approaches for prevention and targeted support. Because paediatricians are regarded by the public as one of the most trusted sources of health information, their guidance has a significant influence on shaping family behaviours. The primary care paediatrician plays a key role in early awareness-raising, routine screening of screen-use habits during preventive check-ups, monitoring children with developmental or behavioural risks, and guiding families toward balanced digital habits. An effective response requires interdisciplinary collaboration among paediatrics, public health, the education system, and society at large, with the aim of providing comprehensive support to parents and children.

Mateja Vintar Spreitzer (contact person)
Primary Healthcare Centre Domžale, Domžale, Slovenia;
Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia
e-mail: matejavintar@hotmail.com

Anja Radšel
Primary Healthcare Centre Medvode, Medvode, Slovenia

Denis Baš
Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia; Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, Ljubljana, Slovenia

Less Is More in Primary Care Paediatrics: European Perspectives

Mateja Renko Koder, Mateja Vintar Spreitzer, Denis Baš, Vanja Kogoj Jug

Modern medicine offers a wide range of healthcare interventions that can provide significant benefits to patients, but also entail potential risks. The “Choosing Wisely” initiative was developed with the aim of optimizing the use of diagnostic and therapeutic procedures through improved communication between healthcare professionals and patients, thereby reducing potential adverse consequences for patients, the healthcare system, and the environment. It is present in more than 30 countries worldwide. An important instrument of the initiative are recommendation lists, formulated by experts according to a predefined methodology. Recently, Slovenian paediatricians, within the framework of the European Academy of Paediatrics, contributed to the preparation of the first joint European list of top ten recommendations. The selection is based on the results of a Europe-wide survey conducted in 2022 and addresses topics ranging from cough medications to the use of proton pump inhibitors in infants with gastroesophageal reflux; with several recommendations focusing specifically on antibiotic use. A booklet for parents is also available, and all materials have been translated into Slovenian. The list of recommendations represents a valuable decision-support tool for diagnostic and therapeutic choices, as it is grounded in scientific evidence and clinical experience from numerous European countries and beyond. Its broader implementation in Slovenia could significantly enhance the quality of healthcare for children and adolescents.

Mateja Renko Koder (contact person)
Primary Healthcare Centre Celje, Celje, Slovenia
e-mail: mateja314@gmail.com

Mateja Vintar Spreitzer
Primary Healthcare Centre Domžale, Domžale, Slovenia; Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia

Denis Baš
Primary Healthcare Centre dr. Julija Polca Kamnik, Kamnik, Slovenia; Slovenian Society of Primary Care Paediatricians, Slovenian Paediatric Society, Slovenian Medical Association, Ljubljana, Slovenia

Vanja Kogoj Jug
Primary Healthcare Centre Nova Gorica, Nova Gorica, Slovenia

Primary Prevention of Cervical Cancer Through Human Papillomavirus (HPV) Vaccination in the Context of Adolescent Reproductive Health Care

Nina Jančar

Human papillomavirus (HPV) infection is the most common sexually transmitted infection and the primary cause of cervical cancer, as well as several other anogenital and oropharyngeal cancers. HPV vaccination is a safe and highly effective primary prevention measure that substantially reduces the burden of HPV-related diseases. Adolescence represents the optimal period for HPV vaccination, as the immune response is strongest at this age and protection is established before potential exposure to the virus. In addition to preventing cervical cancer, HPV vaccination plays an important role in preserving future reproductive health. Treatment of cervical precancerous lesions, particularly excisional procedures of the cervix, has been associated with an increased risk of preterm birth and other adverse obstetric outcomes. Therefore, preventing HPV infection and subsequent precancerous lesions through vaccination is of particular public health importance. Paediatricians, school physicians, gynaecologists, and other healthcare professionals play a crucial role in promoting vaccine uptake and improving awareness among adolescents and their parents through evidence-based counselling and education. HPV vaccination is one of the most effective preventive interventions for reducing the incidence of cervical cancer and contributes significantly to the protection of reproductive health in future generations. Strengthening confidence in vaccination and improving vaccination coverage remain key public health priorities

Nina Jančar (contact person)
Department of Human Reproduction, Division of Obstetrics and Gynaecology, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: nina.jancar@kclj.si

CURRENT ISSUES, FUTURE DIRECTIONS AND STUDENT HEALTH

Beep to Sleep? The Relationship of (At Risk) Social Media Use, Gaming, and Sleep in General Population Adolescents

Noëmi Hagemann, Alexandra Seghers,
Julie Vanderlinden, Anouk Vanlander

Background: Recent research suggests that social media use and gaming may negatively affect sleep latency in adolescents. However, findings remain mixed, and the role of moderating factors such as gender and physical activity has been insufficiently explored.

Methods: In a cohort of Flemish adolescents (N = 881; 461 girls and 420 boys), four models were used to examine the impact of media use and related factors on sleep latency. Model 1 analysed associations between weekly duration of social media use and gaming, risky use, physical activity, and sleep latency. Model 2 examined the moderating effects of physical activity and gender. Model 3 assessed the association between total media use and sleep latency, and Model 4 evaluated interactions between total media use, physical activity, and gender. Mental health status and educational track were included as control variables.

Results: No significant associations were found between the duration of social media use or gaming, risky use, or total media use and sleep latency. No significant interactions were observed between total media use and physical activity or gender. Adolescents with poor mental health and those enrolled in vocational secondary education showed significantly longer sleep latency than those with good mental health and those in general secondary education. These findings remained robust after sensitivity analysis. In Model 2, a gender-specific effect was found for social media use: boys exhibited longer sleep latency than girls. No gender-specific effects were observed for gaming.

Conclusions: Media use appears to be less influential on sleep latency than mental health status and educational track. Boys seem more vulnerable to prolonged sleep latency in relation to social media use.

Noëmi Hagemann (contact person)
Flemish Scientific Association for Youth Health Care, Leuven, Belgium
e-mail: noemi.hagemann@vwvj.be

Alexandra Seghers
Flemish Scientific Association for Youth Health Care, Leuven, Belgium

Julie Vanderlinden
Odisee Hogeschool, Campus Brussel, Brussel, Belgium

Anouk Vanlander
Flemish Scientific Association for Youth Health Care, Leuven, Belgium

Sleep Difficulties and Substance Use Among Adolescents

Arian Peharda, Dijana Mayer, Ivana Pavić Šimetin,
Tonka Karin, Ivona Keć, Anamaria Vidmar

Introduction: Sleep difficulties negatively affect physical and mental health and may indicate disorders such as anxiety or depression. This study analyses associations between students' sleep difficulties and substance use.

Methods: Data from the Croatian Health Behaviour in School-aged Children survey were analysed. An anonymous voluntary survey was conducted in 2022 on a representative sample of 5338 students aged 11, 13 and 15; Pearson's Chi-square and binary logistic regression were used.

Results: Sleep difficulties more than once weekly were reported by 18,6% boys and 22,5% girls age 11 (p=0,049), 18,7% boys and 30,9% girls age 13 (p<0,001), and 17,9% boys and 27,5% girls age 15 (p<0,001). Of five observed substances, association was not observed only for e-cigarettes. Higher odds were associated with smoking (girls13 OR1,22 CI1,03-1,43 p=0,018), drunkenness (boys11 OR1,43 CI1,04-1,98 p=0,028; girls15 OR1,20 CI1,02-1,42 p=0,027), energy drinks (boys11 OR1,19 CI1,02-1,39 p=0,030; girls11 OR1,28 CI1,08-1,53 p=0,006; boys13 OR1,17 CI1,05-1,37 p=0,050; girls13 OR1,21 CI1,06-1,38 p=0,005; girls15 OR1,27 CI1,10-1,44 p=0,001) and cannabis (boys15 OR1,22 CI1,05-1,42 p=0,010; girls15 OR1,18 CI1,02-1,35 p=0,050), compared with sleep difficulties less than once a week.

Conclusions: Girls report sleep difficulties more often than boys across ages. Alcohol, energy drinks, cigarettes and cannabis are associated with sleep difficulties, supporting substance-use prevention in counselling.

Arian Peharda (contact person)
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia
e-mail: arian.peharda@hzjz.hr

Dijana Mayer
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Ivana Pavić Šimetin
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Tonka Karin
Division for School and Adolescent Medicine, Croatian

Towards Consensus on Digital Screen Exposure: A Systematic Review of Existing Recommendations for Infants, Children and Adolescents

Simona Ponte, Viola Nuvoli, Margherita Camanni, Ilaria Mariani, Michelle Black, Marzia Lazzerini

Background: Digital screen exposure (DSE) is recognised as an important determinant of child and adolescent health and development. For clinicians, educators, caregivers, and policymaker's guidance on healthy DSE is a key component for prevention and early intervention. This systematic review aimed to compile and compare current guidance on DSE in infants, children, and adolescents.

Methods: A systematic search was conducted across databases (PubMed, EMBASE, Web of Science), Google, ChatGPT, grey literature, and reference lists.

Results: We identified 41 documents. Most were issued by scientific societies (n=23), followed by government or health authorities (n=13), non-profit organisations (n=3), and WHO (n=2). Recommendations on quantity of DSE largely aligned: zero screen exposure for children under two years (n=20/22), a maximum of one hour/day for ages 2–5 (n=17/21), and up to two hours/day for older children (n=8/10). Most guidelines were as strict as or stricter than WHO recommendations. Regarding the quality of DSE, 10 key points emerged, along with additional guidance for healthcare professionals, parents, schools, researchers, and industry.

Conclusions: There is strong consensus on limiting both the quantity and improving the quality of DSE in paediatric populations. These findings support the integration of screen-use guidance into routine paediatric care, prevention, and health promotion, reinforcing DSE as a modifiable determinant of child and adolescent health.

Simona Ponte (contact person)
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy
e-mail: simona.ponte@burlo.trieste.it

Viola Nuvoli
Clinical Department of Medical, Surgical and Health Sciences, University of Trieste, Trieste, Italy

Margherita Camanni
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Michelle Black
Department of Public Health Policy and Systems, University of Liverpool, Liverpool, UK

Marzia Lazzerini
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Institute of Public Health, Zagreb, Croatia

Ivona Keć
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Anamaria Vidmar
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Relationship Between Digital Screen Exposure and Health Outcomes in Children and Adolescents: A Scoping Review of Systematic Reviews and Meta-analyses

Eleonora Doz, Simona Ponte, Azza Warraitch, Silvia Balletto, Margherita Camanni, Ilaria Mariani, Alina Cosma, Yekaterina Chzhen, Michelle Black, Marzia Lazzerini

Background: The pervasiveness of digital screen exposure (DSE) among children and adolescents has raised concerns about potential impacts on health and wellbeing. This scoping review examined the characteristics, quality, and key findings of existing systematic reviews on the relationship between DSE and health outcomes in individuals aged 0-19 years.

Methods: Seven databases were searched for systematic reviews, with or without meta-analysis, published between 2015-2025.

Results: We identified 138 reviews, reporting 2,749 unique primary studies, with only 3.3% conducted in Lower-Middle-Income (LMICs)/Low-Income Countries (LICs). Publications more than doubled after 2020. Most reviews focused on mental health/risk behaviours (n=71) and cognitive development (n=51), while physical outcomes were less explored. DSE was reported as a risk factor for adverse health outcomes in 61% of reviews, 29% reported mixed associations, 3.6% null association, 1.4% protective, 5% inconclusive. Only eight reviews were high quality, revealing: a harmful association between DSE and anxiety, depression, self-harm, psychological/emotional wellbeing, risk behaviours, sleep, and cardiovascular risk; and mixed associations with self-regulation, social wellbeing, and overweight.

Conclusions: To better inform practice, more research is needed prioritizing high-quality evidence syntheses with coverage of underexplored outcomes and age-specific effects; primary studies in LMICs/LICs; and development of multidimensional metrics for DSE. Meanwhile, limiting DSE and promoting healthy use remain essential.

Eleonora Doz (contact person)
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy
e-mail: eleonora.doz@burlo.trieste.it

Simona Ponte
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Azza Warraitch
Trinity Centre for Global Health, Trinity College Dublin, Dublin, Ireland

Silvia Balletto
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Margherita Camanni
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Ilaria Mariani
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Alina Cosma
Trinity Centre for Global Health, Trinity College Dublin, Dublin, Ireland

Yekaterina Chzhen
Department of Sociology, Trinity College Dublin, Dublin, Ireland

Michelle Black
Department of Public Health Policy and Systems, University of Liverpool, Liverpool, UK

Marzia Lazzerini
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Exploring Adolescent-Led Workshop Design: Communication Strategies and Pedagogical Tools in Health Education

Michelle Veilleux, Guillaume Groffe,
Sylvie Cliquet, Mariana Marin

This study examines the communication and educational strategies used by adolescents when designing peer-led and professional-oriented health-promotion workshops. Since 2023, the Adolescent Health Young Professionals Network has invited adolescents to create workshops on adolescent health with support from healthcare professionals, while maintaining broad creative autonomy. We described the adolescents and professionals involved between 2023 and 2026 and analysed video recordings and produced materials to identify themes, communication strategies, pedagogical tools, and technologies used. Thirty-two adolescents aged 14–18 years developed fourteen workshops, supported by thirty-one professionals, including 22.6% of physicians. Mental health (42.9%) and social media use (21.4%) were the most frequent themes. Workshops aimed at peers commonly used discussions and playful technological tools, while those for healthcare professionals emphasized case scenarios and the development of clinical tools. These findings highlight the diversity, relevance, and adaptability of adolescent-led approaches to health promotion and underscore the value of youth-driven initiatives for enhancing professional understanding and care of adolescents.

Michelle Veilleux
French Society for Adolescent Health, Paris, France; Student Health Foundation of France (FSEF), Paris, France; Institute for Medical Research (INSERM), Paris, France

Guillaume Groffe
French Society for Adolescent Health, Paris, France; Student Health Foundation of France (FSEF), Paris, France

Sylvie Cliquet
French Society for Adolescent Health, Paris, France

Mariana Marin (contact person)
French Society for Adolescent Health, Paris, France; Hospital Rives de Seine, Paris, France
e-mail: mmarin@ch-rivesdeseine.fr

The Young Patient's Perspective: Virtual Reality as a Tool for Medical Students' Empathy Development

Cecilia Stening, Johanna Granhagen Jungner,
Johan von Heideken, Anna Gutniak, Anna Svenningsson

Background: We hypothesized that experiencing clinical scenarios from a first-person perspective in virtual reality (VR) would offer a deeper understanding of patients' experiences and affect medical students' empathy.

Methods: Adolescents with extensive healthcare experience developed clinical scenarios recorded as VR-videos. Thirty-one medical students viewed the videos in VR-headsets, followed by semi-structured group reflections. Using a mixed-methods approach, quantitative data on self-assessed empathy was collected using the Jefferson Scale of Empathy pre-, immediately post-, and 4-6 weeks after exposure. Qualitative data from the group reflections was obtained using thematic analysis according to Braun and Clarke.

Results: A significant increase in self-assessed empathy (mean score pre-109.5, post 115.5 $p<0.05$) was identified. Long-term scores remained higher than baseline (mean score 112.8) but the difference was not statistically significant. Preliminary themes from the qualitative analysis include: challenges to adolescent-friendly healthcare; identification of young patients' vulnerability; and VR-videos as a catalyst for empathy and professional development.

Conclusions: Exposure to patients' perspectives through VR-videos combined with peer reflection may enhance the understanding of young patients' experiences and promote empathy, with effects on students' professional development and ability to deliver adolescent-friendly healthcare.

Cecilia Stening
Department of Paediatric Surgery, Karolinska University Hospital, Stockholm, Sweden

Johanna Granhagen Jungner
Department of Women's and Children's Health, Karolinska Institute, Stockholm, Sweden

Johan von Heideken
Department of Women's and Children's Health, Karolinska Institute, Stockholm, Sweden

Anna Gutniak (contact person)
Youth Guidance Centres of the Stockholm Region, Stockholm, Sweden
e-mail: agutniak@gmail.com

Positive Health Method in Secondary Education

Meinou Theunissen, Farina Oprins,
Mariska Klein Velderman

Anna Svenningsson
Department of Paediatric Surgery, Karolinska University Hospital, Stockholm, Sweden
Department of Women's and Children's Health, Karolinska Institute, Stockholm, Sweden

Background: A preventive child Healthcare (PCH) organization in the Netherlands implemented the method Positive Health in their routine well-child examinations in secondary education to increase adolescents' understanding of their (social-emotional) health and stimulate behaviour change. Adolescents completed a questionnaire covering six domains, such as feelings and thoughts, visualized in a spiderweb. We assessed adolescents' experiences with the method and the extent to which they undertook actions to improve their health.

Methods: During a pilot 1.402 adolescents completed the Positive Health questionnaire. Immediately afterwards, 200 adolescents evaluated their experience with the method. Two weeks later, 80 adolescents reported whether they had undertaken actions to improve their health, such as exercising.

Results: Adolescents reported high Positive Health scores. Most of the 200 respondents indicated that the method was pleasant to work with (>79–90%). Thirty-one percent of the 80 respondents engaged in conversations with family or friends, and almost half reported taking action to improve their health.

Conclusions: The results suggest a generally positive perception of the Positive Health method, with some adolescents reporting health-related actions. These findings should be interpreted cautiously due to low follow-up response rates and potential selection bias.

Meinou Theunissen (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: meinou.theunissen@tno.nl

Farina Oprins
GGD Hart voor Brabant, Tilburg, The Netherlands

Mariska Klein Velderman
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Student Health and Well-Being at the University of Zagreb: Preliminary Results From the pan-European Health Study on the Student Population

Marjeta Majer, Iskra Aleksandra Nola, Miroslav Rajter, Goranka Lalić, Ivana Pavić Šimetin

Background: University students' health and well-being are major public health concerns, as this life stage is a sensitive period of psychological, social and behavioural change. The University of Zagreb (UNIZG) participates in the European University of Cities in Post-Industrial Transition (UNIC) multi-city project to map student health and well-being using a shared framework. This paper aimed to present preliminary survey results.

Methods: A cross-sectional survey will be conducted among approximately 1,500 UNIZG students, using an adapted WHO Health Behaviour in School-aged Children (HBSC) instrument to assess physical, emotional and social well-being, health behaviours, digital risks and social connectedness. Descriptive analyses will summarize key indicators; comparative analyses will explore patterns by gender, study level, and field.

Results: Preliminary 2026 findings will describe levels of self-rated health and life satisfaction, prevalence of mental health difficulties, health-risk behaviours and perceived social support. Priority challenges and vulnerable subgroups within the UNIZG student population will be identified.

Conclusions: Mapping health and well-being among UNIZG students provides university-specific evidence to guide institutional health promotion strategies, student support services and collaboration with school and adolescent medicine. The project is expected to support healthier, more resilient university communities and promote equity and inclusive transformation in higher education.

Marjeta Majer (contact person)
School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: marjeta.majer@snz.hr

Iskra Aleksandra Nola
School of Medicine, University of Zagreb, Zagreb, Croatia

Miroslav Rajter
Faculty of Law, University of Zagreb, Zagreb, Croatia

Goranka Lalić
Faculty of Law, University of Zagreb, Zagreb, Croatia

Ivana Pavić Šimetin
Croatian Institute of Public Health, Zagreb, Croatia

Student Mental Health

Nilvesa Fajić Berginc, Aleksandra Jeličić

The student years (approximately 18–25 years of age) represent a distinct developmental stage, defined in developmental psychology as the transition from late adolescence to early adulthood. During this period, individuals establish their identity, gain independence from their family of origin, and develop professional and intimate relationship roles. These developmental tasks coincide with academic demands, social transitions, and uncertainty about the future, creating a context of increased vulnerability to mental health disorders. Epidemiological studies indicate that approximately 75% of all mental disorders first emerge before the age of 24. Early identification and timely intervention can prevent the chronic progression of symptoms, reduce the risk of academic failure or dropout, and support adaptive psychological development during a critical life stage. Untreated mental health problems not only affect individual well-being but also have significant social and economic consequences. At the specialized mental health clinic of the Student Health Centre, University of Ljubljana, the most commonly encountered conditions include anxiety and depressive disorders, attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), eating disorders, and various forms of personality pathology requiring clinical treatment. In addition to diagnostic and therapeutic services, the Student Health Centre is actively involved in developing guidelines and implementing preventive programmes aimed at promoting mental health and well-being among university students.

Nilvesa Fajić Berginc (contact person)
Student Healthcare Centre, University of Ljubljana, Ljubljana, Slovenia
e-mail: nilvesafb@gmail.com

Aleksandra Jeličić
Student Healthcare Centre, University of Ljubljana, Ljubljana, Slovenia

Exploring Opportunities for the Prevention of School Absenteeism

Esther K. Pijl

School absenteeism is a serious public health problem with lasting effects on children's wellbeing, educational achievement and social participation. Interventions that ensure collaboration between education and school health services, such as Medical Advice for SickReported Students (MASS), can effectively reduce sickness absence and help tackle underlying health or psychosocial problems. The success of MASS also points to a broader opportunity: to strengthen primary prevention by integrating public health perspectives into the existing educational and psychological guidance on promoting school attendance. School professionals already draw on a wide range of advice from educational and psychological fields, and in this workshop, we will explore how public health expertise can further complement and enrich this knowledge base, as we are stronger together. What health-promoting conditions reduce the likelihood of sickness absence? Which public health interventions, campaigns or preventive strategies could meaningfully support attendance? Dr Esther Pijl will share an overview of the most frequently reported underlying causes of school absenteeism in literature, alongside practical attendance-promoting strategies developed by the regional health organisation in West-Brabant. Participants will then be invited to contribute their expertise and ideas to help explore promising preventive approaches that can be applied prevent school absenteeism across Europe.

Esther K. Pijl (contact person)
GGD West-Brabant, Breda, The Netherlands
e-mail: e.pijl@ggdwestbrabant.nl

School Attendance in Unaccompanied Minor Refugees as an Underexplored Indicator of Child and Adolescent Health

Ingrid J. van Dillen

Unaccompanied minor refugees (UAMs) face heightened risks of mental health problems, educational disruption, and social exclusion. While education is widely described as a protective factor, school attendance itself remains weakly conceptualized and rarely examined as a distinct topic in research on UAMs. This exploratory literature review aimed to identify determinants of school attendance and non-attendance and to examine how these are addressed in academic and Dutch practice-oriented literature. A narrative, exploratory mapping approach was applied. Findings show that school attendance and non-attendance are rarely studied as primary outcomes and are mostly addressed implicitly as consequences of broader psychosocial and structural factors, including mental health problems, trauma, and instability in reception and asylum procedures. Consequently, school attendance is seldom approached as a meaningful indicator for preventing longer-term adverse outcomes, including mental health problems and social and educational disadvantage. Dutch practice-oriented literature describes fragmented approaches linking attendance to wellbeing and intersectoral collaboration. Youth health care services are largely absent from these approaches, despite their role in prevention and early identification. The MAZL approach (More Attention to Sickness Absence in Students) illustrates how school absence can be interpreted as a health-related signal but has not yet been adapted or evaluated for UAMs. This review highlights the need for agenda-setting in the Netherlands and supports further discussion on how school attendance can be more explicitly integrated into public health and youth health care practice for refugee youth.

Ingrid J. van Dillen (contact person)
GGD Amsterdam, Amsterdam, The Netherlands; Employers' Organization for Medical Training, Utrecht, The Netherlands; Netherlands School of Public and Occupational Health, Utrecht, The Netherlands
e-mail: ivdillen@ggd.amsterdam.nl

Bridging Healthcare and Educational Participation: The Role of School Nurses in a German Mixed-Methods Study

Gabriele Ellsäßer, Johann Böhmann

Background: School health nursing is an emerging field in Germany, with limited empirical data on utilization, health needs, and its contribution to educational participation.

Methods: Routine documentation data from 18 school health nurses working in 21 schools in Brandenburg/Germany (April 2024–April 2025) were analysed. Descriptive statistics and Poisson regression were used to assess differences by gender and school type.

Results: A total of 27,778 student contacts were documented among 6,905 students with parental consent. Overall, 71.2% of students used the service at least once, with higher utilization in primary schools (78.3%) than in secondary schools (60.9%). On average, 10 students per day consulted a school health nurse (mean duration: 13 minutes). Acute health complaints accounted for the majority of contacts (~66%), followed by injuries (~25%), while chronic conditions and psychosocial problems were less frequently coded. Pain-related symptoms were most common. Girls consulted school health nurses significantly more often than boys, particularly for acute and mental health issues ($p < 0.001$). Primary school students presented more frequently with injuries and pain, whereas secondary school students showed higher rates of psychosocial problems and self-harm ($p < 0.001$). In 85.5% of cases, students returned to class after consultation.

Conclusions: School health nurses are highly utilized and support both health care and school attendance. Gender- and school-type-specific differences highlight the need for tailored school health services.

Gabriele Ellsäßer (contact person)
Delmenhorst Institute for Health Promotion, Delmenhorst, Germany
e-mail: gellsaesser@t-online.de

Johann Böhmann
Delmenhorst Institute for Health Promotion, Delmenhorst, Germany

Intersectoral Collaboration in School Health Systems in Times of Disruption: Evidence From Three World Groupings and Implications for Future Resilience

Min-Chien Tsai, Catherine Chabot, Didier Jourdan, Nicola J. Gray

Background: Within the WHO Health Promoting Schools (HPS) framework, collaboration between health and education sectors is a key component at both national and school levels. This abstract reports perceived intersectoral collaboration in schools across 3 different world groupings during a public health crisis.

Methods: In 2021, during the ongoing COVID-19 pandemic, an online survey was promoted on social media to health and education professionals worldwide. Perceived collaboration between health and education in schools was rated on a Likert scale (no/poor/fair/good/excellent). Data underwent comparative (chi-square) statistical analysis.

Results: Responses from 1,936 health and education professionals were grouped as Global-North (n=434), Global South (GS)-Asia (n=1139) and Global South (GS)-Other (n=363). Intersectoral collaboration differed significantly across the groupings ($\chi^2 = 187.19$, $p < .001$). 'No/poor' collaboration was reported by 36.6% of respondents in GS–Other, compared with 30.2% in Global-North and 8.8% in GS-Asia. 'Good/excellent' collaboration was reported by 52.6% of respondents in GS-Asia and 52.1% in Global-North, compared with 45.3% in GS–Other.

Conclusions: These findings suggest that collaboration varied across system contexts. Strong collaboration in GS-Asia schools could be associated with coordinated centralised guidance, a comprehensive approach to school health, and previous crisis experience, highlighting factors to be explored for future resilience.

Min-Chien Tsai
University of Huddersfield, Huddersfield, UK; Université Clermont Auvergne, Chamalières, France

Catherine Chabot
University of Huddersfield, Huddersfield, UK

Didier Jourdan
Université Clermont Auvergne, Chamalières, France

Nicola J. Gray (contact person)
University of Huddersfield, Huddersfield, UK; Université Clermont Auvergne, Chamalières, France
e-mail: N.J.Gray@hud.ac.uk

YOUTH HEALTH IN A CHANGING WORLD

Characteristics of Menstrual Irregularities Across Eating Disorder Subtypes in Adolescents

Demet Aygün Ari, Melis Pehlivantürk Kizilkan, Laden Jaferi, Eylem Şerife Kalkan, Nur Mutlu, Yelda Kiliç, Sinem Akgül

Menstrual irregularities are common in adolescents with eating disorders (EDs) and may be the sole presenting complaint. This retrospective study aimed to characterize menstrual patterns in adolescents with anorexia nervosa (AN) (n:178), atypical anorexia nervosa (AAN) (n:184), bulimia nervosa (BN) (n:76), avoidant/restrictive food intake disorder (ARFID) (n:18), and unspecified feeding or eating disorder (UFED) (n:35), and to identify factors associated with amenorrhea in AN and AAN. Menstrual and clinical features were analysed. Secondary amenorrhea was most prevalent in AN (68.5%), followed by AAN (26.6%) and BN (7.9%) with no cases observed in the ARFID and UFED groups ($p<0.001$). Oligomenorrhea was more frequent in BN (22.5%), followed by AAN (19%), AN (10.7%), and UFED (2.9%), with no cases in the ARFID group ($p=0.004$). Compared with AAN, adolescents with AN required greater weight gain for menstrual recovery ($p<0.001$). Multivariable analysis showed that binge-purge subtype, vomiting, binge-eating, excessive exercise, hospitalization, and greater weight loss were associated with higher odds of amenorrhea, whereas higher %mBMI and higher minimum weight were protective (all $p<0.001$). Menstrual recovery occurred in all patients with follow-up longer than one year. These findings highlight that menstrual dysfunction reflects disease severity and is largely reversible with adequate weight restoration and sustained follow-up.

Demet Aygün Ari
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Melis Pehlivantürk Kizilkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Laden Jaferi
Department of Paediatrics, Bayındır Hospital, Ankara, Türkiye

Eylem Şerife Kalkan (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: eylemkalkan@hacettepe.edu.tr

Nur Mutlu
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Yelda Kiliç
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Comparison of Clinical and Laboratory Features of Physiological Anovulation and von Willebrand Disease in Adolescents with Heavy Menstrual Bleeding

Melis Pehlivantürk Kızılkan, Nur Mutlu, Tekin Aksu, Selin Aytaç, Sinem Akgül

Heavy menstrual bleeding (HMB) in adolescents is most commonly due to physiological anovulation (PA), but distinguishing it from bleeding disorders like von Willebrand disease (vWD), remains challenging due to overlapping features and lack of definitive guidelines. This study aimed to compare clinical and laboratory characteristics of PA and vWD in adolescents with HMB. Prospective data from 63 adolescents diagnosed with PA after excluding other aetiologies were compared with retrospective data from 23 adolescents diagnosed with vWD (vWF antigen<50IU/dL) between 2022–2025. Menstrual patterns, bleeding history, laboratory parameters, and International Society on Thrombosis and Haemostasis Bleeding Assessment Tool menorrhagia scores (ISTH-BAT-MS) were evaluated. vWD patients had higher daily pad counts (8.2±3.2 vs. 6.0±2.6, p<0.001), pad saturation within two hours (65.2% vs. 36.5%, p=0.018), large clots (43.5% vs.17.5%, p=0.042), persistent HMB since menarche (35.2% vs.12.1%, p=0.016), and higher ISTH-BAT scores (p=0.034). Whereas in the PA group epistaxis was more frequent (p=0.017), with a higher median haemoglobin at presentation (13.3 vs.12.3 g/dL, p=0.017), lower aPTT (26.1 vs. 27.7, p<0.001), and shorter in-vitro bleeding time (collagen/ADP:120 vs. 155, p<0.001). HMB since menarche, concomitant presence of volume-related HMB features, and higher ISTH-BAT-MS were more suggestive of vWD. These findings support prioritizing targeted vWD evaluation in adolescents presenting with these features.

Melis Pehlivantürk Kizilkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Nur Mutlu (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: nurmutlu94@gmail.com

Tekin Aksu
Hacettepe University Faculty of Medicine, Department of Paediatric Haematology, Ankara, Turkey

Selin Aytaç
Hacettepe University Faculty of Medicine, Department of Paediatric Haematology, Ankara, Turkey

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Artificial Intelligence Chatbots as Source of Information on Emergency Contraception for Healthy Adolescents: A Comparative Study of Accuracy, Completeness and Quality

Aikaterini Parisi, Eleni P. Kotanidou, Athanasios Christoforidis, Assimina Galli-Tsinopoulou

Introduction: Artificial intelligence (AI) chatbots are increasingly used as sources of medical information, providing immediate and anonymous access. Emergency contraception (EC) represents a critical area of interest for adolescents, where reliability is essential. The aim of this study was to evaluate AI chatbot responses to EC-related questions posed by healthy adolescents.

Methods: New accounts were created for virtual healthy female adolescents in five AI chatbots (ChatGPT 4o, Microsoft Copilot, Google Gemini, Perplexity AI, DeepSeek). Conversations were conducted using questions simulating adolescents 'natural language' asking information regarding emergency contraception. Thirty conversations were analysed for accuracy and completeness with Likert scales based on 2024 American Academy of Paediatrics Guidelines for EC, for quality with the Patient Education Material Assessment Tool-Printable Material (PEMAT-P) (understandability, actionability) and for readability with the Flesch–Kincaid index.

Results: Mean accuracy was moderate (score:1.14/3) without significant difference between chatbots (p:0.911). Completeness was recorded in 35.44% of the studied conversations. PEMAT-P quality scores were moderate (mean understandability score: 62.78%; mean actionability score 52%). Readability according to Flesch-Kincaid index revealed high linguistic complexity (26.7/100).

Conclusions: AI chatbots provide adolescents EC-information with moderate accuracy, low completeness, limited quality and high linguistic complexity, restricting their effectiveness as tools enhancing adolescent contraception literacy.

Aikaterini Parisi (contact person)
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece
e-mail: katerinapar_93@hotmail.com

Eleni P. Kotanidou
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

Athanasios Christoforidis
School of Medicine, Faculty of Health Sciences, Aristotle

The Promotion of Health Literacy, Reproductive Health, and the Prevention of Menstrual Poverty in Croatia

Ivana Pavić Šimetin, Arian Peharda,
Marija Švajda, Ivana Ćosić

Within programme "Strengthening Schools for the Promotion of Health Literacy, Reproductive Health, and the Prevention of Menstrual Poverty", a situational analysis was conducted in 2025, through anonymous and voluntary online surveys of school staff (N=1556) and school doctors and nurses (N=95). On Likert Scale from 1 "absolutely no" to 5 "absolutely yes", primary school teachers educate pupils mostly on violence and hygiene (average score 3.2), and seldom on STIs and family planning (2.2), with greatest need for training on violence (3.7). Secondary school teachers lecture mainly on hygiene (3.4) and vaccination (3.0), and rarely on menstrual poverty (2.4), while they predominantly need education in violence (3.5). Doctors (3.1) and nurses (2.9) mainly lecture on hygiene and seldom on family planning (doctors 1.8; nurses 1.5). Doctors and nurses mainly need training on violence (3.5) and rarely on hygiene (doctors 2.3; nurses 2.5). Audio-visual materials are mostly used (by 76% of primary school teachers, 73% of secondary school teachers, 91% of doctors, 78% of nurses). Practical materials are rarely used (by 17% of primary school teachers, 14% of secondary school teachers, 9% of doctors, 4% of nurses). Interactive approach and novel materials are needed.

Ivana Pavić Šimetin (contact person)
Croatian Institute of Public Health, Zagreb, Croatia
e-mail: ivana.pavic@hzjz.hr

Arian Peharda
Croatian Institute of Public Health, Zagreb, Croatia

Marija Švajda
Croatian Institute of Public Health, Zagreb, Croatia

Ivana Ćosić
UNICEF Office Croatia, Zagreb, Croatia

University of Thessaloniki, Thessaloniki, Greece

Assimina Galli-Tsinopoulou
School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece

Menstrual Perception and Knowledge in Adolescents and Young Adults: Agreement with Physician-Defined Menstrual Status

Eylem Şerife Kalkan, Nur Mutlu,
Melis Pehlivantürk Kizilkan, Sinem Akgül

Understanding normal menstrual characteristics is essential for adolescent health; however, correct menstrual perception and knowledge may be limited among adolescents and young adults (AYAs). This study evaluated menstrual perception and knowledge among AYAs and their agreement with physician-defined menstrual status. This cross-sectional study included AYAs aged 10-24 years presenting to an adolescent medicine clinic. Sociodemographic characteristics, menstrual perception (about their own cycles), and menstrual knowledge (independent of personal experience) were assessed using a structured questionnaire and evaluated by a physician according to the American College of Obstetricians and Gynaecologists criteria. A total of 278 AYAs were included (mean age 17.1±3.4 years). Overall, 76.4% demonstrated correct menstrual perception, with misperception more commonly due to overestimation of abnormality than under-recognition. The sensitivity and specificity of participant perception for detecting menstrual irregularity were 76.4% and 75.3%, with a positive predictive value of 43.3% and a negative predictive value of 92.8%, indicating that AYAs were more accurate in identifying normal menstruation than abnormalities. None of the sociodemographic factors or receiving menstrual information were associated with correct menstrual perception. These findings highlight gaps in menstrual health literacy, particularly in recognizing abnormal patterns, and emphasize the need for more comprehensive menstrual education.

Eylem Şerife Kalkan (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: eylemkalkan@hacettepe.edu.tr

Nur Mutlu
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Melis Pehlivantürk Kizilkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

An Integrated Framework for Collective Advocacy Against Child Marriage

Yvette Efevbera, Anshu Banerjee, Nuray Kanbur

Background: Child marriage remains a major threat to adolescent girls' health, development, and rights worldwide.

Methods: We present an integrated framework linking developmental science with legal and policy advocacy, emphasizing how evolving capacities and psychosocial maturity should inform marriage laws and protection mechanisms.

Results: Globally, age boundaries surrounding legal marriage are more fluid, and it is increasingly recognized that laws can have negative consequences for girls if not formulated intentionally, prompting policymakers to consult developmental science for guidance. There is a growing movement advocating for the principle of "evolving capacities" in laws, acknowledging that child and adolescent development, relationships with adults, and decision-making abilities evolve over time. However, different legal matters necessitate varying levels of decision-making capacity, as the stages of psychological and cognitive development relevant to consent to medication, for example, differ from those pertinent to marriage. This study reframes advocacy and rights-based action as essential components of adolescent health systems, drawing on recent policy analyses and country examples to identify actionable, multisectoral strategies.

Conclusions: This framework highlights an urgent need for collective, evidence-informed advocacy to protect adolescent girls and advance gender equality, an issue of growing importance amid renewed global attention to legal reforms on child marriage.

Yvette Efevbera
SHE Thinks Group, Washington, USA

Anshu Banerjee
Department of Maternal, Newborn, Child and Adolescent Health and Ageing, World Health Organization, Geneva, Switzerland

Nuray Kanbur (contact person)
Division of Adolescent Health, Children's Hospital of Eastern Ontario, Department of Paediatrics, University of Ottawa, Ottawa, Canada
e-mail: nuraykanbur@hotmail.com

Making (Mental) Health Visible: Development and Impact of a Visual Conversation Card for Vulnerable Youth

Liesbeth Meuwissen, Suzanne van der Geest

The solution focussed preventive health check "Gezond Leven! Check het Even!" from the youth health care requires language skills that are sometimes challenging for adolescents in special needs secondary education (VSO) and practical training (PRO). This study aims to develop and test visual conversation cards to support communication, enhance understanding and skills, and strengthen early identification of (mental) health concerns. Using iterative co-creation with students, youth health physicians, and education professionals, words and images were developed, refined across five feedback rounds, and translated into illustrations. The prototype was pilot tested during 70 consultations with consultation ballots for the students and structured forms for the youth physicians. Students reported improved understanding of consultation topics (91.3%) and physicians' explanations (85.7%). Physicians rated the cards as helpful in 80% of consultations and noted increased insight into students' living situations (93.0%) and health (82.1%), as well as greater student autonomy (53.4%). These findings indicate that cocreation works and that these visual tools strengthen communication, improve the quality of interaction, and support identification of (mental) health concerns. These cards may enhance the accessibility of preventive care in this vulnerable population and therefore contribute to reducing health inequalities.

Liesbeth Meuwissen (contact person)
Municipal Health Organisation Province of Utrecht, Zeist, The Netherlands
e-mail: liesbethmeuwissen@yahoo.com

Suzanne van der Geest
Municipal Health Organisation Province of Utrecht, Zeist, The Netherlands

How do Youth Healthcare Professionals in the Netherlands Support Parents With Low Health Literacy in Improving their Child's Health and Preventing Diseases? A Qualitative Study

Nikki Verheijen, Nicky Halbach, Veja Widdershoven, Liesse Vanderhoven, Christian Hoebe, Rianne Reijs

Caregivers' health literacy (HL) is crucial to a child's health and development. Low HL has been associated with poorer health outcomes, higher healthcare costs, and reduced access to and effectiveness of healthcare. Because parents strongly influence children's health behaviour, they represent an important target group for preventive interventions. In the Netherlands Youth Healthcare (YHC) services provide preventive care for children and are well positioned to support parents with low HL. However, there are no national guidelines describing how professionals should address this task. This study aimed to investigate how YHC professionals recognize and support these parents, which challenges they encounter and which personal, social and organizational factors influence their behaviour. We conducted semi-structured interviews with 21 YHC professionals, working with children aged 0-4 years and their parents, from 12 YHC organizations in the Netherlands. All interviews were transcribed and will be analysed using thematic analysis. Deductive analysis will be applied using a code tree based on the ASE model of behaviour. Additionally, inductive analysis will be applied using themes emerging from the data. The results are expected to follow July 2026. Themes to be analysed are: attitude, self-efficacy, social and organizational influence, recognition, support, barriers, skills/knowledge and recommendations.

Nikki Verheijen (contact person)
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands; Netherlands School of Public & Occupational Health, Utrecht, The Netherlands; GGD Limburg Noord, Venlo, The Netherlands
e-mail: n.verheijen@vrln.nl

Nicky Halbach
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Youth Health Care, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands

Psychosocial Problems in School Health Care: Evidence from School Nurse Routine Data in Brandenburg, Germany

Johann Böhmann, Gabriele Ellsäßer

Veja Widdershoven
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands

Liesse Vanderhoven
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands

Christian Hoebe
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Health Policy and Development, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands; Department of Medical Microbiology, Infectious Diseases and Infection Prevention, Care and Public Health Research Institute, National Chlamydia trachomatis Reference Laboratory, Maastricht University Medical Centre, Maastricht, The Netherlands

Rianne Reijs
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, the Netherlands

Background: Psychosocial problems among students are often underrepresented in quantitative data. Qualitative analysis of routine documentation may provide deeper insights into these complex needs.

Methods: Free text entries from routine documentation (used in 76.8% of 27,778 contacts) were analysed using inductive qualitative content analysis. Categories included psychological problems, social problems, and complex cases. Analyses were stratified by gender and school type.

Results: Clear gender- and school-type-specific patterns emerged. In primary schools, boys predominantly showed externalizing behaviours such as aggression and conflicts, while girls more often presented with internalizing problems including anxiety, psychosomatic complaints, and emotional distress. Complex cases frequently involved a combination of physical symptoms, psychological distress, and family-related burdens, including indicators of neglect. In secondary schools, both severity and complexity increased. Boys were more often described with aggressive behaviour and school refusal, whereas girls showed more severe internalizing disorders, including depression, eating disorders, self-harm, and suicidal crises. Social problems such as domestic violence, unstable family conditions, and substance use were more frequently reported among older students.

Conclusions: Qualitative findings reveal substantial psychosocial needs and a developmental shift toward more complex mental health problems in adolescence. School health nurses play a key role in early detection, psychosocial support, and referral.

Johann Böhmann (contact person)
Delmenhorst Institute for Health Promotion, Delmenhorst, Germany
e-mail: johann.boehmann@d-i-g.de

Gabriele Ellsäßer
Delmenhorst Institute for Health Promotion, Delmenhorst, Germany

Bridging Clinical Care and Everyday Environments: A Cross-border Model for Youth Mental Health Prevention

Vesna Zidar Pečenko, CBC4YOUTH Project Consortium

Mental health challenges among children and adolescents are increasing, placing additional burden on clinical services, while support systems remain fragmented and reactive. This study presents the CBC4YOUTH project, aiming to develop and implement a preventive, community-based model bridging clinical and non-clinical settings. The project was conducted in Slovenia and Austria and included the development of the Duško/Shine toolbox, consisting of structured, low-threshold interventions for children, adolescents, parents, and professionals. The programme was piloted through workshops, youth exchanges, and a family camp. Initial results indicate feasibility of implementation and positive effects on social competencies, emotional resilience, and peer relationships. Based on implementation and expert collaboration, a cross-border strategy was developed to support integration of preventive mental health approaches into school systems, emphasizing early identification and the role of schools as protective environments. The model received positive expert feedback from the National Institute of Public Health, while formal feedback from education authorities is pending. The findings suggest that combining community-based interventions with cross-sectoral collaboration can support early intervention and more integrated mental health responses.

Vesna Zidar Pečenko (contact person)
Waldorf School Ljubljana, Ljubljana, Slovenia; Social Work Centre Gorenjska, Kranj, Slovenia; Waldorf School Klagenfurt, Klagenfurt, Austria
e-mail: vesna.zidar@waldorf.si

How do Parents of Children Following a Plant-based Diet Perceive Communication with Youth Health Care Professionals?

Vassia Ivanova, Marie-José Theunissen Lamers

Introduction: An increasing number of children are adopting a plant-based diet. However, there is no scientific literature available on the experiences of vegan parents regarding Dutch youth preventive healthcare services. Gray and populist literature often suggests that a plant-based diet for young children is generally discouraged. The aim of this study is to explore how parents who provide their children with a fully plant-based diet perceive the communication and attitudes of youth preventive healthcare professionals towards this diet.

Method: In September 2024, an online questionnaire was distributed among parents and caregivers of children aged 0 to 18 years living at home in the Netherlands. The results were analysed using SPSS (version 28.0.1.1) for descriptive statistics, including frequencies and percentages.

Results: A total of 130 questionnaires could be analysed in this study. Only two-thirds of parents informed their youth healthcare professional that their child follows a plant-based diet, with 26% of them reporting a sceptical, negative, or dismissive reaction. Youth preventive healthcare professionals inquired about the motivations for adopting a plant-based diet in 17% of cases, and 30% of parents received information on this topic from their youth preventive healthcare professional.

Conclusions: The findings of this study emphasize the need for increased attention for plant-based diet for children in educational programs and the provision of better accessible information for youth preventive healthcare professionals.

Vassia Ivanova (contact person)
GGD Zuid-Limburg, Heerlen, The Netherlands; Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands
e-mail: vassia.ivanova@ggdzl.n

Marie-José Theunissen Lamers
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; GGD Brabant-Zuidoost, Eindhoven, The Netherlands

Health Advocacy to Contain the Myopia Epidemic: A Case Study of the 'View Outdoors' Network

Vasanthi Iyer, Menno Reijneveld

Introduction: Myopia is becoming an epidemic among children globally, due to increased screen time and reduced outdoor activity. Health advocacy—actions designed to gain political commitment, policy support, and social acceptance for health goals—can help to address this public health challenge. This paper reflects on health advocacy activities undertaken to contain the myopia epidemic.

Methods: We mapped activities using the American Heart Association advocacy framework undertaken individually and via the multidisciplinary network 'View Outdoors' (2018), targeting professionals, policymakers, and the public. We categorized activities using Rogers' Diffusion of Innovations Model as policy development, research dissemination, communication, media engagement, and advocacy campaigns.

Results: The network now includes over one hundred professionals/organizations. Key domains were policy, research dissemination and communication. Examples regard a White Paper and screen use guidelines (policy), a PhD thesis (research), and myopia prevention programs at schools, webinars and conferences (communication), leading to a national prize in 2023. Limitations include absent systematic monitoring of behavioural change, which should be strengthened for sustainable change. The network is well positioned to maintain myopia prevention awareness.

Conclusions: Health advocacy helps to contain the myopia epidemic. Multidisciplinary teamwork, agenda setting, and an early adopter approach help to raise awareness and influence policy.

Vasanthi Iyer (contact person)
University Medical Centre Groningen, Groningen, The Netherlands
e-mail: vasanthi@ajnjeugdartsen.nl

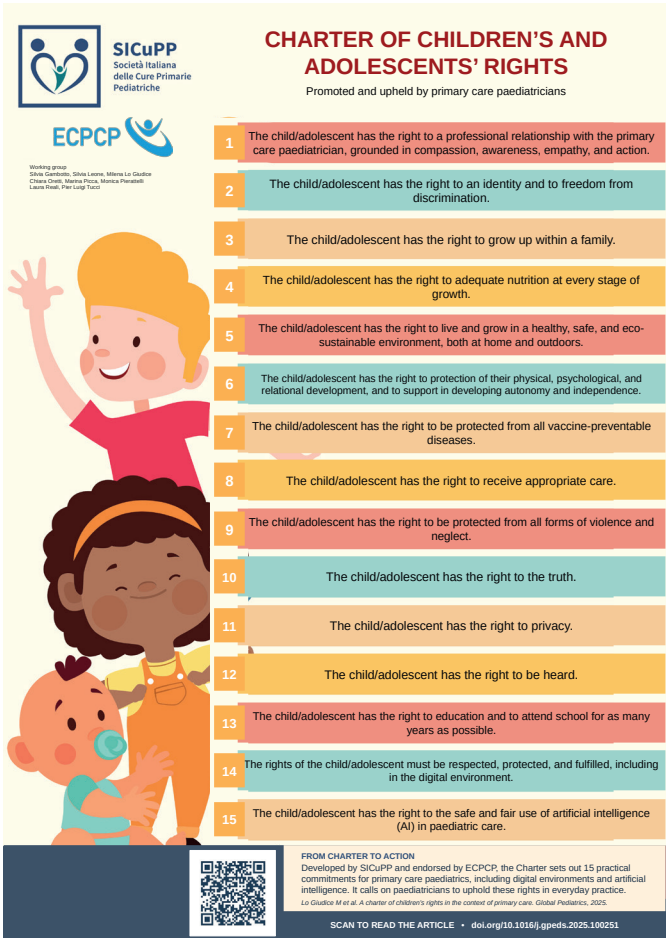
Menno Reijneveld
University Medical Centre Groningen, Groningen, The Netherlands

OPEN TOPICS

CHARTER OF RIGHTS of the Child/ Adolescent Protected and Promoted by the Primary Care Paediatrician

Silvia Gambotto, Silvia Leone, Milena Lo Giudice, Chiara Oretti, Marina Picca, Monica Pierattelli, Laura Reali, Pier Luigi Tucci

This Charter, developed by the Italian Society of Primary Paediatric Care, redefines and strengthens the rights of children and adolescents as protected and promoted by primary care paediatricians. Building on the 1989 New York Convention, it highlights the unique role of paediatricians in ensuring continuity of care, supporting families, and fostering a trustbased relationship that accompanies each child's development. The updated Charter responds to contemporary challenges – social change, technological evolution, environmental concerns, and the impact of the pandemic – by outlining fifteen essential rights. These include compassionate care, identity and nondiscrimination, family support, adequate nutrition, safe and sustainable environments, neurodevelopmental protection, vaccination, appropriate medical treatment, protection from violence, truthful communication, confidentiality, participation in decisions, access to education, digital rights, and safe, equitable use of artificial intelligence. The document emphasizes collaboration among families, schools, and communities, and incorporates the expressed needs of children themselves. It positions paediatricians as advocates committed to safeguarding wellbeing, autonomy, and inclusion, ensuring that every child grows in conditions that respect their dignity, health, and developmental potential.



Silvia Gambotto
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Silvia Leone
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Milena Lo Giudice (contact person)
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy
e-mail: milena.logiudice1@gmail.com

Chiara Oretti
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Marina Picca
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Monica Pierattelli
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Laura Reali
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

Pier Luigi Tucci
Italian Society of Primary Paediatric Care (SICuPP), Torino, Italy

The Sixth Dutch National Growth Study: Earlier Findings, Study Design, Data Collection, and Expectations

Lisanne Vonk, Yvonne Schönbeck,
Paula van Dommelen

The sixth Dutch National Growth Study began data collection in 2026 and continues a seventy-year tradition of documenting growth in children in the Netherlands and what this reveals about population health. Previous national growth studies identified shifts in growth patterns, such as secular trends to the late twentieth century, followed by a stagnation that raised questions about biological limits and changes in lifestyle. Earlier studies also showed increases in overweight and earlier onset of puberty, which informed national prevention strategies. The current study aims to develop ethnic-specific national growth charts for use by child healthcare professionals to detect growth-related disorders, as well as to update thinness, overweight and obesity prevalence rates, and age at menarche. As data collection is still ongoing, we will report on earlier findings, the study design, the data collection approach through electronic health records across the country, and expectations for this new study. Given recent societal changes in lifestyle, screen time and physical activity, the study is expected to provide new insights in growth and age at menarche. The results will ultimately help evaluate whether current policies effectively support children in growing up healthy.

Lisanne Vonk (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: l.vonk@maastrichtuniversity.nl

Yvonne Schönbeck
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Paula van Dommelen
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Blood Pressure Values in Healthy Normal Weight Children and Adolescents in Eight European Countries: The Need for New Referral Blood Pressure Values in Children and Adolescents

Nina Petričević, Vesna Herceg Čavrak, Rina Rus

Previous European paediatric recommendations to establish blood pressure (BP) percentiles and diagnose hypertension relied on American data from the Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents, although these reference values are based on data collected approximately 40 years ago. This study analysed BP values in 38,734 healthy, normal-weight children aged 3–17 years from eight European countries, within the multinational collaborative network HyperChildNET of the CO-operation in Science and Technology (COST) Action. Systolic (SBP) and diastolic (DBP) were measured using validated oscillometric (n=24,390) or sphygmomanometric/auscultatory (n=13,984) devices; three measurements taken and the average of the last two was analysed. BP increased progressively with age in both sexes and was strongly influenced by height. In boys, BP continued to rise after the age of 13, whereas in girls the increase was less pronounced after this age. This study offers the first large-scale comparison between auscultatory and oscillometric methods in paediatric populations and the results show that differences between oscillometric and auscultatory measurements of SBP and DBP were minimal, except in the oldest age groups. These findings provide valuable information on BP distribution in normal-weight European children and adolescents, highlighting the need for updated European data on age-, sex- and height-specific BP reference values.

Nina Petričević (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: nina.petricevic@stampar.hr

Vesna Herceg Čavrak
Faculty of Health Sciences, Libertas International University, Zagreb, Croatia

Rina Rus
Department for Nephrology, University Children's Hospital, University Medical Centre Ljubljana; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Socioeconomic Differences in Eating Habits and Physical Activity Among Adolescents

Ivana Pavić Šimetin, Dijana Mayer, Arian Peharda, Anamaria Vidmar, Ivona Keć, Tonka Karin

Introduction: Poor eating habits and physical inactivity in childhood increase risk of overweight and other health problems. Eating habits and physical activity in adolescence and their association with socio-economic status (SES) require further analysis.

Methods: Croatian 2022 Health Behaviour in School-aged Children data were analysed. Anonymous voluntary survey of 2579 boys and 2758 girls aged 11, 13 and 15. SES measured with Family Affluence Scale. Students grouped into high and low affluence; Pearson's Chi-square and binary logistic regression used.

Results: Daily, 52,9% boys and 42,2% girls eat breakfast (p<0,001), 36,0% boys and 37,6% girls fruit (p=0,261), 29,8% boys and 34,1% girls vegetables (p=0,001), 21,6% boys and 28,9% girls sweets (p<0,001), 14,2% boys and 12,1% girls soft drinks (p=0,026), 5,1% boys and 3,3% girls energy drinks (p=0,001), 44,0% boys and 37,5% girls family meals (p<0,001), while 28,8% boys and 20,0% girls are physically active (p<0,001). SES differences among boys: physical activity (OR1,56 CI1,30-1,88 p<0,001), breakfast (OR1,22 CI1,04-1,45 p=0,018), vegetables (OR1,23 CI1,01-1,50 p=0,04); among girls: physical activity (OR1,34 CI1,10-1,64 p=0,004) and fruit (OR1,25 CI1,04-1,49 p=0,015).

Conclusions: Gender differences in eating habits and physical activity were observed, with higher odds of some healthy behaviours among more affluent students, indicating need for gender-sensitive prevention and attention to less affluent families.

Ivana Pavić Šimetin (contact person)
Croatian Institute of Public Health, Zagreb, Croatia
e-mail: ivana.pavic@hzjz.hr

Dijana Mayer
Croatian Institute of Public Health, Zagreb, Croatia

Arian Peharda
Croatian Institute of Public Health, Zagreb, Croatia

Anamaria Vidmar
Croatian Institute of Public Health, Zagreb, Croatia

Ivona Keć
Croatian Institute of Public Health, Zagreb, Croatia

Tonka Karin
Croatian Institute of Public Health, Zagreb, Croatia

The System of School Nursing in the Slovak Republic: Current State, Pilot Initiatives and Key Challenges

Mikuláš Lakatoš, Vladimíra Kasalová

Introduction: School nursing is a key instrument of preventive healthcare, health promotion, and early intervention among children and adolescents. In the Slovak Republic, the concept has gained policy attention in recent years, particularly in connection with public health priorities and efforts to strengthen community-based and preventive services. Despite this, school nursing remains insufficiently institutionalized and lacks a comprehensive national framework. The aim of this contribution is to present the current state of school nursing in Slovakia, including ongoing pilot initiatives, and to identify systemic challenges affecting its scaling and sustainability.

Methods: The contribution is based on a qualitative policy analysis of national strategic documents (e.g., health and prevention strategies), legislative frameworks, and publicly available data. It also draws on outputs from pilot projects implemented in cooperation with the Ministry of Health of the Slovak Republic, public health authorities, and professional organizations. Expert insights from stakeholders involved in the design and implementation of school nursing initiatives were used to contextualize findings.

Results: Recent years have seen the emergence of pilot projects aimed at introducing school nurses into primary and secondary schools, often supported by national funding schemes and recovery-oriented reforms (e.g., measures linked to the Recovery and Resilience Plan). These pilots have demonstrated the added value of school nurses in areas such as early detection of health problems, mental health support, vaccination awareness, and health education. However, the system remains fragmented and project based. Coverage is limited to selected regions or schools, and the role of school nurses is not yet consistently defined across sectors. Key barriers include the absence of explicit legislative anchoring of school nurses within both the healthcare and education systems, unclear financing mechanisms beyond pilot phases, and a shortage of qualified nursing staff willing to enter this field. Data from pilot implementations also indicate variability in workload, role expectations, and integration into school teams. At the same time, there is growing alignment with broader policy agendas, including strengthening primary care, community health services, and

inclusive approaches targeting vulnerable populations (e.g., children from marginalized communities).

Conclusions: While pilot initiatives in Slovakia provide promising evidence of the effectiveness and relevance of school nursing, their long-term impact depends on systemic integration. This requires legislative recognition of the profession, sustainable financing models, standardized competencies, and stronger intersectoral governance between health and education sectors. Embedding school nurses into national prevention frameworks could significantly enhance child health outcomes and contribute to reducing health inequalities.

Mikuláš Lakatoš (contact person)
Inclusive Policy Department, Government Office of the Slovak Republic, Bratislava, Slovak Republic
e-mail: mikulas.lakatos@vlada.gov.sk

Vladimíra Kasalová
School Nurses Association, Slovak Chamber of Nurses and Midwives, Bratislava, Slovak Republic

Health Promotion at Schools by School Nurses

Ulrike Linstedt

Introduction: Approximately 16% of children and adolescents experience mental health problems, underscoring the relevance of this investigation. School nurses are well positioned to support early identification and preventive mental health care within educational settings, but they face facilitators and barriers.

Aim: To map the scope of interventions led by school nurses for mental health promotion in schools and identify barriers and facilitators to implementation.

Methods: Scoping review of peer-reviewed articles (2015–2024) via PubMed, CINAHL, ERIC (EBSCO). Inclusion: studies on mental health promotion for children/adolescents, interventions, barriers/facilitators, and interprofessional collaboration. Data charted and thematically synthesized.

Results: 39 international studies identified. Interventions include psychoeducation, screening, early intervention, and collaboration with families and mental health services. Barriers were lack of time/equipment, insufficient training, policy constraints. Facilitators were strong interprofessional collaboration, administrative support, targeted training, and integrated care pathways.

Conclusions: School nurses have high potential to advance school-based mental health promotion. Need for equity considerations and scalable implementation across diverse settings. Policy and practice should prioritize integrated care models linking schools, families, and external providers. Future research: country-comparative online survey (international vs. Germany), followed by stakeholder focus groups (education, policy, health).

Ulrike Linstedt (contact person)
Institute of Clinical Nursing Science, Charité Universitätsmedizin Berlin, Berlin, Germany; Institute of Nursing Science and Practice, Paracelsus Medical Private University, Salzburg, Austria
e-mail: ulinstedt@gmail.com

Monitoring Trends in School Experiences and Mental Health of High School Students in Dubrovnik-Neretva County (2006, 2011, 2016, 2025)

Matija Čale Mratović, Mirna Benić,
Petar Bezinović, Slavica Ćelić

Background: This study presents the results of research on school experiences and mental health among high school students in Dubrovnik-Neretva County conducted in 2006, 2011, 2016, and 2025. The primary aim was to track trends and examine the relationships between students' school experiences and mental health indicators over multiple time points.

Methods: The same cross-sectional design and questionnaire were used at all four time points to assess students' risky behaviours and mental health within a broader psychosocial context. The total sample included 4,243 students from all 16 secondary schools in Dubrovnik-Neretva County, with 51.4% of participants being female.

Results: The findings reveal significant positive changes in students' overall school experiences over time. However, persistent fears of academic failure and feelings of academic incompetence remain prevalent. These fears and feelings were found to be statistically significantly associated with existential crisis, fear of negative evaluation, and markers of mental health vulnerability.

Conclusions: These results emphasise the need to develop preventive school programs further focused on enhancing psychological resilience, building competencies, and promoting the overall well-being of students.

Matija Čale Mratović (contact person)
Institute of Public Health Dubrovnik Neretva County, Dubrovnik, Croatia
e-mail: matija.cale-mratovic@zzjzdnz.hr

Mirna Benić
Institute of Public Health Dubrovnik Neretva County, Dubrovnik, Croatia

Petar Bezinović
Institute of Public Health Dubrovnik Neretva County, Dubrovnik, Croatia

Slavica Ćelić
Institute of Public Health Dubrovnik Neretva County, Dubrovnik, Croatia

Centering Parenting

Wilma Helmantel, Suzanna van Dam

Centering Parenting is a model within youth health care that is applied in 40 municipalities in the Netherlands. Instead of individual consultations, group meetings will be organized for the first 14 months, in which medical check-ups by a youth health doctor and vaccinations will continue as usual. During these meetings, a facilitating approach is central. Parents are actively involved and encouraged to find solutions themselves. This increases their independence, self-confidence and social network. At the same time, it contributes to better health outcomes and a strong start for the child. Parents and caregivers work together as partners. Research (*1) during pregnancy shows that both participants and healthcare professionals are more satisfied than with individual care. The groups consist of 6 to 8 parents with their babies and are supervised by a youth nurse and a co-supervisor. The cooperation between midwives and youth health care is strengthened because groups can continue after birth. There are also adapted forms for non-native speakers and an online version available. Centering Parenting is seen as a valuable, modern approach to care, in which contact with peers plays an important role. The program has been recognized by the National Institute for Public Health and the Environment as a well-founded intervention within youth health care

Wilma Helmantel (contact person)
GGD Groningen, Groningen, The Netherlands
e-mail: wilmahelmantel@centeringzorg.nl

Suzanna van Dam
GGD Groningen, Groningen, The Netherlands

9TH SLOVENIAN CONGRESS OF SCHOOL, STUDENT, AND ADOLESCENT MEDICINE

Why Knowledge of Adolescent Medicine Is Important in Modern Medicine

Dušanka Mičetić-Turk, Bernarda Vogrin

Adolescent medicine is an important field of modern medicine that focuses on the specific health needs of young people during the transition from childhood to adulthood. Adolescence is a period of profound physical, psychological, social, and cognitive changes that have a significant impact on an individual's health throughout the life course. Due to the specific developmental characteristics of adolescents, their healthcare requires a specialised approach that goes beyond the traditional frameworks of paediatrics and family medicine. The importance of knowledge of adolescent medicine in modern healthcare stems primarily from the fact that many health behaviours, behavioural patterns, and risk factors for chronic diseases develop during adolescence. Unhealthy eating habits, physical inactivity, smoking, alcohol and other psychoactive substance use, as well as risky sexual behaviours, can have a significant impact on health in adulthood. Mental health disorders among adolescents represent a particular challenge for modern medicine. Research shows that a substantial proportion of mental health disorders, including depression, anxiety disorders, eating disorders, and self-harming behaviours, begin during adolescence. Increased exposure to social media, academic pressures, family difficulties, and broader social changes further affect the psychological well-being of young people. Knowledge of adolescent medicine enables the early recognition of health problems, effective communication with adolescents, and the timely provision of appropriate support and care. Since health during adolescence significantly influences health in adulthood, investing in the development of adolescent medicine is, at the same time, an investment in the health of future generations.

Dušanka Mičetić-Turk (contact person)
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia
e-mail: dusanka.turk13@gmail.com

Bernarda Vogrin
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia; National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia

Benefits and Challenges of Organizing Preventive Health Examinations of Children and Adolescents

Tanja Zbašnik Mulec

Preventive health examinations for children and adolescents constitute the cornerstone of early detection of medical, developmental and psychosocial abnormalities, significantly contributing to the improvement of long-term population health. In Slovenia, these examinations are conducted in accordance with the current guidelines of the ZDAJ program, which defines the content, timeline and objectives for the systematic monitoring of children and adolescents' growth, development and overall health. This paper presents the role of the designated school physician in organizing preventive health examinations, highlighting the advantages of a structured and holistically oriented approach. Key benefits include the early identification of risk factors, equal access to healthcare services, the strengthening of health education and fostered collaboration between healthcare professionals, schools and families. Special emphasis is also placed on the practical challenges faced by healthcare providers. These encompass organizational and staffing constraints, scheduling coordination, administrative burdens and variability in guideline implementation. Furthermore, the issue of effective communication with children, adolescents and their parents is addressed, underscoring the need for further process digitalization and enhanced data sharing.

Tanja Zbašnik Mulec (contact person)
Primary Healthcare Centre Celje, Celje, Slovenia
e-mail: tanja.mulec@yahoo.com

NAVIGATING ADOLESCENCE WITH CHRONIC CONDITIONS

Assessment of Physical and Motor Development in Children with Juvenile Idiopathic Arthritis

Eva Monika Tanko, Lana Pluško, Bojan Leskošek, Tadej Avčin, Maša Bizjak, Nina Emeršič, Anja Koren Jeverica, Gašper Markelj, Nataša Toplak, Tina Vesel Tajnšek, Gregor Jurak, Mojca Zajc Avramovič

Background: Juvenile idiopathic arthritis (JIA) is the most common chronic inflammatory rheumatic disease in childhood and may significantly affect children's physical and motor development. The aim of this study was to assess the physical and motor development of children with JIA according to disease activity and compare it with the healthy Slovenian paediatric population.

Methods: A retrospective longitudinal observational cohort study was conducted in patients diagnosed with JIA and treated at the Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital Ljubljana. Data from the Slovenian national surveillance system for physical and motor development of children and youth (SLOfit/Sports Educational Chart (SED) were analysed, including anthropometric measures, health-related fitness, motor performance-related fitness, and motor efficiency index.

Results: Results showed that children with JIA participated in fewer SED assessments after diagnosis than before diagnosis, indicating reduced participation in physical education. Even before clinical disease onset, children with JIA already differed significantly from healthy peers: they had lower body weight, lower body mass index, reduced peripheral fat mass, and poorer lower back and leg flexibility. During remission on therapy, persistent deviations remained evident, particularly in body weight, body mass index, and selected motor performance measures. These findings indicate that differences in physical and motor development are present already before diagnosis and persist during treatment.

Conclusions: This is worldwide the first study to show distinct pre-disease deviations, that can act as predisposing factors to JIA. Regular monitoring and encouragement of appropriate physical activity should be a part of the comprehensive management of children with JIA.

Eva Monika Tanko
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Lana Pluško
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Bojan Leskošek
Faculty of Sports, University of Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Maša Bizjak
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Nina Emeršič
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Anja Koren Jeverica
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gašper Markelj
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Nataša Toplak
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Tina Vesel Tajnšek
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gregor Jurak
Faculty of Sports, University of Ljubljana, Ljubljana, Slovenia

Mojca Zajc Avramovič (contact person)
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: mojca.zajc.avramovic@kclj.si

Consensus Development of the ERN ReCONNET Training Framework for Paediatric-to-adult Healthcare Transition for Rare Connective Tissue Diseases

Mojca Zajc Avramovic, Claudia Simu, Edoardo Marrani, Silvia Aguilera, Laurent Arnaud, Coziana Ciurtin, Marija Jelusic, Sylvia Kamphuis, Elena Moraitis, Katja Perdan Pirkmajer, Michael Poelz, Filipa Ramos, Pere Soler, Arjan Vissink, Bernarda Vogrin, Lina Zabuliene, Gabriele Simonini, Tadej Avcin

Background: Transition from paediatric to adult healthcare is a vulnerable period for adolescents and young adults (AYA) with rare connective tissue diseases (rCTDs), often associated with reduced adherence and poorer outcomes. Improving transition is a strategic priority of the European Reference Network ReCONNET.

Objectives: To develop a consensus-based framework for a standardized transition training curriculum in rCTDs.

Methods: An international Transition Training Workshop was held in November 2025 in Ljubljana, Slovenia, bringing together multidisciplinary experts from ERN ReCONNET member centres, including paediatric and adult rheumatologists, immunologists, AYA specialists, and patient representatives. A structured consensus process was used. Participants discussed pre-prepared materials in expert groups, presented results in plenary sessions, and voted following moderated discussion. An 80% agreement threshold was required. After the workshop, competencies were aligned with agreed domains and themes and re-evaluated in a second online voting round; items not reaching consensus were excluded.

Results: Seven core domains constituted the framework: principles of AYA medicine; rCTDs in AYA; transitional care; communication; health advocacy and patient partnership; ethical and legal aspects; and implementation and quality management. Each domain included up to five core themes, for a total of 25 themes, enabling the development of observable and measurable competencies.

Conclusions: This framework defines competencies for standardized European transition training in rCTDs.

Mojca Zajc Avramovič (contact person)
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: mojca.zajc.avramovic@kclj.si

Claudia Simu
Iuliu Haţieganu University of Medicine and Pharmacy, ClujNapoca, Romania; Department of Rheumatology, Emergency County Hospital, Cluj-Napoca, Romania

Edoardo Marrani
Meyer Children's Hospital, Florence, Italy; University of Florence, Florence, Italy

Silvia Aguilera
EURORDIS-Rare Diseases Europe, Lausanne, Switzerland

Laurent Arnaud
Department of Rheumatology, Academic Hospital of Strasbourg, Strasbourg, France

Coziana Ciurtin
Department of Rheumatology, University College London, London, United Kingdom

Marija Jelusic
University Medical Centre Zagreb, Zagreb, Croatia

Sylvia Kamphuis
Erasmus MC Sophia Children's Hospital, Rotterdam, The Netherlands

Elena Moraitis
Department of Rheumatology, University College London, London, United Kingdom

Katja Perdan Pirkmajer
University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Michael Poelzl
People with Arthritis and Rheumatism in Europe Organization – EULAR, Graz, Austria; Foundation for Children, and families, with Juvenile Rheumatic and Musculoskeletal Conditions – ENCA, Graz, Austria

Filipa Ramos
Paediatric Rheumatology Unit, University Hospital Santa Maria, Lisbon, Portugal; School of Medicine, University of Lisbon, Lisbon, Portugal

Pere Soler
Vall d'Hebron Barcelona Hospital Campus, Barcelona, Spain

Arjan Vissink
Department of Oral and Maxillofacial Surgery, University of Groningen, Groningen, The Netherlands; Center for Dentistry and Oral Hygiene, University Medical Centre Groningen, Groningen, The Netherlands

Bernarda Vogrin
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia; National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia

Lina Zabuliene
Medical Faculty, University Vilnius, Vilnius, Lithuania

Gabriele Simonini
Meyer Children's Hospital, Florence, Italy; University of Florence, Florence, Italy

Tadej Avcin
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Ready or Not: A Mixed Methods Study of Adolescent Views on Transition Preparedness in Ireland

Adeniran Faderera, Murphy Gillian, Hendrick Paul, Oketah Ngozi

Background: Transition from paediatric to adult healthcare is a crucial period for adolescents with chronic conditions, carrying long-term health and life consequences. The aim of our study was to assess transition preparedness among adolescents, explore their understanding of their condition and adult care plan, alongside their experiences of the transition process.

Methods: A mixed-methods study was conducted using a modified Ready-Steady-Go questionnaire, accessed via QR code by adolescents aged ≥14 years attending a tertiary children's hospital. Qualitative methods included a workshop style focus group incorporating

journey and challenge mapping and vision statement exercises. Quantitative data were analysed descriptively, and qualitative data were analysed thematically.

Results: A total of 140 responses were collected: 62% aged 14–16, 27% 16–18, and 11% 18 years. Seven female adolescents (≥14 years) participated in a workshop. Despite high self-reported knowledge of their condition (89%), 72% reported being unaware of their adult care plan and 60% felt unprepared for transition. In workshop discussions, participants described transition as confusing, emotionally challenging, and poorly communicated, with concerns about leaving paediatric care prematurely without adequate support or preparation.

Conclusions: High disease knowledge did not translate into transition readiness. Earlier, structured youth-centred approaches are needed to improve preparedness, communication, and continuity of care.

Adeniran Faderera (contact person)
Royal College of Surgeons in Ireland, Dublin, Ireland
e-mail: adeniranfade@gmail.com

Murphy Gillian
Department of Psychology, Children's Health Ireland, Dublin, Ireland

Hendrick Paul
Department of Research and Innovation, Children's Health Ireland, Dublin, Ireland

Oketah Ngozi
Department of Paediatrics, Children's Health Ireland, Dublin, Ireland; University College Dublin, Dublin, Ireland

Transition Experiences Before Implementation of a Hospital-wide Transition Pathway: A Historical Control Cohort

Jobert Sturm, Martha van Gaalen, Jane Sattoe, AnneLoes van Staa, Johanna C. Escher

Background: Transition to adult healthcare can disrupt care continuity for adolescents and young adults (AYAs) with chronic conditions. Experiences before implementation of a transition pathway at a university hospital were assessed.

Methods: AYAs 6–18 months post-transfer across six specialties completed the On Your Own Feet–Transition Experience Scale (OYOF-TES; 20 items; range 20–100); parents completed the parent OYOF-TES. Both rated satisfaction and trust in paediatric/adult care teams (1–10). Open questions were analysed using content analysis.

Results: AYAs (n=104) reported generally favourable experiences (OYOF-TES 76.8±13.6) and satisfaction 7.6±1.91. AYAs and parents (n=55) showed same profiles: reception, alliance, and readiness scored higher than preparation and involvement. Youth subscales (mean ± SD; 1–5) were reception 4.28±0.71, alliance 3.79±0.81, readiness 4.12±0.78, preparation 3.43±0.97, involvement 2.90±1.15; parent subscales were reception 4.11±0.74, alliance 3.60±0.82, readiness 4.00±0.80, preparation 3.17±0.92, involvement 2.75±1.15 (parent total 73.3±13.27; satisfaction 7.4±1.77). Trust was lower in adult than paediatric care for AYAs (−0.41; p=0.005) and parents (−0.82; p<0.001). Better experiences were associated with more satisfaction (p=0.786) and adult- care trust (p=0.599). Free-text praised reception/continuity but highlighted preparation/communication gaps, logistics and variability in handover quality.

Conclusions: Preparation and involvement – alongside adult-care trust – and reducing variability in preparation and handover are key improvement targets.

Jobert Sturm (contact person)
Department of Paediatric Gastroenterology, Sophia Children's Hospital, Erasmus University Medical Centre, Rotterdam, The Netherlands; Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, The Netherlands
e-mail: j.l.sturm@hr.nl

Martha van Gaalen
Department of Paediatric Gastroenterology, Sophia Children's Hospital, Erasmus University Medical Centre, Rotterdam, The Netherlands

Experiences of Paediatric Patients With Acute Hospital Care: The First National Cross-sectional Study in Slovenia

Eva Murko, Marcel Kralj,
Metka Zaletel, Neža Karo

Jane Sattoe
Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, The Netherlands

AnneLoes van Staa
Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, The Netherlands

Johanna C. Escher
Department of Paediatric Gastroenterology, Sophia Children's Hospital, Erasmus University Medical Centre, Rotterdam, The Netherlands

Introduction: Monitoring patient experiences is an important indicator of the quality of healthcare. In paediatrics, it is particularly important to consider the perspectives of children and their parents when assessing quality. The aim of the study was to gain a national insight into the experiences of paediatric patients with acute inpatient care in Slovenia using PREMs (patient-reported experience measures).

Methods: The study examined various aspects of hospital care, including admission, the attitude of healthcare staff, feelings of safety, hospital food, and discharge from the hospital. We used three different questionnaires: one for parents/caregivers and two tailored to the age and cognitive abilities of children and adolescents. Data collection took place between September 2023 and March 2024 and included all children and adolescents who were hospitalized for at least one night in an acute paediatric ward during the study period, with the exception of intensive care, neonatal, and psychiatric wards.

Results: Twenty-five wards participated in the study, and 1,965 children and parents submitted validly completed questionnaires. The estimated response rate was 17.6%. Paediatric patients and their parents highly rate the healthcare services received in the hospital, but at the same time highlight several areas for improvement, such as outdated equipment, external sleep disturbances (noise, light), lack of toys, hospital food, staff attitude, etc.

Conclusions: This study provides the first national insight into the experiences of paediatric patients with hospital care in Slovenia. The findings serve as a basis for planning measures to improve the quality of paediatric hospital care.

Eva Murko (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: eva.murko@nijz.si

Marcel Kralj
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Metka Zaletel
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Neža Karo
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Artificial Intelligence–Based Video Analysis to Support Earlier Detection of Duchenne Muscular Dystrophy in Primary Healthcare

Paula van Dommelen, Dieuwertje Alblas, Elfi Hofmeijer, Gertjan Burghouts, Georgios Xanthopoulos, Eline Vlasblom, Jildau Bouwman, Cor Veenman, Sadegh Shahmohammadi

Previous research has shown that boys with Duchenne muscular dystrophy (DMD), an X-linked neuromuscular disorder with progressive muscle weakness, already deviate from typical development in early childhood. Nevertheless, diagnosis often occurs late, partly due to the subtle nature of early clinical signs, such as Gower's sign and a waddling gait, which are not consistently recognized in primary healthcare. The aim of this study was to develop an artificial intelligence–based decision support system for earlier detection of DMD using video data. Video recordings of young children performing gross motor movements relevant to DMD were analysed using pose graph models and vision–language models (VLMs). Pose graphs extracted body key points from video frames, from which expert defined features were derived to capture characteristic movement patterns. VLMs were prompted with domain knowledge to generate frame level textual descriptions of body poses, which were aggregated over time and interpreted using a large language model (LLM). Initial results are promising but preliminary, showing potential to distinguish typical development from movement patterns suggestive of neuromuscular pathology using limited data. Further improvements are expected through more advanced models and larger, more diverse video datasets. This approach may ultimately support earlier referrals in primary healthcare.

Paula van Dommelen (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: paula.vandommelen@tno.nl

Dieuwertje Alblas
Expertise group Defence, Safety and Security, Netherlands Organisation for Applied Scientific Research (TNO), The Hague, The Netherlands

Elfi Hofmeijer
Expertise group Defence, Safety and Security, Netherlands Organisation for Applied Scientific Research (TNO), The Hague, The Netherlands

Gertjan Burghouts
Expertise group Defence, Safety and Security, Netherlands Organisation for Applied Scientific Research (TNO), The Hague, The Netherlands

Georgios Xanthopoulos
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Eline Vlasblom
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Jildau Bouwman
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Cor Veenman
Expertise group ICT, Strategy and Policy, Netherlands Organisation for Applied Scientific Research (TNO), The Hague, The Netherlands

Sadegh Shahmohammadi
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands

Effects of a Hospital-Based Program for Overweight Children: A Two-Year Analysis of Physical Fitness and Body Composition

Manca Zupančič

Childhood and adolescent obesity represent a major public health concern with long-term metabolic and cardiovascular consequences. The aim of this work was to evaluate the effectiveness of a multidisciplinary hospital-based obesity treatment program and to analyse changes in body composition and physical performance in children and adolescents over a two-year follow-up period. Participants with obesity were enrolled in the program between 2023 and 2025. The intervention consisted of an initial two-week hospitalization, followed by 6–8 weeks living in home environment, a one-week inpatient refresher program, and four follow-up visits at six-month intervals. Body composition parameters, physical performance index, aerobic capacity, and handgrip strength were assessed. Results demonstrated marked short-term improvements in adiposity-related outcomes, particularly visceral fat, as well as statistically significant increases in VO_2max and muscle strength following the initial intervention phase. Changes in lean body mass and phase angle developed gradually, while a partial rebound in fat-related indicators was observed after approximately 12 months. Improvements in physical performance was primarily associated with reductions in fat mass. Boys exhibited greater long-term increases in lean body mass, whereas younger participants achieved greater short-term gains in aerobic capacity. These findings confirm that multidisciplinary intervention effectively initiates favourable metabolic adaptations; however, sustained long-term outcomes require additional support and more frequent follow-up.

Manca Zupančič (contact person)
Children's Hospital Šentvid pri Stični, Šentvid pri Stični, Slovenia
e-mail: manca.zupancic@bos-sentvid.si

Challenges in Child Obesity Managing at the Beginning of School Age

Vera Musil

Introduction: Obesity has been recognized as one of the most demanding public health challenges of the 21st century. The aim of this paper was to investigate nutritional status of school beginners.

Methods: A retrospective analysis was conducted on a cohort of 246 school beginners (41% girls) from five primary schools in the Zagrebačka County area. Data on nutritional status, collected at systematic examination before starting school in school heath service and estimated according to the Croatian reference values for body mass index were obtained from medical record.

Results: Data of 237 students (40% girls) were available. Overweight (overweight and obesity) were 19.8% children, significantly more girls (22.5%) than boys (17.8%) ($p<0.001$). Overweight were 13.3% boys and 12.7% girls, obese 4.4% boys and 9.8% girls.

Conclusions: The results showed a high proportion of overweight children at the beginning of school age. The results indicate importance of monitoring and follow-up of nutritional status from the beginning of school age. The results underline the requisite for implementation of healthy lifestyle habits in school setting for children with normal nutritional status, in order to maintain it through the school age and life span.

Vera Musil (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia
e-mail: vmusil@snz.hr

Retrospective Analysis of Children with Confirmed Presence of *Pneumocystis Jirovecii* in the Lower Respiratory Tract

Darja Novakovič, Paola Pascolo, Saša Šetina Šmid, Uroš Krivec, Malena Aldeco, Ana Kotnik Pirš, Katarina Vincek, Mojca Kozinc, Katarina Kouter, Barbara Šoba Šparl, Gašper Markelj

Introduction: *Pneumocystis jirovecii* infection is a fungal infection that usually occurs in immunocompromised patients. Using retrospective analysis, we examined risk factors associated with confirmed presence of *P. jirovecii* in the lower respiratory tract.

Methods: The study included children up to 18 years of age who were hospitalized in UKC Ljubljana between 01/01/2015 until 01/01/2026 and who had a positive sample of *P. jirovecii* in bronchoalveolar fluid. The results were obtained from IMI. Data were collected from electronic medical records retrospectively.

Results: There were 37 patients that had a positive bronchoalveolar lavage for *P. jirovecii*. Of these, 14 (37,8%) had immunodeficiency, that is 4/14 congenital immunodeficiency and 10/14 secondary immunodeficiency. Among secondary immunodeficiencies there is one child with HIV infection, two had thymectomy. The remaining 23 children had no known immunodeficiency. Among 23 children with other comorbidities, respiratory diseases prevailed: 8/23 NEHI, 5/23 BPD and 3/23 postinfectious bronchitis; 2/23 children had syndromic diseases, in 4/23 no clear risk factor was found.

Conclusions: In the last 10 years, 23 out of 37 children with *P. jirovecii* in lower respiratory tract at the UKC Ljubljana had no associated immunodeficiency at presentation as well as during follow-up.

Darja Novakovič (contact person)
Division for Infectious Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail:

Paola Pascolo
Department of Pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Saša Šetina Šmid
Department of Pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Uroš Krivec
Department of Pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Malena Aldeco
Department of Pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Ana Kotnik Pirš
Department of Pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Katarina Vincek
Division for Infectious Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia

Mojca Kozinc
Division for Infectious Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia

Katarina Kouter
Institute for Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Barbara Šoba Šparl
Institute for Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gašper Markelj
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

GROWING UP IN A CHANGING ENVIRONMENT

Environmental Risk Factors in Children and Adolescents: What Clinicians Need to Know and Do

Laura Reali

Children and adolescents are especially vulnerable to environmental hazards. Their organs are still developing, their patterns of exposure differ from those of adults, and they have a longer lifetime ahead. They also depend on adults and social systems for protection. This presentation examines the environmental risks most relevant to clinical practice, including climate change, air pollution, heat, extreme weather, indoor exposures, noise, chemicals, and social vulnerability. Evidence increasingly links these exposures to respiratory and allergic diseases, neurodevelopmental and mental health effects, heat-related illness, injuries, sleep disturbance, and worsening chronic conditions. Adolescents face specific risks arising from outdoor activities, school environments, increasing autonomy, climate anxiety, and perceptions of risk. At the same time, they can become effective agents of change. Clinicians should recognise possible environment-related symptoms and assess individual and community vulnerabilities. A concise environmental history, age-appropriate environmental counselling, and anticipatory guidance should become part of routine care, especially in well-child visits. Paediatricians should support climate adaptation strategies, reduce avoidable exposures, and strengthen resilience. Mitigation requires government action. Clinicians should therefore advocate for policies that place children's health at the centre of policymaking.

Laura Reali (contact person)
Primary Healthcare Centre Rome, Rome, Italy; European Confederation of Primary Care Paediatricians, Lyon France
e-mail: ellereali@gmail.com

Exposure of Children and Adolescents to Selected Metals: Results of the Second National Human Biomonitoring Study

Manca Ahačič, Klemen Tršinar, Katja Rostohar, Janja Snoj Tratnik, Darja Mazej, Marta Jagodic Hudobivnik, Milena Horvat, Lucija Perharič

Human biomonitoring (HBM) determines changes in human tissues and body fluids due to chemical exposure. It enables assessment of exposure, effects and susceptibility, providing a scientific basis for public health interventions. The National Institute of Public Health, initiator of the national HBM programme, and the Jožef Stefan Institute are key implementing institutions. The second national study (2018–2026) includes 1.601 children (6–9 years) and adolescents (12–15 years) from eight potentially contaminated areas in Slovenia. Following ethical approval, first morning urine, blood and hair samples were collected, and history was obtained through a comprehensive questionnaire. HBM guidance values, at which no adverse health effects are expected according to current knowledge, were used for risk assessment. Preliminary results indicate low exposure to cadmium (GM 0.12; P95 0.25 µg/g creatinine), mercury (GM 0.20; P95 0.72 µg/g creatinine; GM 0.55; P95 2.13 µg/L blood; GM 167; P95 691 ng/g hair), and arsenic (GM 5.74; P95 35.5 µg/g creatinine), not exceeding current guidance values. For lead (GM 8.73; P95 20.1 µg/L blood), no safe threshold exists, as developmental neurotoxicity in children was observed at concentrations below 50 µg/L blood. The results highlight the importance of proper interpretation of HBM data and careful communication.

Manca Ahačič (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: manca.ahacic@nijz.si

Klemen Tršinar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Katja Rostohar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Janja Snoj Tratnik
Jožef Stefan Institute, Ljubljana, Slovenia

Darja Mazej
Jožef Stefan Institute, Ljubljana, Slovenia

Marta Jagodic Hudobivnik
Jožef Stefan Institute, Ljubljana, Slovenia

Milena Horvat
Jožef Stefan Institute, Ljubljana, Slovenia

Lucija Perharič
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Development of Paediatric Environmental History Questionnaires in the Slovenian Electronic Health Record

Pia Vračko, Simona Uršič, Irena Veninšek Perpar, Vesna Viher Hrženjak, Bernarda Vogrin, Nina Pirnat

Introduction: Children and adolescents are particularly vulnerable to harmful environmental exposures due to their developmental characteristics and immature organ systems. Systematic data collection using structured tools is essential for identifying such risks in routine paediatric clinical practice. Our aim was to develop structured paediatric environmental history questionnaires tailored to the Slovenian health system and environmental context and to design a concept for their integration into the national electronic health record, enabling early detection of environmental risks, targeted counselling for families, and timely action at individual and community levels.

Methods: We conducted a narrative review of professional literature and international recommendations and compiled an initial set of environmental risk factors particularly relevant in childhood and adolescence. Two authors independently reviewed the sources; discrepancies and open questions were resolved through multistage discussions among all authors.

Results: We developed three age specific questionnaires for children and adolescents, covering the home environment, air and drinking water quality, and exposure to chemical, physical and biological agents. We prepared an electronic documentation template including a risk assessment, text fields for additional findings and conducted pilot cognitive testing with paediatricians.

Conclusions: The tool enables structured data collection, supports clinical decision-making, and strengthens preventive care in paediatrics and adolescent medicine.

Pia Vračko (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: pia.vracko@nijz.si

Simona Uršič
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Irena Veninšek Perpar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Vesna Viher Hrženjak
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Bernarda Vogrin
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia; National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia

Nina Pirnat
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Health Education in the Context of Education for Sustainable Development as a Whole Institution Approach: The example of the Austrian ECOLOGization of Schools Network

Franz Rauch, Mira Dulle

Austria's largest network for sustainable development education in schools is ÖKOLOG, which currently comprises 13% (over 800 schools) of the Austrian schools of all types as well as all university colleges for teacher education. (www.oekolog.at). In the context of a whole-institution-approach schools analyse the ecological, technical, social and health conditions of their environment and, resultingly, define objectives, targets, concrete activities, and quality criteria to be implemented and evaluated. Students and other stakeholders of a school should be involved in a participatory way, and collaboration with authorities, businesses, and other interested parties is encouraged. The measures concern, among others, areas like saving resources (energy, water, etc.), reduction of emissions (i.e., waste, traffic), spatial arrangement (from the classroom to the campus), the culture of learning (communication, organisational structure), health promotion, social learning, as well as the opening of the school to the community. Since the beginning of the ÖKOLOG-schools network's existence, a series of evaluations, inquiries, and studies have been produced and published both using qualitative and quantitative methods. The presentation will showcase examples from ÖKOLOG-schools relating to health education and will also discuss these within the context of the One Health approach.

Franz Rauch (contact person)
Institute of Instructional and School Development, University of Klagenfurt, Austria
e-mail: franz.rauch@aau.at

Mira Dulle
Institute of Instructional and School Development, University of Klagenfurt, Austria

Challenges in Limiting Adolescents' Exposure to Alcohol and Illicit Drugs in Digital Media

Mateja Jandl, Gorazd Levičnik

Background: Digital environments increasingly expose young people to alcohol marketing and emerging drug-related risks. As their media literacy is still unconsolidated, and content regulation often inconsistent, it is difficult to distinguish when young people are exposed to covert marketing and communication content.

Methods: We conducted a narrative review based on original scientific articles and professional sources of grey literature that studied aspects of youth exposure to content in digital media related to the use of alcohol or illicit drugs.

Results: Young people are frequently exposed to alcohol-related content via social media and targeted advertising that normalizes or even encourages the use of alcohol. Mechanisms for checking the content or the age of users is mostly ineffective. Other related factors are social influencers, indirect exposure through third-party comments, online links to other websites, and increasingly individualized marketing and communication content, tailored by the algorithms themselves. Digital platforms may also expose adolescents to recruitment into drug distribution networks.

Conclusions: Digital media, especially social networks, represent a growing public health challenge for effectively limiting the exposure of young people to risky behaviour. There is a clear need to develop modern preventive measures, to strengthen media literacy, as well as to develop better regulatory mechanisms for control and action. Healthcare professionals should address these influences in prevention, early identification, and counselling.

Mateja Jandl (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: mateja.jandl@nijz.si

Gorazd Levičnik
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Effectiveness of a New Approach to Enhance the Implementation of School Tobacco Policies – Results from a Randomized Controlled Trial

Pierre Laloux, Vincent Lorant

Background: Smoking and vaping among adolescents is a major public health issue. Schools may contribute to smoking prevention through the implementation of tobacco policies (STPs). Evidence of STPs' effectiveness remains weak due to few experimental trials and barriers to implementation. The ADHAirE study aimed to fill these two gaps.

Methods: ADHAirE is a randomized controlled trial aimed to assess a new approach to enhance the implementation of STPs. It was conducted between 2024 and 2026 in 18 secondary schools, in a socio-economically disadvantaged province in Belgium. Schools were randomly allocated either to an experimental or a control group. In the experimental group, schools set up a task force including students, staff members, and the principal to foster the implementation of the STP while receiving guidance from the research team and sharing practices with other participating schools. Control schools were not provided with a structured intervention to address smoking.

Results: Longitudinal data on 3000 students and 600 staff members will be available in June 2026. We expect students in experimental schools to report lower visibility of smoking and vaping in and around the school, and improved communication regarding smoking and vaping bans. Staff from those schools are expected to share a common understanding of the rules and to enforce them more consistently.

Discussion: Strengthening collaboration within schools may foster a collective commitment to a smoke-free environment.

Pierre Laloux (contact person)
Institute of Health and Society, Université catholique, Brussels, Belgium
e-mail: pierre.laloux@uclouvain.be

Vincent Lorant
Institute of Health and Society, Université catholique, Brussels, Belgium

EMERGENCY MEDICINE

Announced and Unannounced Paediatric Resuscitation Simulations: Participants Perceptions

Nina Milenković Kikelj, Jera Grabnar, Jernej Brecelj, Nina Emeršič, Gorazd Mlakar, Gregor Nosan, Saša Šetina Šmid, Rina Rus

Background: Simulation-based training is crucial for resuscitation skills retention. The optimal design—announced versus unannounced simulations—remains debated. This study explores participants perceptions of both formats of simulations.

Methods: We conducted a prospective observational study at the University Children's Hospital Ljubljana (Sept 2023–May 2024). Participants completed anonymous questionnaires primarily utilizing a 5-point Likert scale (1=strongly agree, 5=strongly disagree) after both formats of paediatric resuscitation simulations. Data were analysed using descriptive statistics, Mann-Whitney U tests for announced vs. unannounced comparisons, and bootstrap analysis for comparative questions.

Results: Study included 159 valid responses, 93 (58.5%) after announced and 66 (41.5%) after unannounced simulations. Unannounced significantly increased participant stress (Me 2.5 vs. 3.0, $p < 0.001$) and feelings of unpreparedness (Me 3.0 vs. 4.0, $p < 0.001$). They also led to greater distractions from work (Me 4.0 vs. 5.0, $p < 0.05$). Respondents highly valued both formats of simulations for learning and skill development (Me 1.0) and consistently found debriefing useful (Me 1.0).

Conclusions: Unannounced simulations evoke higher stress and perceived disruption compared to announced, yet both formats are highly valued for learning and skill development. Recognizing these perceptual differences enables the tailoring of simulation design and debriefing strategies to maximize participant engagement and educational outcomes in paediatric resuscitation training.

Nina Milenković Kikelj (contact person)
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: nina.milenkovic.kikelj@kclj.si

Jera Grabnar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jernej Brecelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Nina Emeršič
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Gorazd Mlakar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gregor Nosan
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Saša Šetina Šmid
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Rina Rus
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Announced and Unannounced Paediatric Resuscitation Simulations: Participant Performance

Jera Grabnar, Nina Milenković Kikelj, Jernej Brecelj, Nina Emeršič, Gorazd Mlakar, Gregor Nosan, Saša Šetina Šmid, Rina Rus

Background: Paediatric cardiac arrest is rare but life-threatening. In-situ simulation to improve resuscitation skills is increasingly used, but the value of announced and unannounced formats remains uncertain.

Methods: We conducted a prospective observational study at the University Children's Hospital Ljubljana. Each department participated in one announced and one unannounced paediatric resuscitation simulation. Team performance was assessed using structured checklists.

Results: A total of 24 simulations were conducted across 12 departments, involving 205 active participants and observers. In paired analyses, team size was significantly larger in announced than in unannounced simulations (median 9.5 [IQR 8.0–12.3] vs. 8.0 [IQR 6.0–9.0], p = 0.016). Response time tended to be longer in unannounced simulations. Only one announced team completed the full ABCDE assessment. Complete breathing assessment was achieved in 10/12 announced simulations (83.3%, 95% CI 51.6%–97.9%) and 8/12 unannounced simulations (66.7%, 95% CI 34.9%–90.1%). Complete circulation assessment was observed in 3/24 simulations (12.5%, 95% CI 2.7%–32.4%). Correct chest compressions, intraosseous access, and defibrillator use were observed in 7/24, 17/24, and 9/24 simulations, respectively. Given the small sample size, inferential comparisons were considered exploratory.

Conclusions: Both formats identified important gaps in paediatric resuscitation performance and support repeated low-dose, high-frequency training embedded in the clinical environment.

Jera Grabnar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Nina Milenković Kikelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jernej Brecelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Nina Emeršič
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Gorazd Mlakar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gregor Nosan
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Saša Šetina Šmid
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Rina Rus (contact person)
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: rina.rus@kclj.si

Acute Alcohol Intoxications in Adolescents at the University Children's Hospital Ljubljana (2013–2023)

Amadeja Založnik, Peter Kunstelj, Eva Vrščaj,
Jera Grabnar, Nina Milenković Kikelj, Veronika Velenšek

Background: The use of alcohol usually begins in adolescence. Its unhealthy use represents a global public health concern, particularly in Slovenia. Acute alcohol intoxications (AAI) in adolescents are common. The aim of our study was to evaluate the characteristics of Slovenian adolescents with AAI and to compare our findings with other published analyses.

Methods: We conducted a retrospective analysis of all adolescents treated for AAI from 2013 to 2023 in University Children's Hospital in Ljubljana, Slovenia.

Results: 542 adolescents aged 12 to 18 years were included in our study. Gender distribution was balanced (50.5% boys and 49.6% girls). The average age was 15.6 years; the average blood alcohol concentration (BAC) was 1.56 g/L. 88% of the patients were admitted to hospital, 1.3% to the intensive care unit (ICU). In 13.9% of the tested individuals, screening was positive for illicit drugs, mostly tetrahydrocannabinol (THC). Many needed mental health specialist's evaluation or management. Hypokalaemia was present in 21% of cases, hypoglycaemia in less than 0.01%. 55% of cases presented on non-working days.

Conclusions: our findings are roughly consistent with comparable European reports on AAI among adolescents. Of particular concern is the presence of illicit drugs, which seems to be more common in our population than elsewhere. Enhanced multicentre and international cooperation could facilitate the development of more effective preventive strategies.

Amadeja Založnik
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Peter Kunstelj (contact person)
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: peterkuns@gmail.com

Eva Vrščaj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jera Grabnar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Nina Milenković Kikelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Veronika Velenšek
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Trends of Acute Psychoactive Substance Poisonings in Children and Adolescents: An Eleven-Year Experience from a Tertiary Paediatric Center

Nina Žavbi Kunaver, Nina Milenković Kikelj, Veronika Velenšek, Eva Vrščaj, Jera Grabnar

Background: Acute psychoactive substance (PAS) poisonings are an important and increasing health concern also in paediatric population.

Methods: We conducted a retrospective study of PAS poisonings presenting to the University Children's Hospital Ljubljana over eleven years (2013-2023). Collected data included demographics, type of PAS, exposure intent, co-ingestants, mode of arrival, professionals involved, and treatment details. Acute alcohol poisonings as a sole substance were excluded.

Results: A total of 182 poisoning cases in 128 individuals were analysed (57% girls, majority aged 15–18 years). The number of cases per year increased markedly after 2020. 65% cases required hospital admission, and 3% intensive care. Clinical toxicologists were consulted in 49%. Cannabinoids were the leading substance (45%), followed by stimulants (33%) and central nervous system depressants (30%). Poly-substance use occurred in 40% of cases and alcohol co-ingestion in 24%. Unintentional poisonings (4%) were primarily observed in young children. Intentional substance misuse accounted for 59% of cases, while 32% involved self-harm or suicide attempts (90% of these among girls). Paediatric psychiatrist was involved in 70% of cases.

Conclusions: Trends of PAS poisonings show a marked rise, particularly after 2020, with high rates of intentional misuse, self-harm attempts, and poly-substance exposure. These findings underscore the need for targeted prevention, integrated emergency care pathways and early psychiatric intervention.

Nina Žavbi Kunaver (contact person)
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: ninazavbik@gmail.com

Nina Milenković Kikelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Veronika Velenšek
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Eva Vrščaj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Jera Grabnar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

WORKSHOPS – ABSTRACTS

Words That Work: Navigating Difficult Conversations with Adolescent and Their Family

Anne-Emmanuelle Ambresin

Communication lies at the heart of adolescent healthcare – yet navigating conversations within the adolescent-parent-provider triangle remains one of the most challenging skills to master. This interactive workshop invites health and allied health professionals from all disciplines working with adolescents to explore the dynamics, tensions, and opportunities that arise in these three-way encounters. Through role-play and case-based scenarios drawn from real clinical situations, participants will examine key communication challenges: balancing confidentiality and parental involvement, giving voice to the adolescent while maintaining family alliance, and managing disagreement or conflict within the consultation. An interprofessional lens will run throughout, acknowledging that physicians, nurses, psychologists, social workers, educators, and others each bring distinct perspectives – and face distinct challenges – when engaging with young people and their families. By the end of this workshop, participants will have practiced concrete communication strategies they can adapt to their own professional context and clinical setting.

Anne-Emmanuelle Ambresin (contact person)
Division for adolescent health, University Hospital, Lausanne, Switzerland
e-mail: anne-emmanuelle.ambresin@unil.ch

Expert Teens: Getting Acknowledged in Our Health! A Workshop Aimed at Adolescent Health Professionals and Facilitated by Adolescents

Marie Dinh, Michelle Veilleux, Guillaume Groffe, Sylvie Cliquet, Sylvie Cliquet

Involving young people in health programmes, a principle the WHO considers crucial, allows us to tailor services to their needs and better prepare for the future. Their active participation is essential to delivering care that is acceptable, relevant and effective. This workshop shares our experience of youth participation through an immersive, session facilitated by trained teenage presenters. This group has worked alongside health professionals since the International Adolescent Health Week (IAHW) in 2023, engaging young people in schools and prevention initiatives, and leading roundtables at adolescent medicine conferences. Three members served as French ambassadors for the IAHW. By placing these teenage experts at the centre of health promotion, we have supported them in becoming genuine agents of change, reflecting the strength of partnerships between healthcare structures, prevention services and local communities. For attending professionals, this will be an eye-opening experience demonstrating how listening to adolescents deepens understanding of their needs. For the teenagers, it is an empowering opportunity to share their expertise and broaden their impact.

Marie Dinh
University Paris Cité, Paris, France; University Sorbonne Paris Nord, Paris, France; Institute for Medical Research (INSERM), Paris, France

Michelle Veilleux
French Society for Adolescent Health, Paris, France; Student Health Foundation of France (FSEF), Paris, France; Institute for Medical Research (INSERM), Paris, France

Guillaume Groffe
French Society for Adolescent Health, Paris, France; Student Health Foundation of France (FSEF), Paris, France

Sylvie Cliquet
French Society for Adolescent Health, Paris, France

Mariana Marin (contact person)
French Society for Adolescent Health, Paris, France; Hospital Rives de Seine, Paris, France
e-mail: mmarin@ch-rivesdeseine.fr

From Standard Clinical Data to AI Insights: The SmartCHANGE Ecosystem for NCD Risk Prediction and Intervention

Gregor Jurak, Marina Trkman, Bernarda Vogrin

Background: This hands-on workshop will demonstrate key components of the AI-supported ecosystem developed within the Horizon Europe SmartCHANGE project. The project aims to revolutionize health promotion by leveraging artificial intelligence (AI) to identify long-term Non-Communicable Disease (NCD) risks in youth and generate highly individualized behaviour change interventions.

Methods: Following a brief, high-level overview of the SmartCHANGE project, participants will engage in an interactive, three-stage comparative case-study simulation. Working in small groups, participants will evaluate health risks and design interventions for the same patient profiles across three evolving tiers of care. Round 1 (Standard Care): Groups receive traditional, printed clinical data (e.g., standard anthropometrics, family environment, and self-reported diet and physical activity) to perform a baseline risk assessment and design an initial intervention strategy. Round 2 (Advanced Care with Wearable Data): Participants log into the SmartCHANGE platform, where the baseline clinical profiles are enriched with device-measured 24-hour movement behaviours (physical activity, sedentary behaviour, and sleep) and logged nutrition data. Groups will re-evaluate the risk profiles and refine their strategies based on these objective behavioural insights. Round 3 (AI-Supported Care): Participants unlock the full capabilities of the SmartCHANGE AI engine. Utilizing predictive modelling and advanced decision-support features, groups will finalize a comprehensive, long-term behaviour change strategy.

Results: The session will conclude with a collaborative evaluation and debrief. We will analyse how the transition from traditional metrics to wearable data – and ultimately to AI-driven predictive insights – altered participants' perceptions of long-term health risks and influenced the precision and feasibility of their intervention designs.

Conclusions: This interactive simulation highlights the clinical and practical utility of the SmartCHANGE ecosystem. By bridging the gap between raw behavioural tracking and predictive AI, the workshop demonstrates how next-generation digital tools can shift paediatric and youth health promotion from reactive care to proactive, individualized NCD prevention.

Gregor Jurak
Faculty of Sports, University of Ljubljana, Ljubljana, Slovenia

Marina Trkman
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Bernarda Vogrin (contact person)
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia; National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia
e-mail: bernarda.vogrin@hotmail.com

Stronger Together: Co-creating Youth Health Services with Children, Adolescents and Professionals

Bianca Fortuin, Siegnella Concincion, Maya Deconinck, Mia Kösters, Mariëtte Hoogsteder

Background: Participatory health research with youth (YPAR) offers a collaborative approach to generate knowledge in which children or adolescents and others (parents, professionals and policymakers) act as active partners rather than passive subjects. This workshop introduces the principles, opportunities and challenges of YPAR and demonstrates how these approaches can be used to meaningfully engage stakeholders in improving preventive youth health care services.

Methods: Using examples from ongoing participatory studies with children and adolescents, we illustrate how participatory methods generate valuable insights into youth perspectives on health, wellbeing, and their experiences with youth health care services. Subsequently, we actively engage the participants in this session to explore how they can engage children and adolescents in their own research or clinical practice.

Results: Through two different co-creation methods, such as photovoice and draw-and-write-technique, participants experience how YPAR can strengthen innovations, support effective implementation and bridge the gap between practice and research.

Conclusions: This workshop provides participants with both theoretical knowledge and practical experience in YPAR as an approach for research and clinical practice. It enables participants to incorporate YPAR into their own professional practice and translate research findings into actionable improvements. This work was supported by Amsterdam UMC Department of Public and Occupational Health, the Public Health Services of Flevoland and Amsterdam. They are all partners in the Academic Collaborative Centre of Youth and Health.

Bianca Fortuin (contact person)
Department of Preventive Youth Health Care, GGD Flevoland, Lelystad, The Netherlands; University Medical Centre Amsterdam, Amsterdam, The Netherlands; Amsterdam Public Health, Amsterdam, The Netherlands
e-mail: b.fortuin@amsterdamumc.nl

Siegnella Concincion
GGD Amsterdam, Amsterdam, The Netherlands

Maya Deconinck
University Medical Centre Amsterdam, Amsterdam, The Netherlands; Amsterdam Public Health, Amsterdam, The Netherlands

Mia Kösters
GGD Amsterdam, Amsterdam, The Netherlands

Mariëtte Hoogsteder
University Medical Centre Amsterdam, Amsterdam, The Netherlands; Amsterdam Public Health, Amsterdam, The Netherlands

Flourishing in Transition: Youth-Led Implementation of F-Words-Based Tools in Rehabilitation Care

Jan Willem Gorter, Iris van Wijk, Myrthe Braunstahl, Cecilia Kalsbeek, Veronique Visser, Max Been, Neeltje Verrijt

The transition from paediatric to adult rehabilitation care remains a vulnerable phase for adolescents with childhood-onset disabilities. Despite existing guidelines, many still experience fragmented care, unclear expectations, and limited autonomy. Addressing these gaps requires clinical expertise and meaningful engagement of young people themselves. Just Like You is a Dutch youth-driven initiative co-created with adolescents, parents, and rehabilitation professionals. It provides practical, low-threshold tools – such as transition roadmaps, peer-led storytelling materials, and structured conversation guides – aligned with the F-words for Child Development. These tools support youths' identity formation, self-management, communication, and future planning while strengthening collaboration between families and clinical teams. The tools are already implemented in practice and integrated into the national program Transition Continued, used across several healthcare and rehabilitation centres in the Netherlands. A distinctive strength is the active involvement of young people with lived experience as co-designers, trainers, and facilitators—bringing authenticity and contributing to sustainable implementation. This course uniquely demonstrates how youth-designed tools are not only developed but successfully embedded and scaled in real-world transitional care through Transition Continued. This Instructional Course combines short presentations with interactive elements, providing participants with practical guidance on adapting and implementing these strategies in their own clinical settings.

Jan-Willem Gorter
University Medical Centre Utrecht, The Netherlands

Iris van Wijk
Department of Paediatric Rehabilitation, De Hoogstraat Rehabilitation, Utrecht, The Netherlands; University Medical Centre Utrecht, The Netherlands

Myrthe Braunstahl (contact person)
Research Centre Innovations in Care, Rotterdam, University of Applied Sciences, Rotterdam, The Netherlands
e-mail: m.r.braunstahl@hr.nl

Cecilia Kalsbeek
Kalsbeek-Impact, Amersfoort, The Netherlands

Navigating Socially Contested Clinical Territories: A Participatory Workshop on Representations, Resonances, and Cognitive Biases in Gender Diversity Care

Patrick André Schmitt, Anne-Emmanuelle Ambresin

Care for gender-diverse adolescents is a clinical field subject to ongoing debate across medical, political, and media spheres. Yet gender-diverse youth unquestionably exist, present to clinical settings, and carry well-documented health vulnerabilities. In parallel, the scientific literature continues to grow and clinical guidelines from major health institutions are increasingly structured, supported by a continuously expanding body of evidence. When a clinical field attracts societal, clinicians' own representations, resonances, and resistances may shape practice in ways that go unexamined. This participatory workshop opens with a brief, non-prescriptive overview of current institutional frameworks and relevant literature on the influence of media framing on clinical attitudes. Participants then engage with a clinical vignette, exploring their personal representations and emotional responses, and identifying the cognitive biases these may reflect. Rather than addressing what clinicians should do or think, this workshop aims solely to foster clinical resonances and introspection, supporting participants in developing greater awareness of their own inner processes and how these may affect the quality and equity of care they provide. Although anchored in gender diversity, the reflective methodology is transferable to any clinically sensitive topic subject to societal controversy.

Patrick André Schmitt
Division for adolescent health, University Hospital, Lausanne, Switzerland

Anne-Emmanuelle Ambresin (contact person)
Division for adolescent health, University Hospital, Lausanne, Switzerland
e-mail: anne-emmanuelle.ambresin@unil.ch

Parenting and Families During Adolescence

Helena Fonseca, Filipa Carmo

In a context of growing social uncertainty, family systems face increasing challenges. These challenges arise not only from the diversification of family structures but also, from the increasing complexity of choices adolescents must make in their daily lives. During this developmental stage, adolescents often seek stability, guidance, and a sense of belonging, with the family ideally serving as a secure and supportive environment. However, the relationship between adolescents and their families is inherently bidirectional: adolescents may introduce significant changes into family dynamics, while families may either support healthy development or become a source of stress that hinders adolescents' autonomy and well-being. Healthcare professionals working with adolescents are therefore well-positioned to support both young people and their families in navigating these dynamics. This interactive workshop promotes reflective practice and experiential learning to strengthen participants' competencies in working with adolescents and their families. Through case discussions, role-playing exercises, and collaborative problem-solving, participants will develop communication skills and explore systemic approaches to understanding family functioning and dynamics. By the end of the workshop, participants will be able to assess family functioning and apply systemic communication strategies when working with families, contributing to improved psychosocial well-being and supporting positive health and life outcomes for adolescents.

Helena Fonseca (contact person)
Faculty of Medicine, University of Lisbon, Lisbon, Portugal
e-mail: helenaregalofonseca@gmail.com

Filipa Carmo
Faculty of Medicine, University of Lisbon, Lisbon, Portugal

Stronger Together Through Engaging Health Professionals in AI-based Risk Prediction for Youth

Teatske Altenburg, Claudia Dictus, Mariëtte Hoogsteder

In the European SmartCHANGE project, an AI-based decision-support tool is developed to support health professionals in assessing youth's risks of non-communicable diseases (NCD) and promote risk-lowering behaviour strategies. This tool is linked to an app, Happy Plant, through which data on youth's behaviours is obtained. The feasibility of this support tool is now being tested in four countries (Slovenia, The Netherlands, Finland, Portugal). The aim of this workshop is to get input from health professionals on recommendations for the implementation of AI-based risk prediction for youth. After a presentation on the Happy Plant app and AI-based decision-support tool for professionals, a World Café facilitative method will be applied to engage participants in a discussion on the general set-up of the SmartCHANGE apps, the use of AI for prediction of children's NCD risk, barriers and possibilities for implementation in various European countries. Through their practice-based input on the afore-mentioned topics, participants will contribute to insights in the acceptability of AI-based decision-support tools for youth, and their implementation in (preventive/paediatric) health care. This workshop concludes with the formulation of recommendations for the implementation of AI-based risk prediction and personalised prevention strategies for youth.

Teatske Altenburg
Department Public and Occupational Health, University Medical Centre, Amsterdam, The Netherlands

Claudia Dictus
Department Public and Occupational Health, University Medical Centre, Amsterdam, The Netherlands

Mariëtte Hoogsteder (contact person)
Department Public and Occupational Health, University Medical Centre, Amsterdam, The Netherlands
e-mail: m.hoogsteder@amsterdamumc.nl

POSTER WALKS – ABSTRACTS

Lifestyle Changes Improve Fat Taste Sensitivity and Preference for Lower-Fat Foods in Children

Tadeja Jakus, Tamara Poklar Vatovec, Špela Bužinel

Background: Oral sensitivity to fatty acids – particularly oleic acid – has been associated with body mass index, dietary fat intake, and the ability to identify fat in foods.

Methods: The study included 61 children (7–18 years), 32 with obesity and 29 with normal body weight. Fat taste perception was assessed using oleic acid at five concentrations with a two-alternative forced choice (2AFC) procedure. Fat taste thresholds (lowest detectable oleic acid concentration), fat preference (yoghurts with 2%, 5%, and 10% fat), and anthropometric measurements were evaluated at baseline and after six weeks.

Results: No significant differences in fat taste perception or fat preference were observed between children with obesity and those with normal body weight ($p < 0.05$). Fat taste perception improved over six weeks and was accompanied by weight reduction (72.2 kg vs. 69.6 kg, $p < 0.001$) and lower detection thresholds (0.76 mM vs. 0.37 mM, $p = 0.026$). Preference for low-fat yoghurt also increased with weight reduction (3.1 vs. 3.7, $p < 0.001$).

Conclusions: Body weight alone does not appear to significantly influence fat taste sensitivity; however, lifestyle changes may modify fat preference and improve sensitivity to fatty taste.

Tadeja Jakus (contact person)
Faculty of Health Sciences, University of Primorska, Izola, Slovenia
e-mail: tadeja.jakus@upr.si

Tamara Poklar Vatovec
Faculty of Health Sciences, University of Primorska, Izola, Slovenia

Špela Bužinel
Faculty of Health Sciences, University of Primorska, Izola, Slovenia

Integrated Care Approach for Overweight Children in a Rural Dutch Municipality: Implementation of "Healthy Heroes"

Vera Klamer

Background: Overweight and obesity in children constitute a growing public health problem, particularly in rural municipalities, where the prevalence is higher than the average. Implementing an integrated care approach aims to improve prevention and treatment.

Methods: A local multidisciplinary group-based lifestyle intervention called "Healthy Heroes" was introduced for overweight children aged 6-12. A community sports coach, paediatric physiotherapist, paediatric dietitian, educationalist, youth health nurse, and nurse practitioner provided weekly intensive training at individual and group levels, parental guidance, and monitoring, with care provided as much as possible within existing funding structures.

Results: Participants showed improvements in their physical condition, weight stabilization or reduction, increased enjoyment of physical activity, and parental involvement increased. Results also show better access to care, better identification of complex family needs, and stronger collaboration among professionals.

Conclusions: An integrated, locally adapted approach offers potential for sustainable behavioural change and a reduction of health risks in the long term. Implementation of coordinated locally adapted interventions is essential to effectively address childhood overweight.

Vera Klamer (contact person)
GGD Fryslân, Youth Health Care, The Netherlands
e-mail: veraklamer@hotmail.com

Analysis of the Nutritional Adequacy of Subsidized Student Meal Provision within the "Dober tek, študent!" Project

Maja Škrlj, Neža Fras, Matej Gregorič,
Vida Fajdiga Turk

Introduction: The quality of student meals has a significant impact on students' dietary habits and health. In Slovenia, the subsidized student meal system provides students with affordable meals; however, despite the defined tender requirements, deviations from nutritional recommendations persist. Within the "Dober tek, študent!" project, we assessed the compliance of subsidized student meals with healthy eating guidelines.

Methods: A cross-sectional study conducted in 2025 was based on a visual sensory assessment method. Between April and June 2025, trained student inspectors carried out unannounced assessment of 142 meal at 142 randomly selected subsidized student meal providers. Meals were evaluated according to seven nutritional components and scored based on their compliance with dietary recommendations.

Results: Only 9,6 % of the assessed meals were fully compliant with the guidelines, while 28,2 % were considered unsuitable for daily consumption. Overall, meal composition was unbalanced, with an excessive proportion of starchy foods (49 %) and an insufficient proportion of vegetables (12 %). Most meals included fruit and water, while saltshakers were frequently available on the tables. The proportion of fried dishes remained high (31 %). Lower scores were predominantly observed among fast-food providers and lower-priced meal providers.

Conclusions: The nutritional quality of subsidized student meals is highly variable. Improvements are needed in monitoring, the criteria for selecting meal providers should be strengthened and professional support should be provided to help providers improve the nutritional quality of their meals.

Maja Škrlj (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: maja.skrlj@nijz.si

Neža Fras
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Matej Gregorič
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Vida Fajdiga Turk
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Bridging Prevention and Cure: Child Health Physicians' Attitudes and Actions towards Health Advocacy

Femke E. de Bok, Djoeke Wolff, Robbert J. Duvivier,
Jessie Hermans, Sijmen A. Reijneveld, Netty Bos-Veneman

Background: Social, environmental, and medical factors in childhood strongly influence lifelong well-being. Health advocacy by paediatricians and youth health physicians is recognized as essential but the way they act as health advocates in healthcare systems with separate preventive and curative roles, remains unclear. We aimed to explore perceptions and practical performance of health advocacy by physicians in child healthcare.

Methods: We performed a qualitative study with focus group interviews with Preventive Child Healthcare (PCH) physicians and paediatricians in the Netherlands, where child health care is organized with distinct preventive and curative physicians. We used an interview topic guide based on the UBC Health Advocacy framework and conducted thematical analysis.

Results: We interviewed 24 participants in focus group discussions. Participants valued health advocacy as a core professional responsibility on individual level as well as extending beyond the consultation room. Collaboration was mentioned as a key promoting factor in health advocacy performance. Numerous barriers, including time constraints and organizational limitations impeded enactment of advocacy activities.

Conclusions: Understanding attitudes and enactment of health advocacy among child health physicians highlights key determinants for effective preventive and curative care. Addressing identified barriers can guide policy, training, and practice to strengthen child health outcomes.

Femke E. de Bok (contact person)
Department of Health Sciences, University Medical Centre, University of Groningen, Groningen, The Netherlands
e-mail: f.e.de.bok@umcg.nl

Djoeke Wolff
Department of Health Sciences, University Medical Centre, University of Groningen, Groningen, The Netherlands

Robbert J. Duvivier
Institute for Forensic Psychiatry and Psychology (NIFP), Parnassia Psychiatric Institute, The Hague, The Netherlands

What Do I Know About Human Papillomavirus? – A Survey Among Healthcare Professionals

Saša Korez

Jessie Hermans
Department of Health Sciences, University Medical Centre, University of Groningen, Groningen, The Netherlands

Sijmen A. Reijneveld
Department of Health Sciences, University Medical Centre, University of Groningen, Groningen, The Netherlands

Netty Bos-Veneman
Department of Health Sciences, University Medical Centre, University of Groningen, Groningen, The Netherlands

Introduction: During the Cervical cancer prevention week we conducted a survey among healthcare professionals in our institution to assess their knowledge of HPV facts and provide concurrent education. After each question respondents received facts about HPV.

Methods: Healthcare professionals received an anonymous electronic survey (using Google forms).

Results: 56% of the respondents were registered nurses, 22% family physicians, 15% nursing technicians, 7% paediatricians. All participants recognized HPV as a cause of cervical cancer (100%). HPV was identified as a causative agent for other types of cancer by 80%. 89% believed that vaccination is the best protection against infection. Only 56% correctly assessed the lifetime prevalence of the infection, while 44% believed it to be less common. 96% of the respondents would recommend the vaccination to their relatives. The reason for not recommending it was that pupils are too young.

Conclusions: The results showed good knowledge of basic facts about HPV. Knowledge of other important facts was less comprehensive (prevalence of infection, other cancers caused by the infection). We believe that more attention should be paid to healthcare professionals, as they are often a source of information for patients (including in their private lives) and frequently influence vaccination decisions.

Saša Korez (contact person)
Primary Healthcare Centre Slovenske Konjice, Slovenske Konjice, Slovenia
e-mail: korez.sasa@gmail.com

Pre-pandemic and Post-pandemic Vaccination Coverage of Children at Entry into the First Grade of Primary School in Split-Dalmatia County, Croatia

Željka Karin, Diana Nonković,
Tonka Karin, Nina Sladojević

Introduction: A significant decline in routine childhood vaccination coverage following the pandemic represents a public health challenge that requires systematic analysis of its causes and consequences in order to prevent the re-emergence of vaccine-preventable infectious diseases.

Methods: A retrospective analysis of data from preventive health records on vaccination coverage among 8,215 children receiving routine immunization was conducted within the Department of School and Adolescent Medicine, Split-Dalmatia County, Croatia. Descriptive analysis was applied to data on children at entry into the first grade of primary school in the school years 2019/2020 and 2024/2025.

Results: In the 2019/2020 school year, 1.44% of children had not received any dose of the diphtheria, tetanus, and pertussis (DTaP) vaccine, compared to 3.42% in 2024/2025. For the IPV vaccine, 1.47% of children were unvaccinated in 2019/2020, increasing to 3.67% in 2024/2025. The largest difference between pre-pandemic and post-pandemic vaccination coverage was observed for the measles, mumps, and rubella (MMR) vaccine, with 4.50% of children unvaccinated in 2019/2020 compared to 8.50% in 2024/2025. The proportion of unvaccinated children against hepatitis B increased from 1.01% in 2019/2020 to 3.90% in 2024/2025. Differences by sex were small, although boys consistently showed slightly lower vaccination coverage than girls in both periods.

Conclusions: In the post-pandemic period, an increase in the proportion of unvaccinated children was observed for all analysed vaccines, with the most pronounced decline in coverage recorded for the MMR vaccine. These findings highlight the need to strengthen immunization measures, including systematic monitoring of vaccination coverage, implementation of targeted public health interventions, and improvement of population health literacy.

Željka Karin (contact person)
Teaching Institute of Public Health of Split-Dalmatia County, Split, Croatia; School of Medicine, University of Split, School of Medicine, Croatia; Faculty of Health Studies, University of Split, Croatia
e-mail: karinzeljka@gmail.com

Diana Nonković
Teaching Institute of Public Health of Split-Dalmatia County, Split, Croatia; Faculty of Health Studies, University of Split, Croatia

Tonka Karin
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Nina Sladojević
Division for School and Adolescent Medicine, Croatian Institute of Public Health, Zagreb, Croatia

Epidemiology of Chickenpox and Vaccination Coverage in Slovenia, 2016-2025

Andrea Zorman, Nadja Šinkovec Zorko, Maja Sočan, Marta Grgič Vitek, Irena Kavšek, Saša Šteiner Rihtar, Marjana Vrh

Chickenpox is a contagious disease caused by the varicella-zoster virus (VZV). It is prevalent worldwide and primarily affects children. The course of the disease is generally mild and predictable, although 2–6% of patients experience complications. In a retrospective review we monitored and analysed data on reported chickenpox for a ten-year period from 2016 to 2025 using the SURVIVAL electronic database of the National Institute of Public Health. The annual reported incidence rate ranged from 210 cases per 100,000 population (in 2020, during the COVID-19 pandemic) to 683.4 cases per 100,000 population. Chickenpox occurs predominantly during the winter and spring months, and the majority of cases occurring in preschool-aged children. Following the expansion of the vaccination program to include universal childhood vaccination against chickenpox, routine vaccination of children in Slovenia with the combined measles, mumps, rubella, and varicella vaccine (MMRV) has been implemented in January 2025. A comparison of vaccination coverage data from the electronic vaccination registry (eRCO) for birth cohorts from 2019 to 2024, before and after inclusion in the national immunization program, shows higher vaccination coverage among children included in the program compared with cohorts that had not yet been included. According to eRCO data, by 10 March 2026, 64.3% of children included in the chickenpox vaccination program (born between 1 February and 31 December 2024) had received at least one dose of varicella vaccine (either MMRV or a monovalent vaccine).

Andrea Zorman (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: andrea.zorman@nijz.si

Nadja Šinkovec Zorko
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Maja Sočan
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Marta Grgič Vitek
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Irena Kavšek
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Saša Šteiner Rihtar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Marjana Vrh
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

School Perspectives on Health Education Programme Delivery: Results of the 2024/25 National Survey

Anja Durjava, Urška Hajdinjak, Anja Lunar Kolar, Ingrid Markočič Tadič, Primož Osek, Damjan Vincek, Martina Vuk

Background: The Health Education Programme for Children and Adolescents as part of the Preventive Health Care Programme for Children and Adolescents (NOW Programme) is implemented at the primary health care level and it is covered by the Health Insurance Institute of Slovenia. The programme aims to strengthen health literacy and promote healthy lifestyles.

Methods: In November 2024, an online survey was conducted among all 456 Slovenian primary schools to assess cooperation with health centres and the implementation of health education programme in the 2024/25 school year. The aim was to obtain the opinion of primary schools about participation in the programme, problems in implementing it, and what are the advantages of such participation. A total of 249 responses were received; after data cleaning, 180 schools (39.5% response rate) were included in the analysis. The questionnaire included 26 closed- and 3 open-ended questions.

Results: Most schools reported long-term cooperation with health centres (> 10 years: 81.1%). Almost all student classes were included in workshops (97.8%) and schools rated the importance of the programme highly (mean 4.8/5). The majority considered the scope (76.3%) and time allocation (79.1%) appropriate. Additional activities addressing emerging issues were implemented in 67.6% of schools. Key challenges included scheduling, staff shortages, and curriculum constraints. Student satisfaction was rated positively (mean 4.19/5).

Conclusions: Schools perceive health education programme as a valuable and well-integrated component of the educational process. Strengthening intersectoral coordination, increasing practical and interactive content, and enhancing parental involvement may further improve programme effectiveness.

Anja Durjava (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: anja.durjava@nijz.si

Urška Hajdinjak
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

The Ethical Acceptability of a Screening Questionnaire Used in Youth Public Health Care Services: An Observation Study

Maya Deconinck, Serife Yildirim,
Mariëtte Hoogsteder, Mai Chin A Paw

Introduction: Health screening questionnaires are a widely used tool for prevention and health promotion in high school students within youth public health services in the Netherlands. A validated questionnaire assessing lifestyle and mental health in youth has been developed. However, the acceptability of this questionnaire in a classroom setting remains unclear. To further explore this, we sought to examine the behaviours students exhibited while completing the questionnaire and understand how the context influenced their engagement.

Methods: We observed 10 classrooms with 180 students across four schools. To guide our observations, we used the acceptability framework for healthcare interventions. As the ethical dimension of acceptability yielded the most significant data; we focused on this aspect in our analysis. The data were analysed using thematic analysis.

Results: The thematic analysis generated three key themes: the duality of privacy, the implicit nature of consent for students, and the influence of group dynamics both within and outside the classroom on how students completed the questionnaire.

Conclusions: Our observations provide valuable insights for the quality improvement of questionnaire administration in classroom settings. Enhanced attention to privacy, consent, and group dynamics is essential for ensuring the reliability and validity of screening procedures.

Maya Deconinck (contact person)
University Medical Centre Amsterdam, Amsterdam, The Netherlands
e-mail: m.deconinck@amsterdamumc.nl

Serife Yildirim
University Medical Centre Amsterdam, Amsterdam, The Netherlands

Mariëtte Hoogsteder
University Medical Centre Amsterdam, Amsterdam, The Netherlands

Mai Chin A Paw
University Medical Centre Amsterdam, Amsterdam, The Netherlands

Anja Lunar Kolar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Ingrid Markočič Tadič
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Primož Osek
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Damjan Vincek
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Martina Vuk
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Developing Recommendations for Multisectoral Cooperation Between Schools, Healthcare Providers, and Parents to Ensure Healthy 24-Hour Movement Behaviour

Gregor Jurak, Bernarda Vogrin, Polonca Truden Dobrin, Nadja Černe, Marjeta Kovač

Public health systems worldwide are facing an alarming decline in paediatric physical fitness and rising obesity rates, necessitating a coordinated, multisectoral response. Despite existing policies, institutional isolation remains a significant barrier; the education and healthcare sectors typically operate within vertical hierarchies that hinder horizontal integration. Currently, only 20% of Slovenian schools report any cross-sectoral cooperation, with a mere 2% engaging in joint intervention planning. To address these gaps, a multisectoral stakeholder group was formed to develop guidelines that foster bottom-up collaboration. This study employs a three-round Delphi method to establish specific recommendations, informed by prior surveys conducted among physical education teachers and kinesiologists. In round 1, experts will refine existing cooperation scenarios and identify the main obstacles that limit the execution of each scenario. Furthermore, they will evaluate the relevance and feasibility of these scenarios. In round 2, participants will re-evaluate these scenarios based on the information from round 1 to create a draft of recommendations. In round 3, experts will comment the recommendations and identify key performance indicators for monitoring cooperation levels. Following formal adoption, these recommendations will be disseminated across the education and healthcare sectors and to parents to ensure a unified, holistic approach to child health.

Gregor Jurak (contact person)
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia
e-mail: gregor.jurak@fsp.uni-lj.si

Bernarda Vogrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia;
Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia;
Faculty of Medicine, University of Maribor, Maribor, Slovenia

Polonca Truden Dobrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Nadja Černe
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Marjeta Kovač
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Paroxysmal Disorders – Narcolepsy and Cataplexy in the School Environment

Mirjana Zjača

Introduction: Narcolepsy in school-age children often manifests as excessive daytime sleepiness and sudden sleep attacks, which teachers and parents may initially misinterpret as laziness, lack of motivation, or attention/behavioural disorders. Although children with narcolepsy have normal intellectual abilities, the disease significantly hinders academic success and socialization. The journey from the first symptoms to diagnosis and successful school adjustment is crucial for the child's academic and social development.

Case report: We present the case of a girl who, at the age of six, was referred for evaluation due to paroxysmal events resembling absence seizures and atonic attacks. Since the age of four, episodes similar to brief, atypical facial muscle weakness without loss of consciousness, as well as episodes of staggering with loss of orientation, have been observed. Subsequently, anamnesis revealed a disturbed sleep-wake rhythm, which significantly impacted the girl's functioning upon starting school.

Clinical Presentation: Episodes involving eye deviation, eye closure, relaxation of the lower jaw with tongue protrusion, and slurred speech resembling "making faces" often triggered by emotional stimuli such as laughter. While dancing or playing, she would occasionally fall or begin to sway. The girl experienced frequent night-time awakenings (to full alertness) and frequent daytime sleep episodes.

Diagnostics: Initial EEG findings were nonspecific. Polysomnography showed mildly disturbed arousal, and the Multiple Sleep Latency Test (MSLT) confirmed excessive daytime sleepiness.

Results: The introduction of specific pharmacotherapy (pitolisant) and behavioural adjustments (planned daytime naps at school, a regular sleep schedule, light evening meals) led to better control of cataplectic attacks, reduced irritability, and improved social integration. The following support measures are implemented in school: planned naps in a designated area or a quiet corner of the classroom, assessment adjustments (extended time for tests, avoiding examinations during peak fatigue hours, preferring oral examinations), dynamic environment (permission to move around, avoiding monotony), community education and social sup-

port (informing teachers and peers about the nature of the illness to prevent stigmatization and social isolation).

Mirjana Zjača (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: mirzja@gmail.com

Improving Management of Adolescents' Mental Health Challenges in Botswana: Health Care Workers' Perspectives

Kebope Kealeboga, Parisa Ayoubi, Eleanor Lustig, Kealeboga Morapedi, Patlo Entaile, Phenyo Morakanyane, Gbolahan Ajibola, Samuel Matula, Ohemaa Poku, Merrian J. Brooks

Background: Botswana's adolescent mental health (MH) services are limited, despite rising national needs. Health-care workers (HCWs) at Youth Friendly Services (YFS) work closely with adolescents and can offer valuable insights. We report on HCW perspectives regarding challenges and solutions for adolescent MH.

Methods: We interviewed 14 HCWs working with adolescents at YFS in four clinics. Data was analysed for themes using Atlas software.

Results: The socio-ecological model informed themes. Challenges associated with adolescent MH included: 1) Individual (e.g., alcohol/drug abuse, teenage pregnancy, school drop-outs); 2) Family/Community (e.g., poor relationships with parents, negative peer pressure); 3) Structural (e.g., limited resources, shortage of trained mental HCWs, lack of youth services); and 4) Societal (e.g., all forms of abuse, lack of finances). Possible solution themes were: 1) Individual interventions (school-based education, use of media platforms to address MH issues); 2) Community interventions (improving communication between parents and adolescents, involving community leaders and those with lived MH experience); and 3) Policy interventions (prioritising adolescent MH services by policymakers).

Conclusions: HCWs identified MH challenges at multiple levels for adolescents. The health system will need multilevel interventions to meet these needs.

Kebope Kealeboga (contact person)
Faculty of Medicine and Health Sciences, School of Nursing, University of Botswana, Gaborone, Botswana
e-mail: kealebogak@ub.ac.bw

Parisa Ayoubi
Department of Community and Health Sciences, NYC Pandemic Response Institute, New York, USA

Eleanor Lustig
Perelman School of Medicine, University of Pennsylvania, Pennsylvania, USA

Kealeboga Morapedi
Faculty of Medicine and Health Sciences, School of Nursing, University of Botswana, Gaborone, Botswana

The Health, Health Behaviours, and Prevention Strategies of School-Aged Children in Nyiregyhaza

Renáta Javorné Erdei, Ágota Barabás, Péter Takács

According to data from the 2022 international HBSC survey, physical inactivity, unhealthy eating habits, and declining mental health are at alarming levels among European adolescents. In Hungary, according to the latest research, young people's health behaviours – particularly regarding regular alcohol consumption and certain risk behaviours – are less favourable than the international average across numerous indicators; and significant challenges can also be identified in the areas of school satisfaction and subjective well-being. In our research, we conducted a comprehensive analysis of general practitioner reports from Nyiregyhaza for the years 2017, 2019, 2021, and 2023, followed by focus group interviews with healthcare and social professionals serving school-aged children. According to our findings, during the study period, the order and prevalence of the main diseases were nearly identical for both genders: endocrine, nutritional, and metabolic diseases (20%), diseases of the blood, blood-forming organs, and the immune system (16%), and mental and behavioural disorders (15–14%). Within endocrine, nutritional, and metabolic diseases, obesity due to excess calories (approx. 14%) should be highlighted as the primary diagnosis; however, it should be noted that malnutrition (approx. 5%) was also present in both genders. Based on the interviews, it can be said that the incidence of late-diagnosed diabetes and mental and psychological disorders is on the rise. In the future, there is a need to develop innovative, comprehensive prevention programs and to strengthen the human resources of the school health team.

Renáta Javorné Erdei (contact person)
Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary
e-mail: erdei.renata@etk.unideb.hu

Ágota Barabás
Department of Health Methodology and Prevention, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Péter Takács
Department of Health Informatics, Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary; Department of Health Informatics, Faculty of Health Sciences, University of Debrecen, Nyiregyhaza, Hungary

Patlo Entaile
Faculty of Medicine and Health Sciences, School of Nursing, University of Botswana, Gaborone, Botswana

Phenyo Morakanyane
Botswana Harvard Health Partnership, Gaborone, Botswana

Gbolahan Ajibola
Botswana Harvard Health Partnership, Gaborone, Botswana

Samuel Matula
Faculty of Medicine and Health Sciences, School of Nursing, University of Botswana, Gaborone, Botswana

Ohemaa Poku
Department of Psychiatry, University of Pennsylvania, New York, USA

Merrian J. Brooks
Children's Hospital of Philadelphia, Philadelphia, USA; University of Pennsylvania Partnership, Gaborone, Botswana

Sexual Health Content for Youth: A Mixed-Methods Analysis of French-Language Instagram Accounts

Marie Dinh, Philippe Martin, Brice Gouvernet, Aurélie Bourmaud

Young people rely increasingly on social media for health information, yet limited research examines French-language sexual health promotion content. This study systematically analysed themes, formats, and prevention approaches in 51 French-language Instagram accounts focused on sexual health using a snowballing method. Data were collected from account descriptions, posts, stories, and highlights, analysed through a grid based on UNESCO's comprehensive sexuality education guidelines and digital communication techniques. Most accounts were managed by women and targeted female audiences. Common prevention themes included feminism, sexual and sexist violence prevention, and reproductive health, delivered through explanations, testimonials, and humour via stories, image carousels, and reels. Topics addressing values, rights, and violence prevention dominated, while contraception and STI content were less prevalent. Six account typologies emerged: militant, news, personal/blog, educational, testimonial, and comedic. French-language sexual health content on Instagram demonstrates a predominantly feminist, holistic prevention approach using diverse formats to engage youth. However, gaps in contraception and STI prevention content indicate opportunities for more comprehensive messaging. Further research on youth engagement and behavioural outcomes is essential to optimize social media-based prevention strategies.

Marie Dinh (contact person)
University Paris Cité, Paris, France; University Sorbonne Paris Nord, Paris, France; Institute for Medical Research (INSERM), Paris, France
e-mail: marie.dinh@inserm.fr

Philippe Martin
University Paris Cité, University Hospital Robert Debré, Paris, France; Sexual and Reproductive Health and Rights, Aubervilliers, France

Brice Gouvernet
University of Rouen, Rouen, France

Aurélie Bourmaud
University Paris Cité, Paris, France; University Sorbonne Paris Nord, Paris, France; Institute for Medical Research (INSERM), Paris, France; University Paris Cité, University Hospital Robert Debré, Paris, France

Read MiPi and You'll Learn More

Petra Zupančič

Under the auspices of the Agency for Communication Networks and Services of the Republic of Slovenia (AKOS), the MiPi portal for media and information literacy is being developed to inform the public about the regulation of the media and digital environment and to promote the safe and responsible use of communication services. In line with its mission to protect users – particularly vulnerable groups, including children and adolescents – AKOS views media literacy as a key protective factor that, together with effective regulation, helps create a safe communications ecosystem. In recent years, concrete regulatory measures in the digital environment have been taking shape more and more clearly, with an emphasis on the principle of "safety by design". These measures are primarily aimed at mitigating online risks associated with illegal and harmful content. Nevertheless, the competencies of a media-literate user are becoming more important than ever before. These are skills we develop throughout our lives, and their early development is of crucial importance. The modern digital environment presents numerous challenges, such as targeted digital advertising, the influence of algorithms, the prevalence of social media, and the use of artificial intelligence systems. Individuals are expected to act responsibly – both toward others and toward themselves. While technological progress offers numerous opportunities, excessive screen time is increasingly having a negative impact on physical and mental health. The MiPi portal team believes that the content we create not only helps people navigate online risks but also provides daily support in understanding the digital world and encourages critical evaluation of media and online content. Through this contribution, we also emphasize the need for coordinated cooperation among various stakeholders. To strengthen a healthy media and digital environment, it is essential to bring together regulators, decision-makers, the education system, industry, and experts – because we are "stronger together".

Petra Zupančič (contact person)
Agency for Communication Networks and Services of the Republic of Slovenia, Ljubljana, Slovenia
e-mail: petra.zupancic@akos-rs.si

Which Children Have Their Enrolment in the First Grade of Primary School Postponed?

Andrea Vrdoljak, Vlatka Gabrić

In Croatia, children with disabilities may have their enrolment in 1st grade of primary school postponed for 1 year. The aim of the paper is to present the proportion of deferred children in the school years 2024/2025 and the difficulties that were the reason for the deferral. The data was taken from the preventive health records of children from three primary schools in Split (Manuš, Lučac, Split 3). 273 children were examined. 9,15% of them were deferred (64% of them were boys and 36% girls). The main reason for postponement in both sexes were speech and language difficulties (82,6%). Other reasons for postponement in boys were underdeveloped graphomotor skills (37,5%), socio-emotional problems (62,5%), pervasive developmental disorder (6,25%) and ADHD (6,25%). Other reasons for postponement in girls were underdeveloped graphomotor skills (44,44%), socio-emotional problems (44,44%), cerebral palsy (11,11%), epilepsy (11,11%) and ADHD (11,11%). The number of boys whose 1st grade enrolment in primary school was postponed for one year was significantly higher than the number of girls. Most children had language and speech difficulties, graphomotor difficulties and socio-emotional problems. Therefore, families and kindergartens should systematically work on increasing children's speech, language and graphomotor competences, as well as encouraging socio-emotional maturity.

Andrea Vrdoljak (contact person)
Teaching Institute of Public Health of Split and Dalmatian County, Split, Croatia
e-mail: andrea.vrdoljak@gmail.com

Vlatka Gabrić
Teaching Institute of Public Health of Split and Dalmatian County, Split, Croatia

Growth Faltering Detected During School Health Screening Revealed Autoimmune Hepatitis With Cirrhosis in an Adolescent: A Case Report

Željkica Hadrović-Pavišić, Jadranka Vrcelj Šanko, Vesna Jureša, Nataša Dragaš Zubalj

Longitudinal monitoring of a schoolchild's growth and development enables timely detection of deviations and referral for additional evaluation. During growth and development screening in the sixth grade of primary school, a boy aged 12 years and 10 months was noted to have growth deceleration after measurements of height and weight and calculation of BMI. The school physician referred the child for specialist assessment. A significant growth delay over the previous six years was established. At the initial examination at school entry, the boy's height was at the 50th percentile; after one year it was at the 25th percentile, and by the sixth grade it had fallen to the 6th percentile. Further specialist evaluation, including an X-ray of the left hand, showed a bone age corresponding to that of an 11-year-old boy and the presence of "spider" nevi. Laboratory tests revealed anaemia, thrombocytopenia, coagulopathy, and markedly elevated transaminases; ultrasound demonstrated splenomegaly. Liver biopsy revealed advanced fibrosis/cirrhosis with interface hepatitis and inflammation predominantly composed of plasma cells, consistent with type 1 autoimmune hepatitis. Corticosteroid therapy was initiated, resulting in biochemical improvement. Growth deceleration may be a warning sign of serious disease. Through preventive and systematic examinations, school physicians are crucial for early detection, appropriate additional workup, and coordination of care; missed scheduled check-ups may delay diagnosis.

Željkica Hadrović-Pavišić (contact person)
Teaching Institute of Public Health of Primorsko-Goranska County, Rijeka, Croatia
e-mail: zhadrovicp@gmail.com

Jadranka Vrcelj Šanko
Teaching Institute of Public Health of Primorsko-Goranska County, Rijeka, Croatia

Vesna Jureša
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Nataša Dragaš Zubalj
Teaching Institute of Public Health of Primorsko-Goranska County, Rijeka, Croatia

Ptosis That Changed the Diagnosis: Lyme Neuroborreliosis Presenting as Horner Syndrome – Case Report

Mihaela Slemnik, Eva Miler Mojškerc, Alja Lodrant

Lyme neuroborreliosis most commonly presents with facial nerve palsy and meningitis. Although less frequent, ocular motor disturbances, including ptosis, are well-recognized clinical features. Paediatric Horner syndrome presents with the classic triad of ipsilateral miosis, ptosis, and anhidrosis, resulting from disruption of the oculosympathetic pathway. While neuroblastoma represents the most common serious aetiology of acquired Horner syndrome in young children, infectious causes including Lyme neuroborreliosis have been documented as rare but treatable causes. This paper presents an overview of the theoretical basis for both Lyme neuroborreliosis and Horner syndrome. We also present a clinical case of a paediatric patient with ptosis, anisocoria and a characteristic erythematous semi-circular rash on the cheek, highlighting the importance of considering Lyme disease in a patient with ptosis.

Mihaela Slemnik (contact person)
Primary Healthcare Centre Slovenj Gradec, Slovenj Gradec, Slovenia
e-mail: slemnik@gmail.com

Eva Miler Mojškerc
General Hospital Slovenj Gradec, Slovenj Gradec, Slovenia

Alja Lodrant
General Hospital Slovenj Gradec, Slovenj Gradec, Slovenia

Disseminated Erythema Migrans with Long Thoracic Nerve Palsy in a 13-month-old Girl: A Rare Manifestation of Paediatric Lyme Disease

Minca Mramor, Vanja Kaučič, Alenka Stepišnik

We report the case of a 13-month-old girl referred to our hospital with disseminated erythema migrans and a winged scapula. Two days before presentation, a circular rash appeared on her right shin. The following day, several similar, non-painful and non-pruritic rashes developed on her arms and legs. On the same day, her parents observed that she was unable to lift her left arm above shoulder height, and the left scapula was protruding. She was afebrile, active, with normal appetite, and exhibited no pain or distress. There was no known tick bite, although the family frequently spent time outdoors. Physical examination revealed multiple erythema migrans lesions measuring approximately 2 × 2 cm on the arms and legs, and a left-sided winged scapula. Elevation of the left arm above the shoulder joint was impaired. Laboratory results were within normal limits. Serology for *Borrelia burgdorferi* showed positive IgM and negative IgG antibodies. She received a 14-day course of ceftriaxone, which resolved the skin lesions; however, the peripheral nerve palsy persisted. Intensive neurophysiotherapy was initiated. At follow-up 2.5 years later, the winged scapula had not fully resolved. Interestingly, in this patient, infection with *Borrelia burgdorferi* caused long thoracic nerve palsy. This resulted in weakness of the serratus anterior muscle and presentation as a winged scapula. There was no associated pain or sensory deficit.

Minca Mramor (contact person)
General Hospital Izola, Izola, Slovenia
e-mail: minca.mramor@gmail.com

Vanja Kaučič
General Hospital Izola, Izola, Slovenia

Alenka Stepišnik
General Hospital Izola, Izola, Slovenia

Neurologic Involvement in X-Linked Agammaglobulinemia: A Slovenian Cohort Study

Maša Bizjak, Tita Butenko, Mark Kačar, Mojca Zajc Avramovič, Sarah Gomezelj, Gregor Brecl Jakob, Tamara Meško, Andreja Pikelj Pečnik, Tina Vipotnik Vesnaver, Tadej Avčin, Gašper Markelj

Background: Neurologic manifestations are increasingly recognized as a comorbidity in X-linked agammaglobulinemia (XLA), but remain poorly understood. This study assessed neurologic and neuropsychiatric symptoms in a Slovenian XLA cohort.

Methods: In this retrospective study, patients with confirmed XLA were identified from the national immunodeficiency registry. Clinical and demographic data were obtained from medical records. Structured telephone interviews with patients or caregivers, designed with input from neurology, immunology, and psychology specialists, were used to evaluate neurologic and neuropsychiatric symptoms. Only chronic symptoms were included, except seizures.

Results: Fourteen patients were identified; 13 participated (age 6–61 years). Median age at diagnosis was 4.8 years (range 0.2–10.9). Three patients had died (ages 18, 36, and 61). Four patients (30%) reported no neurologic symptoms. Memory or attention problems, speech difficulties, and neuropsychiatric symptoms were each reported by 4 patients (30%). Seizures occurred in 3 (23%), while chronic headache, vertigo, and sleep disturbances were each reported by 2 patients (15%). One patient developed epilepsy at 18 years with MRI evidence of generalized cerebral atrophy. Another had enteroviral meningitis at 21 years. A third developed progressive neurologic decline from childhood, leading to death at 36.

Conclusions: Neurologic and neuropsychiatric symptoms were common in this cohort, highlighting the need for improved diagnostics and understanding of neurologic involvement in XLA.

Maša Bizjak (contact person)
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: masa.bizjak@kclj.si

Tita Butenko
Department of Paediatric Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Mark Kačar
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; University Clinic of Respiratory and Allergic Diseases Golnik, Golnik, Slovenia

Mojca Zajc Avramovič
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Sarah Gomezelj
Division of Neurology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Gregor Brecl Jakob
Division of Neurology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tamara Meško
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Andreja Pikelj Pečnik
Division for Infectious Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tina Vipotnik Vesnaver
Institute of Radiology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gašper Markelj
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Myocarditis and Interstitial Lung Involvement in a 13-year-old Girl with Eosinophilic Granulomatosis with Polyangiitis – Case Report

Peter Kunstelj, Saša Ilovar Strehar, Saša Šetina Šmid, Rok Zbačnik, Tina Vesel Tajnšek, Marina Praprotnik, Nataša Toplak

Background: Eosinophilic granulomatosis with polyangiitis (EGPA) is an idiopathic necrotizing small-vessel vasculitis characterized by asthma, marked eosinophilia and eosinophilic inflammation. It is extremely rare among children. The clinical presentation may include cardiac, pulmonary, neurological, cutaneous, gastrointestinal and ENT involvement. Cardiac involvement is more common in ANCA negative patients.

Methods: we report a 13-year-old girl, treated in our institution for severe ANCA-negative EGPA with myocarditis and interstitial lung involvement. She was admitted because of vasculitic rash, joint pain and a history of asthma. Laboratory evaluation revealed moderately elevated inflammatory markers, marked eosinophilia, and substantially elevated troponin levels accompanied by ECG changes. Chest X-ray demonstrated pulmonary infiltrates. Cardiac MR confirmed myocarditis. Cardiac function remained preserved. HRCT revealed interstitial lung involvement. The patient received intensive anti-inflammatory therapy with intravenous immunoglobulins, high dose methylprednisolone, cyclophosphamide and anti-IL5 receptor agent benralizumab, along with supportive care.

Results: eosinophil counts and troponin levels declined early after initiation of intensive anti-inflammatory treatment, followed by gradual improvement of symptoms and pulmonary function.

Conclusions: in patients with asthma, marked eosinophilia and vasculitic rash, EGPA should be strongly suspected. Evaluation for cardiac and pulmonary involvement and prompt intensive anti-inflammatory therapy are essential.

Peter Kunstelj (contact person)
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: peterkuns@gmail.com

Saša Ilovar Strehar
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Saša Šetina Šmid
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Rok Zbačnik
Institute of Radiology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tina Vesel Tajnšek
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Marina Praprotnik
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Nataša Toplak
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Mild Stridor in an Infant as a First Sign of Type II Laryngomalacia

Nina Naprudnik, Žiga Pokorn, Tina Vesel Tajnšek, Aleksandra Zver, Marina Praprotnik, Airin Veronese, Tadej Avčin, Miha Zabret

Laryngomalacia is the most common congenital anomaly of the upper airway and the leading cause of congenital inspirator stridor in infancy. It results from dynamic collapse of supraglottic structures during inspiration and presents with symptoms ranging from mild inspiratory stridor to respiratory distress and failure to thrive. It is often associated with obstructive sleep apnoea (OSA). Infants with stridor accompanied by breathing pauses or poor weight gain should be evaluated with overnight polygraphy. Although most cases resolve spontaneously, about 10–20% of patients require surgical treatment. We present the case of a one-month-old infant who was evaluated at the emergency department of the University Children's Hospital Ljubljana due to low-grade fever. Clinical examination revealed inspiratory stridor persisting during feeding and in the supine position and had reportedly been present since shortly after birth. No other signs of acute respiratory infection were found. Inflammatory markers were low. During hospitalization, overnight polygraphy was performed, showing normal baseline oxygen saturation with periodic breathing and frequent obstructive apnoeas and hypopneas. We referred the infant to an otorhinolaryngology clinic, where nasolaryngoscopy was performed while the infant was awake under local anesthesia. The examination revealed an omega-shaped epiglottis, consistent with type II laryngomalacia. The infant was followed up in outpatient care, with gradual clinical improvement. Surgical treatment was not required. Inspiratory stridor in newborns and infants most commonly indicates laryngomalacia, although other causes such as acute laryngitis, vocal cord mobility disorders, subglottic haemangioma, or subglottic stenosis are possible. Infants with normal weight gain can be followed by a paediatrician, whereas those with more severe symptoms should be referred to endoscopic airway evaluation and polygraphy. We aimed to present the successful multidisciplinary management of inspiratory stridor, in which life-threatening causes were excluded and the infant required only follow-up with a paediatrician.

Nina Naprudnik (contact person)
Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: nina.naprudnik@gmail.com

Žiga Pokorn
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tina Vesel Tajnšek
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Aleksandra Zver
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Marina Praprotnik
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Airin Veronese
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of Allergology, Rheumatology and Clinical Immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Miha Zabret
Division of otorhinolaryngology and cervical surgery, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Cholestatic Hepatitis with Prolonged Jaundice in Epstein-Barr Virus Infection

Jasmina Zrim, Petra Rižnik, Jernej Dolinšek

Cholestatic hepatitis with prolonged jaundice is a rare complication of primary Epstein-Barr virus (EBV) infection. We present a case of a 17-year-old male who presented with fever, acute tonsillitis, cervical lymphadenitis, and jaundice. The diagnosis of infectious mononucleosis was confirmed by a rapid agglutination test for EBV IgM heterophile antibodies. Laboratory findings revealed persistent direct hyperbilirubinemia for two months, with total bilirubin peaking at 205 µmol/l and direct bilirubin at 166 µmol/l. Abdominal ultrasound excluded mechanical biliary obstruction. Due to persistent cholestasis, treatment with ursodeoxycholic acid and cholestyramine was initiated. Full resolution of liver function tests and bilirubin levels occurred six months after the onset of infection. While EBV-induced cholestasis is more common in older adults, this case highlights the possibility of a significantly prolonged course in adolescents. Early recognition is essential to avoid invasive diagnostic procedures such as liver biopsy or invasive biliary imaging.

Jasmina Zrim (contact person)
Primary Healthcare Centre Ormož, Ormož, SLovenia
e-mail: jess.bezjak@gmail.com

Petra Rižnik
Department of Paediatric Gastroenterology, University Medical Centre Maribor, Maribor, Slovenia

Jernej Dolinšek
Department of Paediatric Gastroenterology, University Medical Centre Maribor, Maribor, Slovenia

PHACES Syndrome in Newborns: Clinical Case Presentation

Iva Bojanić, Aneta Soltirovska Šalamon, Alja Kavčič, Mojca Kavčič

Introduction: Infantile haemangioma is the most prevalent benign tumor of infancy, with an incidence of 4-5%. Cervicofacial haemangiomas can be associated with a rare neurocutaneous syndrome – PHACES: P – posterior fossa malformations, H – cervicofacial haemangiomas, A – arterial anomalies, C – cardiac anomalies, E – eye anomalies, S – sternal or abdominal clefting and endocrine disturbances.

Clinical case: We present two clinical cases of PHACES syndrome in two term female neonates. The syndrome is more common among females. In first, the vascular anomaly of the cervicofacial region was hardly visible at birth, yet she presented with signs of cellulitis on the left auricle and scalp. After a few days, haemangiomas became visible on the left side of the scalp, auricle, neck, gums and sublingual mucosa. Echocardiogram revealed an aortic coarctation, PDA and PFO with five vessels exiting the aortic arch. A surgical resection of the cardiac anomalies was done. After developing stridulous breathing amidst a respiratory infection, a subglottic haemangioma was found and treatment with propranolol was started. Magnetic resonance imaging of the head showed cerebral artery hypoplasia with a hypoplastic A1 segment of the left anterior cerebral artery and hypoplasia of the whole course of the right vertebral artery. In second, the cervicofacial haemangioma on the right side of the forehead, eyelid, cheek, philtrum, auricle and neck were visible at birth, and the right palatine arch was erythematous. Echocardiogram showed an ASD type PFO with a slight acceleration over the aortic isthmus without signs of coarctation. Head MRI revealed a dysplastic right cerebellar hemisphere and a hygroma. Neither of the newborns had any ocular involvement. Whole exome sequencing did not reveal any pathogenic genetic changes.

Conclusions: We present the phenotypical diversity of PHACES syndrome. The genetic aetiology is not yet defined, yet the cause could be an embryological defect occurring between the third and twelfth gestational week. A multidisciplinary evaluation and clinical presentation follow-ups are necessary.

Iva Bojanić (contact person)
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia
e-mail: iva.bojanic@kclj.si

Transfer of a Child with Fulminant RSV Bronchiolitis from a Secondary Hospital to a Tertiary Care Centre Due to Worsening Respiratory Distress – A Case Report

Domen Lenarčič, Tina Ahačič

Aneta Soltirovska Šalamon
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Alja Kavčič
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Mojca Kavčič
Department of Neonatology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Background: Respiratory syncytial virus (RSV) is one of the leading causes of lower respiratory tract infections in infants and young children. Although most cases of infection are self- limiting, severe and fulminant RSV infections can result in deepening respiratory distress, escalation of respiratory support and the need for treatment in a paediatric intensive care unit (PICU). We report a case of fulminant RSV bronchiolitis which necessitated transfer to the PICU within the first 24 hours of hospitalisation.

Case presentation: A 7-week-old previously healthy infant was admitted to the General hospital Jesenice after referral from a primary care centre with signs of upper respiratory tract infections. During admission an RSV infection was confirmed via rapid antigen test, respiratory support was not needed prior to admission. During the first hour of stationary care signs of respiratory distress developed and oxygen was administered first by nasal cannula and was gradually elevated. Despite elevating the O2 flow through the nasal cannula the patient showed signs of worsening respiratory distress because of which high-flow respiratory support was initiated and gradually escalated. Clinical stability was temporarily achieved, after which the patient's clinical status worsened while an elevation of pCO_2 was occurring in blood gas analysis. With clinical and laboratory signs of respiratory distress worsening the University clinical centre of Ljubljana PICU transport team was activated for interhospital transfer of critically an ill patient 22 hours after admission. Upon arrival of the PICU transport team rapid sequence intubation (RSI) was performed due to respiratory instability. Sufficient clinical stability was achieved for transportation, and the patient was transferred to PICU for further treatment.

Discussion: Fulminant RSV infections are uncommon compared to the rate of all RSV infections but tend to be life-threatening with a rapid progression despite standard supportive therapy. There are several risk factors that may affect the course of the disease though severe illness may also occur in previously healthy children. Early recognition of a fulminant progression plays a vital role in the survival of an affected patient.

Conclusions: The presented case highlights the potential severity of RSV bronchiolitis and underscores the impor-

tance of close monitoring and early PICU transfer in rapidly worsening cases. Prompt intervention and good interhospital coordination may reduce morbidity and improve clinical outcomes in severe paediatric RSV infections.

Domen Lenarčič (contact person)
General Hospital Jesenice, Jesenice, Slovenia
e-mail: domen.lenarcic@sb-je.si

Tina Ahačič
General Hospital Jesenice, Jesenice, Slovenia

POSTER VIEWING SESSIONS – ABSTRACTS

For the Health of Schoolchildren – A Digital School Health Information System in Hungary

Andrea Wenhard

Monitoring the health status of children and adolescents is a key public health task; however, existing data sources such as the HBSC, NETFIT and COSI surveys are typically based on periodic studies and provide limited opportunities for continuous monitoring. In Hungary, the digitalisation of school health services has been strengthened by the nationwide introduction of the KRÉTA School Health Module (IER), an integrated digital platform supporting school physicians and school nurses. The aim of this presentation is to describe the structure, functions and development process of the system and to outline its potential for future school health promotion and public health research. The KRÉTA IER enables the electronic documentation of health screening examinations, vaccinations, acute care events, school accidents and health promotion activities. The system is integrated with the national educational platform (KRÉTA), allows digital communication with parents, and is connected to the Hungarian National eHealth Infrastructure (EESZT). Through electronic referrals, it also supports coordination with specialised care via the National Outpatient Referral System (JIR). The development of the system has been an iterative process over several years, during which the functionality and the number of users has gradually expanded. The nationwide implementation creates the opportunity for the systematic collection and long-term monitoring of health data for the school-aged population. In the future, this digital infrastructure may support evidence-based school health promotion and the development of a comprehensive school health information system in Hungary.

Andrea Wenhard (contact person)
Faculty of Health Sciences, University of Pécs, Pécs, Hungary
e-mail: andrea.wenhard@iskolaegeszsegugy.hu

Treatment of Children and Adolescents in the Debeli Rtič Health Resort

Breda Prunk Franetič

Introduction: The Ministry of Health has declared the climate and seawater in the area of the health resort to be natural healing agents and has granted a concession for the implementation of rehabilitation health resort treatment for respiratory and skin diseases and conditions after injuries and operations of the locomotor system. We provide medical rehabilitation for children and adolescents in accordance with professional doctrine for individual indications. In addition to health resort treatment, we provide restorative rehabilitation for children with diabetes, celiac disease, phenylketonuria and those who are overweight, subsidized health and social welfare programs, educational camps for schools and kindergartens, as well as cultural, athletic, and other organized group events. We host a total of 18.000 children per year.

Methods: The success of health resort treatment is monitored based on SpO_2, PEF measurements, medical history, clinical picture and psychophysical condition. 1,400 children and adolescents are annually admitted to the 14-day health resort treatment program.

Results: Improvement of SpO_2 values (from 95-97% on admission, to 98-100% on discharge); improvement of PEF values in asthmatic patients by an average of 10-30%; improvement of nasal patency in 60% of children with AR; improvement of psychophysical condition; partial regression of skin lesions in 60% of those referred; complete regression of skin lesions in 20% of children; improvement of sleep quality in 30% of children; successful education of parents regarding dietary nutrition, local and systemic treatment.

Conclusions: Positive results in terms of improved patient condition upon discharge are proof that health resort treatment contributes to the treatment and rehabilitation of chronically ill children and adolescents.

Breda Prunk Franetič (contact person)
Youth Health Resort, Debeli rtič, Slovenia
e-mail: breda.prunk@gmail.com

Peer Educators Network in Promoting Healthy Eating for Adolescents

Diana Nonković, Željka Karin, Žana Škaričić Gudelj, Nikola Jelaš, Josipa Caktaš

During adolescence healthy balanced diet is crucial to support rapid growth and development. The major challenges of healthy eating are easy access to unhealthy foods, lack of nutrition knowledge and busy schedules. To cross the barrier, peer education can be useful tool in promoting healthy diets. Experts of Teaching Public Health Institute of Split – Dalmatian County educated 8 peer educators (16 years old students) of Secondary School in Split (Croatia) about healthy diet, who then led guided workshops to their own classmates (169 students). Project tasks were conducted in the period from 1.4. – 31.5.2025. The survey consisted of questions regarding diet habits and was handed to students before and after peer education. Out of all surveyed students 40,2% consumes junk food several times a week, and only 7,7% don't. Moreover, half (55%) of students consumes food supplements without professional supervision. After the workshops have been conducted the results showed complete satisfaction with unformal learning about healthy diet and all students were pleased with participating in the workshops (87,5% graded them Excellent). Peer education can positively influence what adolescents eat despite all challenges.

Diana Nonković (contact person)
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia; Faculty of Health Sciences, University of Split, Split, Croatia
e-mail: diana.nonkovic@nzjz-split.hr

Željka Karin
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia; Faculty of Health Sciences, University of Split, Split, Croatia; School of Medicine, University of Split, Split, Croatia

Žana Škaričić Gudelj
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Nikola Jelaš
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Josipa Caktaš
Secondary School Fifth Gymnasium Vladimir Nazor, Split, Croatia

Parental Influence on Alcohol Mixed with Energy Drink Consumption Among Students

Dijana Mayer, Ivana Pavić Šimetin, Arian Peharda, Ivona Keć, Anamaria Vidmar, Tonka Karin

Introduction: Alcohol is commonly used among adolescents and may affect social, physical and mental well-being, imposing high societal costs. Its psychoactive effects are particularly concerning when combined with energy drinks.

Methods: Data from the 2022 Croatian Health Behaviour in School-aged Children survey were analysed. 2.579 boys and 2.758 girls aged 11, 13 and 15 completed the questionnaire anonymously and voluntarily. Pearson's Chi-square test and binary logistic regression tested statistical significance.

Results: Energy drinks combined with alcohol were consumed at least once by 12,5% boys and 6,6% girls aged 11 (p<0,001), 15,5% boys and 18,4% girls aged 13 (p=0,108), and 36,8% boys and 34,1% girls aged 15 (p=0,289). Family socio-economic status was not associated with this behaviour. Higher odds were observed among students who did not have to tell parents when going out (boys 11: OR 1,64 CI 1,16-2,33 p=0,005; girls 11: OR 1,71 CI 1,01-2,93 p=0,049; boys 15: OR 1,33 CI 1,03-1,73 p=0,029) and those not required home by certain time (girls 11: OR 1,95 CI 1,29-2,96 p=0,002; boys 13: OR 1,38 CI 1,05-1,83 p=0,022; girls 13: OR 1,58 CI 1,21-2,07 p=0,001), compared with students who never drank alcohol with energy drinks.

Conclusions: Alcohol consumption with energy drinks increases with age, with no significant gender difference except at 11 when boys consume more. Regardless of family socioeconomic status, stricter parental supervision may reduce consumption and professionals should educate parents.

Dijana Mayer (contact person)
Croatian Institute of Public Health, Zagreb, Croatia
e-mail: dijana.mayer@hzjz.hr

Ivana Pavić Šimetin
Croatian Institute of Public Health, Zagreb, Croatia

Arian Peharda
Croatian Institute of Public Health, Zagreb, Croatia

Ivona Keć
Croatian Institute of Public Health, Zagreb, Croatia

Anamaria Vidmar
Croatian Institute of Public Health, Zagreb, Croatia

Tonka Karin
Croatian Institute of Public Health, Zagreb, Croatia

Intelligence, School Absenteeism and Mental Health in Adolescence: Insights from the TRAILS Cohort

Dominique Suykerbuyk, Marie-José Theunissen

School absenteeism is an increasing concern in adolescent health and often attributed to high intelligence or giftedness, though underlying mental health conditions may play a critical role. This study investigates the relationship between intelligence (WISCIII IQ scores) and both excused and unexcused absenteeism in Dutch adolescents, with specific emphasis on mental health and psychosocial determinants. Using retrospective data from the TRAILS cohort (ages 10–20), we analyse how psychiatric comorbidities (including ADHD, autism spectrum disorder, mood and anxiety disorders) modify the association between IQ and absenteeism. Temperament, self-efficacy and self-esteem are included to identify cognitive emotional pathways relevant for early detection of risk. We hypothesize a nonlinear relationship in which both lower and higher IQ levels predict increased absenteeism, but primarily in the presence of mental health vulnerabilities. The findings are expected to clarify whether absenteeism in highly intelligent adolescents reflects unmet educational needs or underlying psychiatric burden. By integrating cognitive, psychological and social determinants, this study aims to strengthen preventive strategies within school health services and supports the congress focus on improving mental health and wellbeing among young people.

Dominique Suykerbuyk (contact person)
GGD Limburg Noord, Venlo, The Netherlands
e-mail: d.suykerbuyk@vrln.nl

Marie-José Theunissen
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; GGD Brabant-Zuidoost, Eindhoven, The Netherlands

Early Screening for Mental Health Disorders in Croatian Children: Can We Do More?

Dora Cesarec, Jana Jelenić

Mental health disorders among youth are an increasing public health concern, with an estimated 11.5% of Croatian individuals aged 10–19 affected. Screening is currently conducted in the 8th grade (mean age 14) using the YP-CORE questionnaire; however, approximately one-third of mental health difficulties emerge earlier, supporting the need for screening in preadolescence. This literature review aimed to identify self-report instruments suitable for children aged 10-11 for earlier detection in clinical practice. The search was conducted using PubMed and Google Scholar. Identified instruments clustered into broad psychosocial screeners (SDQ, PSC-Y, YSR) and internalizing symptom measures (RCADS, SCARED, MFQ/SMFQ). Further qualitative analysis identified RCADS and SMFQ as the most suitable instruments for preadolescents, due to their brevity and age suitability; with developmentally appropriate wording. RCADS is applicable from age 8, available in Slovenian and Serbian, and comprises 25 items across five subscales that can be used selectively for screening. SMFQ is a 13-item instrument suitable from age 6 and available in Serbian. In conclusion, the review was limited by methodological constraints and insufficient data on the sensitivity and specificity of observed self-report instruments. Several questionnaires show potential for earlier screening in preadolescents; however, further validation and evaluation is needed.

Dora Cesarec (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: dora.cesarec@stampar.hr

Jana Jelenić
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Mapping and Evaluating Child and Adolescent Mental Health Practices Across 30 European Countries: Findings from the EU4Health–UNICEF Partnership

Francesca Iris Bellotti, Simona Ponte, Marianna Zanette, Eleonora Doz, Marzia Lazzerini

Background: Mental health conditions affect nearly 14% of individuals under 19 in the European Region, yet evidence on existing supporting practices remains fragmented. Within the EU4Health Programme and in partnership with UNICEF, we systematically mapped child and adolescent mental health interventions across Europe to identify best practices for cross-country implementation.

Methods: We conducted a scoping review integrating institutional databases, grey literature, and a structured survey for key informants. Eleven evaluation criteria – including effectiveness, sustainability, accessibility, and transferability – were developed through stakeholder dialogue and applied to all identified practices.

Results: We identified 232 practices. Most targeted adolescents (79%), with limited coverage of early childhood and caregivers. Sub-clinical care (42%) and universal prevention (39%) predominated over targeted prevention (28%) and promotion (25%). The education sector was involved in 54% of practices – second only to health services (61%) – and 42 practices (18%) specifically targeted teachers and educators. Identified best practices included school-based, community, and parenting support programmes, several already implemented across multiple countries.

Conclusions: Current responses remain largely reactive, with limited investment in early childhood, family-based approaches, and targeted prevention. School-based practices – already present in over half of identified initiatives – offer a feasible pathway to rebalance efforts toward early promotion and prevention, with potential for cross-country scaling.

Francesca Iris Bellotti (contact person)
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy
e-mail: francescairis.bellotti@burlo.trieste.it

Simona Ponte
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Marianna Zanette
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Eleonora Doz
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Marzia Lazzerini
Centre for Maternal and Child Health, Institute for Maternal and Child Health (IRCCS Burlo Garofolo), Trieste, Italy

Pilot Implementation of a Social-Emotional Skills Program in First Grade

Eve Viilma, Kätlin Laas, Pillemai Pihlak

Developing social-emotional skills in early primary education supports children's adjustment to school and peer relationships. This study piloted a nine-lesson social-emotional learning SEL program for first grade students to evaluate its feasibility and potential impact on children's social-emotional competencies. The program was based on the CASEL framework and incorporated elements from evidence-informed approaches, including the anti-bullying programme, Good Behaviour Game, mindfulness-based practices, and Bullying-Free School initiatives, alongside structured problem-solving activities. The program was delivered by mental health nurses from the Tallinn School Health Foundation as part of the school health service, integrating SEL instruction into a preventive and health-promoting framework. During the pilot phase, nine lessons focused on recognizing and labelling emotions, understanding connections between thoughts and feelings, fostering empathy, developing self-control and practicing cooperation skills. Prior to the program, parents completed a survey assessing their perceptions of their child's social-emotional skills; the same survey is planned after program completion in spring 2026 to explore potential changes. The pilot enabled evaluation of age-appropriateness, student engagement, and practical applicability of nurse-led SEL instruction in a first-grade classroom. The findings inform further program refinement and systematic application to support early social and emotional development.

Eve Viilma (contact person)
Tallinn School Health Foundation, Tallinn, Estonia
e-mail: eve.viilma@kth.ee

Kätlin Laas
Tallinn School Health Foundation, Tallinn, Estonia

Pillemai Pihlak
Tallinn School Health Foundation, Tallinn, Estonia

Theories, Models and Frameworks of School Nursing - A Scoping Review

Jana Kaden, Birte Berger-Höger

Background: School nursing is a complex clinical specialty practice with different approaches and responsibilities between countries. Theories, models and frameworks inform nursing practice. This study aims to explore the conceptualisation and operationalisation of school nursing within existing theoretical approaches.

Methods: To identify existing theories, models, frameworks and concepts of school nursing, a scoping review was conducted, oriented on JBI Manual for evidence synthesis. We searched in the data bases Medline/PsycInfo, CINAHL and ERIC from earliest date to 08 March 2024. Content analysis was used and data extraction included target group, school type, tasks, qualification, aim, role and key elements.

Results: Two theories, eleven different models, and seven different frameworks were identified within 28 reports, highlighting the complexity of school nursing. Based on their focus three different types of models/frameworks were identified: "Role and practice", "Organisation and delivery" and "Qualification". School nursing definitions and aims varied and included supporting students' health, education or school attendance, and school nurses' professional development. Tasks of school nurses differ with leadership, evaluation and coordination as key elements.

Conclusions: Different theoretical foundations for school nursing exist intended to support school nurses in developing their role and corresponding offers. Furthermore, implementation of school nursing could be supported.

Jana Kaden (contact person)
Department Evaluation and Implementation Research in Nursing Science, Institute for Public Health and Nursing Research, University of Bremen, Bremen, Germany
e-mail: jana.kaden@uni-bremen.de

Birte Berger-Höger
Department Evaluation and Implementation Research in Nursing Science, Institute for Public Health and Nursing Research, University of Bremen, Bremen, Germany

Exploring Adolescent Males' Consultations with General Practitioners in the Context of Psychosocial Health – Presentation of Thesis

Johanna Haraldsson, Lena Nordgren, Ylva Tindberg, Ronnie Pingel, Per Kristiansson

Adolescent males face substantial communication barriers in consultations with general practitioners (GPs), despite having higher mortality than females largely due to poor mental health and health compromising behaviours. This thesis explored adolescent males' experiences of GP consultations and their perceptions of confidentiality in relation to sensitive issues. Conceptual model linking mental health, somatic symptoms, and health compromising behaviours was developed, and expectations and experiences of confidentiality were examined using structural equation modelling. Additionally, nine adolescent males participated in video recorded consultations followed by interviews; interview data were analysed using thematic analysis, and video observations were analysed with a phenomenological hermeneutic approach. Results indicate that consultations can be strengthened by offering private time without parents and by clearly explaining confidentiality. Adolescent males further emphasized the importance of feeling listened to, requiring GPs to demonstrate engagement and understanding throughout the encounter. Consultations also posed cognitive, emotional, and relational challenges, creating a demanding combination of vulnerability and complexity. The thesis concludes that combining two existing consultation models may better meet adolescent males' needs, underscoring the importance of reinforcing confidentiality practices and communication strategies in primary care.

Johanna Haraldsson (contact person)
Department of Public Health and Caring Sciences/General practice, Uppsala University, Uppsala, Sweden; Centre for Clinical Research Sörmland/Uppsala University, Eskilstuna, Sweden
e-mail: johanna.haraldsson@uu.se

Lena Nordgren
Department of Public Health and Caring Sciences/General practice, Uppsala University, Uppsala, Sweden; Centre for Clinical Research Sörmland/Uppsala University, Eskilstuna, Sweden; Department of Public Health and Caring Sciences/Caring Sciences, Uppsala University, Uppsala, Sweden

Ylva Tindberg
Center for Clinical Research Sörmland/Uppsala University, Eskilstuna, Sweden; Department of Women's and Children's Health, Uppsala University, Uppsala, Sweden

Ronnie Pingel
Department of Statistics, Uppsala University, Uppsala, Sweden

Per Kristiansson
Department of Public Health and Caring Sciences/General practice, Uppsala University, Uppsala, Sweden

Decline in Organized Sports Participation and Persistence of Overweight/Obesity in Croatian Primary School Children: A Longitudinal Cohort Study

Josipa Glavaš, Ivana Sikirica, Katarina Tomelić Ercegović

Background: Recent reports from the World Health Organization identify obesity and physical inactivity as major risk factors for noncommunicable diseases in youth.

Methods: This retrospective longitudinal cohort study examined the association between participation in organized sports and overweight/obesity among 608 students (325 boys, 283 girls) from three Croatian towns, with anthropometric and sports participation data collected in the 1st, 5th, and 8th grades.

Results: In the 8th grade, 8.4% were obese and 12.5% overweight. Overall, 76.6% of students engaged in organized sports at some point, but only 24.7% maintained continuous participation, with a marked decline by the 8th grade, particularly among girls. Obesity persisted from the 5th grade in 74.5%, and from the 1st grade in 51.0% of affected students. Among children with persistent obesity, 57.7% participated in sports, 19.2% continuously, and none remained active by the 8th grade. Persistent overweight affected 53.9% from the 5th grade and 2.2% from the 1st grade; although 86.7% participated at some point and 33.3% continuously, participation declined to zero by the 8th grade.

Conclusions: Early and sustained engagement in accessible and gender-responsive sports programs may reduce persistent childhood obesity and overweight, supporting interventions to maintain activity throughout primary school.

Josipa Glavaš (contact person)
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia
e-mail: josipa.glavas@nzjz-split.hr

Ivana Sikirica
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Katarina Tomelić Ercegović
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Higher Obesity Rates Among Rural Children: A Focus on Adolescent Girls

Katarina Tomelić Ercegović, Josipa Glavaš, Ivana Sikirica

Background: In recent years, overweight and obesity among children have increased. This study aimed to examine differences in BMI among children in urban and rural areas of Split-Dalmatia County.

Methods: During routine eighth-grade health examinations, height and weight were measured, and BMI was interpreted using sex-specific BMI-for-age percentiles. A total of 243 urban children (125 boys, 118 girls) and 224 rural children (111 boys, 113 girls) were included.

Results: Underweight prevalence was similar in both areas (urban 12.8%, rural 12.4%). In urban areas, 63.4% had a normal weight, 14% were overweight, and 9.9% obese. In rural areas, 50.2% had a normal weight, 17.3% were overweight, and 20% obese. The proportion of obese girls was significantly higher in rural areas (26.5%) than in urban areas (10.2%).

Conclusions: Rural children, especially girls, have higher rates of obesity, possibly due to limited access to organized sports and lower physical activity levels among girls. Targeted interventions promoting healthy nutrition and increased physical activity, particularly for adolescent girls, are recommended.

Katarina Tomelić Ercegović (contact person)
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia
e-mail: katarina.tomelic.ercegovic@nzjz-split.hr

Josipa Glavaš
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Ivana Sikirica
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Familial Hypercholesterolemia in School-Age Children: Screening Challenges and Effectiveness of Early Interventions

Lucija Eškutić, Vesna Bilić-Kirin

Familial hypercholesterolemia is one of the most common inherited lipid disorders with serious cardiovascular risks if not detected and treated in a timely manner. This study aims to assess the response rate to total blood cholesterol screening among children enrolling in elementary school at the Department of School Medicine, Teaching Institute of Public Health Osijek-Baranja County as part of the National Screening and Early Detection Program for Familial Hypercholesterolemia introduced in 2023. It also aims to monitor follow-up measurements and the effectiveness of interventions. The sample consisted of 269 first grade elementary school students, examining cholesterol levels, anthropometric characteristics, socio-demographic factors and dietary habits. Students with elevated cholesterol levels were evaluated using a standardized algorithm and required further monitoring. Results indicate a high screening participation rate (97.4%) and a significant proportion of children with borderline cholesterol levels, of whom 13.33% were subsequently positive for familial hypercholesterolemia on follow-up assessment. These findings highlight the importance of early detection and the necessity of preventive measures.

Lucija Eškutić (contact person)
Teaching Public Health Institute of Osijek-Baranja County, Osijek, Croatia
e-mail: lucijaeskutic@gmail.com

Vesna Bilić-Kirin
Teaching Public Health Institute of Osijek-Baranja County, Osijek, Croatia; Faculty of Medicine, University of Osijek, Osijek, Croatia

EXperiMental: Wearable Technology and EXplainable AI for Mental Health and Inclusivity in Schools

Maja Lugonjić, Hrvoje Podnar, Filip Sinković, Jelena Gerjević, Petra Lončar Kubura, Maroje Sorić

Mental health (MH) in early adolescence is a significant public health concern, as three-quarters of mental disorders emerge before the age of 24. Compared to other age groups, adolescents have the poorest access to MH services. The EXperiMental project aims to create long-lasting MH inclusivity in schools by identifying and encouraging characteristics of mentally healthy and resilient adolescents. The core idea is to use wearables, machine learning (ML), and explainable artificial intelligence (XAI) to monitor and improve adolescent mental health in schools through co-designed, personalized interventions. Adolescents aged 11–14 years will partake in participatory action research and data collection alongside teachers. Two studies will be conducted in Zagreb primary schools: an observational study involving 50–100 adolescents over three months using wearables and smartphones to track physiological data, physical activity (PA), sleep patterns, and smartphone usage, followed by a nine-month intervention study involving approximately 200 adolescents. Collected data will be used to develop ML models for predicting risks related to mood and sleep quality, and to explore how PA relates to MH outcomes. XAI tools will provide personalized feedback tailored to the needs of end users. Expected outcomes include improved MH literacy, reduced stigma, and guidelines for the broader implementation of AI-based tools in school settings.

Maja Lugonjić (contact person)
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia
e-mail: maja.lagator@kif.unizg.hr

Hrvoje Podnar
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia

Filip Sinković
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia

Jelena Gerjević
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia

Petra Lončar Kubura
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia

Maroje Sorić
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia; Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Raising Awareness of Healthier Food Choices for Preschool Children in Županja, Croatia

Marina Dominković, Dario Arnautalić, Vesna Bilić-Kirin, Sara Batković, Amalija Romić

The link between healthy food and better health in general has already been proved through numerous studies. An attitude that even small changes of food choices from early age on could lead to the cumulative effect for the future health of our children lead our actions. Few months of analysing menus of the Nursery school Maslačak, that nutritionally were not adjusted, were followed by analysing data of all the preschool children that were physically examined in the ambulance of school medicine in Županja, as a part of the examination and assessment for the first grade. Data for the school year 2024/2025 showed that among 77 preschool children from this nursery school, 4 children were diagnosed with obesity due to excess calories, 7 children had high cholesterol or low-density lipoprotein levels and 14 suffer from malnutrition. Nutrition specialist at Croatian Institute of Public health suggested changes among which was not allowing parents to bring sweets and snacks on a daily basis. At the beginning of the school year 2025/2026 parents were kindly asked to bring only fruit and eventually healthy snacks, what resulted in significantly reduction of sweets offered right after resting time at 14:30. Health manager started sending recipes and advice connected to better food solutions as a part of parental education. In March 2026. new preschool director was selected and is dedicated in following earlier recommendations for balanced meals. As a part of this process, various number of fresh vegetables are now being served instead of processed foods. Education of employers, not only the ones that work in the kitchen, but also all day-care professionals is what follows now as a part of better implementation of all good changes for over 450 children, their families and over 80 workers in this nursery school.

Marina Dominković (contact person)
Public Health Institute of Vukovar-Srijem County, Vinkovci, Croatia
e-mail: marina.babic990@gmail.com

Dario Arnautalić
Public Health Institute of Vukovar-Srijem County, Vinkovci, Croatia

Vesna Bilić-Kirin
Teaching Public Health Institute of Osijek-Baranja County, Osijek, Croatia; Faculty of Medicine, University of Osijek, Osijek, Croatia

Sara Batković
Nursery School Maslačak, Županja, Croatia

Amalija Romić
Nursery School Maslačak, Županja, Croatia

Mental Health of International Students at the University of Zagreb

Marjeta Majer, Tea Vukušić Rukavina, Danko Relić, Zlata Ožvačić Adžić, Venija Cerovečki, Ino Kermc, Nada Pjevač, Hana Škornjak Periša

Introduction: The COVID-19 pandemic has been linked to an increased risk of mental health problems in university students, with international students considered particularly vulnerable. This study examined the frequency of contacts with a Multidisciplinary Counselling Centre for International Students due to mental health problems before and during, and after the COVID-19 pandemic.

Methods: We retrospectively analysed medical records of international students who contacted the Centre between 2019 and 2025 with diagnoses from the mental and behavioural disorders chapter of the International Classification of Diseases. Data were analysed using descriptive statistics ($p < 0.05$).

Results: The total number of students seen per year ranged from 455 to 537. The proportion of consultations for mental health problems was 8.7% in 2019, 5.9% in 2020, and peaked at 14.3% in 2021 (χ^2=19.11; P<0.001), then fluctuated between 9.6% and 14.2% from 2022 to 2025, with a consistently higher share of female students. The most frequent diagnoses across years were neurotic, stress-related and somatoform disorders, particularly mixed anxiety and depressive disorder and adjustment disorder.

Conclusions: Contacts for mental health problems among international students increased markedly during 2021 and remained elevated thereafter, underscoring the need for continuous, easily accessible mental health care for this population.

Marjeta Majer (contact person)
School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail:

Tea Vukušić Rukavina
School of Medicine, University of Zagreb, Zagreb, Croatia

Danko Relić
School of Medicine, University of Zagreb, Zagreb, Croatia

Zlata Ožvačić Adžić
School of Medicine, University of Zagreb, Zagreb, Croatia

Venija Cerovečki
School of Medicine, University of Zagreb, Zagreb, Croatia

Ino Kermc
School of Medicine, University of Zagreb, Zagreb, Croatia

Nada Pjevač
School of Medicine, University of Zagreb, Zagreb, Croatia

Hana Škornjak Periša
School of Medicine, University of Zagreb, Zagreb, Croatia

Protecting Scarce Generations: Health System Coordination for School Accident Insurance in a Low-Fertility Country (Chile)

Monica Naveillan, Daniel Muñoz, Ingrid Reyes, Jose Torres

Background: Chile faces record-low fertility rates (1.1 births per woman in 2024) and an imminent population decline, making each child a strategic asset for national sustainability. However, public spending on early childhood care and education remains below the OECD average and has been inconsistent across administrations. The last major state policy for children was "Chile Crece Contigo" (2006). In 1972, Decree Law 313 incorporated students into the workplace accident insurance framework (Law 16.744), covering all students from pre-school to higher education for accidents on school grounds or during commutes.

Methods: In 2023, a national public consultation revealed widespread lack of knowledge among families about this School Accident Insurance.

Results: In response, the Ñuble region developed interinstitutional coordination, designating insurance representatives in health facilities, systematizing accident types, and establishing protocols between the administering body (ISL) and health services (Servicio de Salud Ñuble and Secretaría Ministerial de Salud de Ñuble). A procedural manual is currently being designed.

Conclusions: In a demographically shrinking nation, ensuring effective protection and awareness of existing child benefits is not only a right but a demographic imperative. The Ñuble experience offers a replicable model for maximizing the impact of scarce child-directed resources.

Monica Naveillan (contact person)
Health Service Ñuble, Ñuble, Chile
e-mail: monillan@gmail.com

Daniel Muñoz
Health Service Ñuble, Ñuble, Chile

Ingrid Reyes
Institute for Occupational Safety (ISL), Santiago, Chile

Jose Torres
Regional Ministerial Secretariat of Health, Ñuble, Chile

Overview of the Nutritional Status of Primary Schools in the Western Part of the City of Zagreb

Neda Ferenčić Vrban, Giovana Armano, Adrijana Mesić

In the world, including Croatia, obesity is becoming an increasingly important public health problem. It is known that in addition to predisposition, an obesogenic environment also contributes to the development of obesity. Obesity is not only an aesthetic and cosmetic problem. Obesity is a disease and according to the ICD classification it is classified under the code E66 and in addition to the predisposition to various organic symptoms (a number of chronic diseases) there are also psychological disorders (depression, isolation and social stigmatization). The presence of obesity in Croatia increases significantly from the age of 5. According to the latest data (CroCOSI), 36% of children aged 8-9 are overweight or obese. In addition, 10% of children enrolled in the first grade have elevated cholesterol levels. During the screening of body weight and height in the 3rd grade of primary school (8 to 9 years old), in the school year 2025/26, 145 children from three Zagreb schools were included, of which 83 were girls and 78 were boys. To determine physical status, we used BMI centiles. The results showed that 44 (30.34%) children had increased body weight. Of these, 16 were obese (36.3%), 7 (15.9%) were extremely obese and 21 (47.72%) were overweight. In our research, a high percentage of obese people, however, it is still slightly lower than the Croatian average. Our sample was relatively small or a smaller percentage than the previous ones, in any case good preventive practice and early intervention contributed. The results show that due to good preventive programs implemented in schools, the number of obese children is still decreasing, and those who are registered at this age, as well as timely intervention by referral to a paediatric endocrinologist, and those with lower BMI centiles are referred to the Counselling Centre for obesity and eating disorders of school children.

Neda Ferenčić Vrban (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: neda.ferencic@stampar.hr

Giovana Armano
Specialistic Paediatric Hospital Dr. Armano, Zagreb, Croatia

Adrijana Mesić
Primary Healthcare Centre Zagreb, Zagreb, Croatia

Expanding Medical Tasks for Youth Health Physicians in Preventive Child Health Care: A National Substitution of Care Initiative

Nicole Goossens, Myrte Damming, Petra de Jong

Preventive child health services in the Netherlands aim to improve accessibility, efficiency, and patient-centred care by expanding medical tasks performed by youth health physicians. This national project explores substitution of care from primary and secondary care to preventive child health services. In the first phase, four clinical domains were analysed: laboratory testing for prolonged neonatal jaundice, hepatitis B serology in children of hepatitis B–positive mothers, laboratory screening for paediatric obesity, and prescribing simple prescription-only medications for common dermatological conditions. Stakeholder consultations were conducted with paediatricians, general practitioners, a health insurer, and a diagnostic laboratory, and organizational, educational, and financial requirements were assessed. Initial findings indicate feasibility of task substitution without compromising quality of care. Youth health physicians are considered competent to perform these tasks with additional training and protocols. Expected benefits include reduced referrals, earlier detection of serious conditions such as biliary atresia, and improved patient-centred and efficient care delivery. Reduced workload for general practitioners and increased attractiveness of the youth health physician role were identified as secondary effects. The main implementation challenge is financing, as substitution of care requires structural reallocation of funds within the healthcare system.

Nicole Goossens (contact person)
Regional Public Health Service Fryslân, The Netherlands
e-mail: nicole.goossens@ou.nl

Myrte Damming
Youth Health Care Service, The Hague, The Netherlands

Petra de Jong
Association of Dutch Youth Health Care Physicians, Utrecht, The Netherlands

Collaboration Between School Nurse and Mental Health Nurse in Student Mental Health Crisis

Pille Kukk, Kadri Jürisoo, Irena Uustalu

Background: The Foundation for School Health Care in Tallinn employs mental health nurses alongside school nurses, enabling prompt consultation in complex cases and, when needed, direct involvement with the student. This collaborative model ensures timely, structured support. This report presents a case study of successful school nurse–mental health nurse collaboration during a student mental health crisis. During a planned 10th-grade health check, including a psycho-emotional questionnaire, a sleep disorder was identified. Although the student initially hesitated to provide details, the school nurse recognized the severity and facilitated consultation with a mental health nurse. During this meeting, the student disclosed long-standing mental health problems and a suicide plan. Immediate cooperation with the parents followed, and the student was referred directly to psychiatric hospital treatment. The

student is now continuing upper secondary studies. This case illustrates how early, structured collaboration between school and mental health nurses can prevent the escalation of a student's mental health crisis. It provides a practical example of effective crisis management in a school setting and demonstrates that timely intervention can be lifesaving.

Pille Kukk (contact person)
Foundation for School Health Care, Tallinn, Estonia
e-mail: pille.kukk@kth.ee

Kadri Jürisoo
Foundation for School Health Care, Tallinn, Estonia

Irena Uustalu
Foundation for School Health Care, Tallinn, Estonia

Witnessing Family Violence and Its Associations with Mental Health Problems Among Adolescents: The Influence of Social Support

Sanna Tiikkaja, Natalie Durbeej, Ylva Tindberg, Sara Fritzell

Background: About 10-20% of Swedish adolescents have witnessed family violence. This group may be susceptible for mental health problems. This study explored the association between witnessing family violence and mental health problems, and the influence of social support, in adolescents in Sörmland county (2023).

Methods: Population-based cross-sectional data (n=3546) were analysed by descriptive statistics and logistic regressions. Family violence included witnessing threats, abusive words or physical/sexual violence. Mental health problems, including feeling anxious/worried, low/sad and/or angry at least once a week the during last 3 months, was used as the outcome.

Results: Nearly 20% of the respondents reported having witnessed family violence. Of these, 76% reported having mental health problems, vs 47% among those that did not witness family violence. The odds ratio for witnessing family violence and mental health problems was 2.29 (1.87–2.82) in total in the fully adjusted model. Lack of social support has a strong influence on the association between witnessing family violence and mental health problems.

Conclusions: Witnessing family violence is common among adolescents in Sörmland this group often reports mental health problems. The lack of social support has been shown to be an important risk factor.

Sanna Tiikkaja (contact person)
Department of Public Health and Caring Sciences, Uppsala University, Uppsala, Sweden; Centre of Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden
e-mail: sanna.tiikkaja@fou.sormland.se

Natalie Durbeej
Department of Public Health and Caring Sciences, Uppsala University, Uppsala, Sweden; Department of Health Sciences, Karlstad University, Karlstad, Sweden

Ylva Tindberg
Centre of Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden; Department of Women's and Children's Health, Uppsala University, Uppsala, Sweden

Sara Fritzell
Department of Global Public Health, Karolinska Institute, Solna, Sweden

Targeting Paediatric Obesity through Gender-Specific Nutritional Strategies

Tadeja Jakus, Breda Prunk Franetič, Tamara Poklar Vatovec

Background: Understanding gender differences in diet may improve prevention and treatment strategies for childhood obesity.

Methods: Data from 180 participants (83 boys, 97 girls; 7–18 years) attending the national obesity intervention program Camp My Challenge were analysed. Anthropometric parameters and dietary intake were assessed using a validated food-frequency questionnaire (OPKP).

Results: Mean energy intake was 2.543 ± 1.138 kcal/day, exceeding DRV by 16% ($t = 3.31$, $p < 0.001$). Girls exceeded energy requirements more than boys (24.5% vs. 5.4%; $p = 0.019$). Boys consumed significantly more total fat (106 ± 61 g vs. 85 ± 47 g; $p = 0.014$), saturated fatty acids (34 ± 20 g vs. 27 ± 13 g; $p = 0.011$), protein (119 ± 63 g vs. 98 ± 41 g; $p = 0.008$), and sodium (3.628 ± 2.086 mg vs. 2.852 ± 1.520 mg; $p = 0.005$). Girls had higher sugar intake (208% vs. 166% of DRV; $p = 0.032$), mainly from sweet foods (24%) and fruit (26%), whereas beverages – predominantly isotonic drinks – accounted for 27% of boys' sugar intake.

Conclusions: Interventions should target excessive energy and sugar intake in girls and high fat, sodium, and sugar-sweetened beverage consumption in boys to improve paediatric obesity management.

Tadeja Jakus (contact person)
Faculty of Health Sciences, University of Primorska, Izola, Slovenia
e-mail: tadeja.jakus@upr.si

Breda Prunk Franetič
Youth Health Resort, Debeli rtič, Slovenia

Tamara Poklar Vatovec
Faculty of Health Sciences, University of Primorska, Izola, Slovenia

Breastfeeding in the Roma Community

Tatjana Pavlin

Background: Breastfeeding is extremely important for the health and optimal development of children. The recommendation of UNICEF and many other professional associations is that children should be exclusively breastfed for the first six months of life and then with complementary nutrition up to 2 years of age or older. There are many factors that positively or negatively affect the duration of breastfeeding. With the research, we wanted to find out how long Roma women breastfeed and what factors influence this.

Methods: The research took the form of a structured interview. 30 Roma women from two Roma settlements in south-eastern Slovenia participated. Their average age is 33 years. Together, they gave birth to 86 children.

Results: The mean duration of breastfeeding was 49,35 weeks. 20 babies were not breastfed, and 26 babies were breastfed less than a week. The most common reason for stopping breastfeeding was the belief that the mother didn't have enough milk. The mean age of women at first birth was 18,3 years. The minimum age at the first birth was 12 years and the highest was 30 years. 12 mothers (40%) gave birth before the age of eighteen. A large proportion, 92,6% of the interviewees are smokers. None of the interviewees attended the School for Parents. Most of them heard about the benefits of breastfeeding in the maternity hospital and later in the paediatric dispensary, and half also heard from their mother, grandmother or mother-in-law. Only two also cited the Internet.

Conclusions: Breastfeeding is a very important protective factor for the health of children and adults. However, the Roma women in the interviewed group only breastfed for a short time. It is necessary to improve the awareness of the Roma about the importance of breastfeeding and to bring preventive programmes closer to them.

Tatjana Pavlin (contact person)
General Hospital Novo mesto, Novo mesto, Slovenia
e-mail: pavlin.tatjana@gmail.com

Prevalence, Types, And Motives for the Use of Dietary Supplements Among Students of University of Rijeka

Valentina Ferenčić, Martina Rojnić, Vesna Jureša, Nataša Dragaš-Zubalj

Background: Dietary supplements are defined as products containing concentrated sources of physiologically active substances, and their use has increased.

Methods: In light of potential safety concerns and questionable efficacy, the aim of this study was to systematically assess the prevalence and motives for the use of dietary supplements and sports dietary supplements among students at the University of Rijeka.

Results: A total of 222 participants were included, 120 females (54.05%) and 102 males (45.95%). A high prevalence of dietary supplement use (N=144; 64.86%) was observed, with frequent simultaneous consumption of multiple products. Male students demonstrated a significantly higher use of sports dietary supplements compared with female students. The most commonly reported motives for dietary supplement use were immune system enhancement (N=72; 47.06%), whereas increased strength (N=48; 42.48%) and improved athletic performance (N=40; 35.40%) predominated as motives for sports dietary supplement use. Only a minority of responses (N=36; 23.53%) referred to the use of dietary supplements based on recommendation or a stated deficiency.

Conclusions: The high prevalence of use, particularly among male students for sports supplements, underscores the need for targeted public health interventions to promote the rational and safe use of dietary supplements.

Valentina Ferenčić (contact person)
Teaching Public Health Institute of Istrian County, Pula, Croatia
e-mail: valentina.ferencic@gmail.com

Martina Rojnić
Teaching Public Health Institute of Istrian County, Pula, Croatia

Vesna Jureša
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Nataša Dragaš-Zubalj
Teaching Public Health Institute of Primorje-Gorski Kotar County, Rijeka, Croatia

The Use of Written Recommendations in School Health Counseling for Students with Obesity

Željka Mihaljević, Natalija Tutavac

In Croatia, one in three children is overweight. According to the European Childhood Obesity Surveillance Initiative, Croatia ranks fourth in the prevalence of childhood overweight and obesity. The aim of this study is to describe the use of written recommendations in the work of a school health service. The written recommendations provided to each student identified with a body mass index (BMI) above the 90th percentile are aligned with the Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Obesity issued by the American Academy of Paediatrics. In accordance with Croatia's National Program of Health Care Measures obese children in primary schools are identified during routine health examinations in the first, fifth, and eighth grades, as well as through screening in the third and sixth grades. Each identified student is provided with a medical report containing written recommendations, including reduction of caloric intake, increased consumption of fruits and vegetables, adequate hydration, adherence to a Mediterranean diet, and engagement in at least 60 minutes of daily physical activity. Additionally, the following laboratory tests are recommended: complete blood count, lipid profile, blood glucose, and liver enzymes. A follow-up examination is scheduled after three months. Students are advised to maintain or reduce their current body weight until the follow-up. In conclusion, the use of written recommendations, as outlined in this paper, may represent an effective tool in school health counselling.

Željka Mihaljević (contact person)
Institute for Public Health of the Zagreb County, Zagreb, Croatia
e-mail: zemarkov1407@gmail.com

Natalija Tutavac
Institute for Public Health of Vukovar-Srijemska County, Vukovar, Croatia

Allocation and Impact of Physician Health Examinations in School Health Care (KouluTK)

Alisa Alanne, Pekka Mäntyselkä, Silja Kosola, Sonja Soininen

In Finland, school physicians focus largely on statutory health checks, leaving limited capacity for needs-based appointments. A model where physician appointments were allocated based on assessed need following a school nurse encounter was piloted in one school in North Savo in the school year 2024-2025, and the following school year the model was extended to ten schools. We conduct a mixed-method, prospective observational study in schools implementing the new model in 2025-2026. The aim of this study is to provide a basis for further development of the practice model by collecting end-of-year feedback from school nurses (n=16) and school physicians (n=18) in the participating schools. In May 2026, we will invite these professionals to complete an anonymous Webropol survey. Professionals moving to a different position earlier during the school year are also asked to complete the same survey before they leave. In the survey, we assess how the new model has affected their daily work. By September results on staff experiences will be ready. The study will generate evidence to support more purposeful and effective development of school health services.

Alisa Alanne (contact person)
Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio, Finland; Physician and Nursing Services, Health and Social Services Centre, Wellbeing Services County of North Savo, Kuopio, Finland
e-mail: alisa.alanne@uef.fi

Pekka Mäntyselkä
Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio, Finland; Teaching Clinic Osmo, Wellbeing Services County of North Savo, Kuopio, Finland

Silja Kosola
Paediatric Research Center, Helsinki University Hospital, University of Helsinki, Helsinki, Finland; Research Services, Western Uusimaa Wellbeing Services County, Espoo, Finland

Sonja Soininen
Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio, Finland; Teaching Clinic Osmo, Wellbeing Services County of North Savo, Kuopio, Finland

A Longitudinal Case Report of a Neurodivergent Adolescent: School Physician as a Key Coordinator in Multidisciplinary Care

Bernarda Krnić, Vera Musil

Background: Children with early behavioural difficulties, impulsivity, and emotional dysregulation often require long-term, multidisciplinary support. Neurodivergent and twice-exceptional profiles present additional challenges due to the coexistence of high cognitive abilities and developmental or mental health difficulties. The role of the school physician in continuous monitoring and coordination of care is not sufficiently highlighted in the literature.

Methods: We present a longitudinal case report of a boy followed from early school age through adolescence. Data were collected through continuous school health records, collaboration with school staff, and communication with parents and mental health professionals. Interventions included regular monitoring, counselling, and implementation of an individualized educational approach.

Results: The patient initially presented with impulsivity, hyperactivity, and behavioural difficulties requiring support from a social pedagogue. Following parental divorce and a period of living in a permissive family environment, he developed obesity and depressive symptoms with suicidal ideation, requiring psychiatric intervention and antidepressant therapy. After transitioning to a more structured paternal environment, improvements were observed in physical health and academic performance, although interpersonal conflicts persisted. The patient demonstrated a twice-exceptional profile, with high cognitive abilities alongside social and behavioural challenges. Continuous involvement of the school physician enabled early recognition of risks, coordination of care, and support in the educational setting.

Conclusions: This case highlights the importance of the school physician as a key coordinating figure in the longitudinal care of neurodivergent, twice-exceptional students. Clear role delineation, collaboration with mental health services, and support for both family and school are essential to avoid role overlap while ensuring comprehensive care.

Bernarda Krnić (contact person)
Institute of Public Health of Zagrebačka County, Zaprešić, Croatia
e-mail: bernarda.krnic@zzjz-zz.hr

Vera Musil
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia

Integrating Children's Perspectives into Routine Youth Health Assessments: A Co-design Approach with Dutch 9–12-year-olds

Bianca Fortuin, Mai Chin A Paw, Mia Kösters, Mariëtte Hoogsteder

Background: Children's perspectives are rarely involved in research on improving health care. This study aims to improve routine health assessments in preventive youth health care through co-design with children (9-12 years).

Methods: This participatory study involves three co-design meetings with an estimated three groups of children in three Dutch primary schools taking part (n=75). In session 1, children re-experienced the routine health assessment through role-play as a nurse, parent and child to reflect on their perspectives. In session 2, they evaluated six existing screening and conversation methods. In session 3, children created and presented their ideal routine health assessment.

Results: Children had varying preferences for existing instruments; several were considered suitable; one was deemed suitable only with modifications and some children felt that none were appropriate and that a new instrument was needed. Children further indicated that the overall experience of the routine health assessment, was shaped more by having an attractive, child-friendly, and safe environment, to help children feel comfortable rather than the specific instrument being used.

Conclusions: These insights can guide youth health care to actively involve children in designing their services, striving for shared decision making and services that are best for children's health and wellbeing.

Bianca Fortuin (contact person)
Department of Preventive Youth Health Care, GGD Flevoland, Lelystad, The Netherlands; University Medical Centre Amsterdam, Amsterdam, The Netherlands; Amsterdam Public Health, Amsterdam, The Netherlands
e-mail: b.fortuin@amsterdamumc.nl

Mai Chin A Paw
University Medical Centre Amsterdam, Amsterdam, The Netherlands

Mia Kösters
GGD Amsterdam, Amsterdam, The Netherlands

Mariëtte Hoogsteder
University Medical Centre Amsterdam, Amsterdam, The Netherlands; Amsterdam Public Health, Amsterdam, The Netherlands

How Are the Parents Doing by the Way?

Manon Leemans, Caroline Kruyt

Parents who use municipal access to youth care services often experience that professionals focus mainly on the child, while their own well-being is overlooked. This was shown in a study of Tranzo, Tilburg University on client-centred youth care access in the municipality of Breda. The aim of this project was to develop an innovation that supports both professionals and parents in initiating conversations about parental well- being. Using a Design Thinking approach, five co-creation sessions were organized with parents with lived experience and youth care professionals. Together, they went through the phases of gaining insights, defining the problem, generating ideas, developing a prototype conversation tool about Parental Well-being. This tool was tested within municipal youth care access services and related settings. Professionals used the tool in conversations with parents. The evaluation included questionnaires, observations, feedback conversations, and written input from professionals and parents. Results informed further development as well as an implementation and dissemination plan. The final tool, based on the NJi publication Parental Well-being, consists of questions addressing different aspects of parental well-being, with parents taking the lead in choosing which topics to discuss. Initial experiences are positive: parents report feeling more acknowledged.

Manon Leemans
Tilburg University, Tilburg, The Netherlands; GGD West-Brabant, Geertruidenberg, The Netherlands

Caroline Kruyt (contact person)
Tilburg University, Tilburg, The Netherlands; GGD West-Brabant, Geertruidenberg, The Netherlands
e-mail: c.kruyt@ggdwestbrabant.nl

School Nurse as a Supporter of Families and Community: Piloting Parent-Focused Educational Activities

Eve Viilma, Janne Roosnupp Kõlamets

The role of the school nurse is often primarily associated with supporting student health, but it can be expanded to include supporting parents and the wider community. This pilot initiative describes parent-focused educational activities coordinated by a school nurse during the current academic year. The school nurse delivered lectures independently or invited external specialists to provide training for parents. Topics included, for example, mental health vitamins, adolescent development, nicotine products. Sessions were conducted both on-site at school and online via Zoom to improve accessibility and participation. As this was a pilot initiative, no systematic outcome data were collected. The initiative aligns with the goals of Republic of Estonia Social Insurance Board, which is launching the Parenting Theme Year in 2026, aimed not only at parents but at the whole society, including employers, teachers, neighbours, and specialists. Strengthening parenting skills helps create a safer, more supportive, and stable environment for children, supporting their mental health, development, and coping skills. The results of this academic year suggest the approach is feasible, and continuation of the activities in the future is considered possible.

Eve Viilma (contact person)
Tallinn School Health Foundation, Tallinn, Estonia
e-mail: eve.viilma@kth.ee

Janne Roosnupp Kõlamets
Tallinn School Health Foundation, Tallinn, Estonia

A Predictive Model for the Relationship Between Health Behaviours and Academic Performance in Adolescents

Nimet Genç Çelik, Eylem Şerife Kalkan, Ela Naz Gedik, İpek Vatan, Eli Naz Eyvaz, Sinem Akgül

Adolescence is a critical developmental period during which health behaviours can significantly influence cognitive functioning and academic outcomes. This study aimed to develop a predictive model examining the relationship between key health behaviours and academic performance, focusing particularly on mathematics grade. A cross-sectional study was conducted among 204 high school students (14-18 years) in grades 9-12. Data on sleep duration, breakfast frequency, physical activity, screen time, and risky health behaviours were collected using a structured questionnaire and the validated Risky Health Behaviours Scale (RHBS). Academic performance data (grade point average and mathematics grade) were obtained from official school records. Health variables were ordinally coded and used to train a linear regression-based predictive model. There was a negative correlation between RHBS and grade point average ($r = -0.212$, $p = 0.002$). Longer sleep duration independently predicted higher mathematics grade ($\beta = 0.187$, $p = 0.008$), whereas daily screen time was the strongest negative predictor of mathematics grade ($\beta = -0.275$, $p < 0.001$). The trained model was integrated into a web-based monitoring system that generates individualized risk alerts and behavioural feedback. These findings demonstrate the feasibility of translating data-driven predictive modelling into practical digital tools that provide personalized risk alerts and behavioural guidance to support adolescents' academic performance.

Nimet Genç Çelik
Yavuz Sultan Selim Anatolian High School, Ankara, Türkiye

Eylem Şerife Kalkan (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: eylemkalkan@hacettepe.edu.tr

Ela Naz Gedik
Yavuz Sultan Selim Anatolian High School, Ankara, Türkiye

İpek Vatan
Yavuz Sultan Selim Anatolian High School, Ankara, Türkiye

Elif Naz Eyvaz
Yavuz Sultan Selim Anatolian High School, Ankara, Türkiye

Sinem Akgül
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Developing Slovenian 24-hour Movement Behaviour Guidelines for Children and Adolescents

Gregor Jurak, Shawnda A. Morrison, Maroje Sorić, Bernarda Vogrin, Polonca Truden Dobrin, Gregor Starc

The 24-hour movement behaviour (24-HMB) paradigm integrates physical activity, sedentary behaviour, and sleep. Despite Slovenian youth meeting WHO physical activity recommendations, fitness levels have declined, particularly after the COVID-19 pandemic. This highlights the need for tailored national guidelines to restore Slovenia's historically high health standards. This study employs a Twin-Panel Delphi Method to develop specific national guidelines, informed by desktop research, and a survey of professional counselling practices among physical education teachers, doctors, and kinesiologists, and other health professionals. Two survey rounds will occur between April and May 2026. In Round 1, experts will evaluate the global 24-HMB standards against Slovenia's unique fitness data and current advisory practices to determine relevant contextual national settings and enhancements. In Round 2, participants will review and refine draft national guidelines for children and youth based on consolidated feedback from the initial blinded stage. The project team will then finalize the national recommendations by analysing qualitative insights to ensure professional consensus. This structured approach aims to provide an advanced framework for professional counselling, ensuring that interventions for Slovenian children and adolescents are both evidence-based and contextually relevant.

Gregor Jurak (contact person)
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia
e-mail: gregor.jurak@fsp.uni-lj.si

Shawnda A. Morrison
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Maroje Sorić
Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia;
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Bernarda Vogrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia;
Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia;
Faculty of Medicine, University of Maribor, Maribor, Slovenia

Polonca Truden Dobrin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Gregor Starc
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Teenage Pregnancy and School Based Prevention Strategies for Adolescents

Rakoczi Ildiko, Gebrine Eles Krisztina, Major Gyöngyi, Nadasdi Kristof Zsolt, Balazs Peter

Background: Globally, the estimated live birth rate per 1,000 women aged 15–19 is 39 but 16.69 in Hungary.

Methods: We conducted our questionnaire survey in Nyiregyhaza/Hungary between October 1, 2019, and March 31, 2021, as well as May 1, 2021, and December 31, 2022. The total sample size was 2,526, of which 70 respondents were aged ≤18 years. SPSS v.31 was used for statistical analysis at $p < 0.05$ significance level and the Phi coefficient for measuring correlation.

Results: Out of 70 pregnant women 37 smoked tobacco together with their partners in 44 cases. Significant correlation was found between the partner's smoking status and that of the respondent ($p=0.00$), with a Phi coefficient of 0.459. While 68 women were aware of the harmful effects of smoking, 65 realized dangers of passive smoking too. Pregnancies were planned in 90.0% over 18, but only 28.6% in our sample.

Conclusions: Our findings underscore the critical need for tailored sexual and reproductive health education. Thus, improving access to information on contraception and sexually transmitted diseases is essential for supporting adolescent health and reducing unplanned pregnancies.

Rakoczi Ildiko (contact person)
Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary
e-mail: rakoczi.ildiko@etk.unideb.hu

Gebrine Eles Krisztina
Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Major Gyöngyi
Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Nadasdi Kristof Zsolt
Faculty of Health Sciences, University of Debrecen, Debrecen, Hungary

Balazs Peter
Institute of Public Health, Semmelweis University, Budapest, Hungary

"Why Can't I Get a Good Grade, But I Study a Lot?" - A Presentation to the Processing Algorithm and Cognitive-behavioural Techniques in a Girl with Separation and Social Anxiety Symptoms – Case Report

Jelica Perasović

Introduction: A child's failure at school is often an objective indicator to a parent that the child has learning difficulties, while indicators of emotional difficulties often go unrecognized. The mother is coming with her 10.3-year-old girl because of notable imbalance between her effort in studying and her school success. Goal is to present the assessment of the child's difficulties, the importance of multidisciplinary treatment and the results and the cognitive-behavioural approach to a child with certain anxiety-type difficulties and impaired family and social functioning.

Methods: Initial assessment of the child, clinical interview with both parent and child, multidisciplinary treatment, adoption of teaching methods, cognitive-behavioural treatment (CBT) of separation and social anxiety symptoms.

Results: Continuation of education with an individualized approach due to dyslexia, dysgraphia, stuttering, disharmonious intellectual profile from extremely low, low to average results; inclusion in speech therapy treatment due to stuttering; inclusion in the Association for Children and Youth with Writing and Learning Difficulties due to dyslexia and dysgraphia; reduction of symptoms of separation and social anxiety; better school, social and family functioning.

Conclusions: Anxiety disorders are one of the most common mental disorders when it comes to children and adolescents. The core characteristic of these disorders is a level of anxiety and fears that is not appropriate for that stage of development in a child which leads to anxiety disorders having a significant impact on disrupting daily activities of a child. Detection of learning difficulties and anxiety symptoms in children and adolescents, a multidisciplinary approach and inclusion in appropriate treatments can reduce their negative impact on the educational, social and family functioning of children and young people. CBT has proven useful in reducing anxiety symptoms in children and adolescents.

Jelica Perasović (contact person)
Teaching Institute for Public Health, Split-Dalmatia County, Split, Croatia
e-mail: jelica.perasovic@nzjz-split.com

Reform of Student Healthcare Services

Johanna Jahnukainen, Marke Hietanen-Peltola

Background: In Finland, compulsory education continues until age 18, ensuring all young people are enrolled in secondary education and entitled to student healthcare services. These services monitor and support students physical and mental health, well-being and study ability through periodic check-ups. Concurrently, all 18-year-old men are subject to military conscription, while women may apply for voluntary military service. Historically, those entering military service have undergone a separate pre-service medical examination.

Current status: Student healthcare check-ups have not reached the entire age cohort comprehensively. Although providing check-ups is statutory, participation is voluntary; in the 2024–2025 academic year, only 64% of first-year students met with a nurse, and 37% of second-year students saw a doctor. Furthermore, approximately 10% of the 24,000 conscripts who began service in January 2025 discontinued prematurely, primarily due to mental health, coping, adjustment, or substance abuse issues.

Reform: Starting in 2027, student healthcare check-ups and Finnish Defence Forces pre-service examinations will be integrated into a single national model. Conducted during the second year of studies (at age 18), this joint examination by a nurse and doctor evaluates the student's health and functional capacity from both an academic and military fitness perspective.

Conclusions: This integrated model aims to significantly increase the coverage of health examinations. The Finnish Institute for Health and Welfare (THL) will monitor the implementation and collect feedback from both students and healthcare professionals to evaluate the impact of the reform.

Johanna Jahnukainen (contact person)
The Finnish Institute for Health and Welfare, Helsinki, Finland
e-mail: johanna.jahnukainen@thl.fi

Marke Hietanen-Peltola
The Finnish Institute for Health and Welfare, Helsinki, Finland

Trusted Digital Health Platforms Supporting Preventive Decision-Making in European School Health Care: The Estonian Experience and Transferable Solutions

Külli Reinsali

Background: School health care plays a central role in promoting the physical and mental well-being of children and adolescents and in delivering preventive medicine. Increasing mental health problems, unhealthy lifestyle behaviours, vaccine hesitancy, and limited resources place growing demands on school nurses. Trusted digital health platforms provide accessible, evidence-based, and multilingual resources that can significantly support preventive work when seamlessly integrated into everyday school health care practice.

Aim: To describe how trusted digital health platforms support preventive decision-making and early interventions in school health care, highlighting practical experience from Estonia and its potential relevance for school health systems across Europe.

Methods: This poster is based on the practical experience of Estonian school nurses who use national and international digital health resources to support preventive counselling and health promotion. School nurses guide students to trusted platforms addressing mental health (e.g. national mental health support portals), nutrition and physical activity (e.g. digital nutrition tools), public health and vaccination information (resources provided by the National Institute for Health Development and official vaccination platforms), as well as recommendations from the World Health Organization (WHO). These digital solutions are used in combination with face-to-face consultations, supporting structured assessment, individualized health education, and follow-up activities.

Results: Practical experience indicates that the use of digital health platforms improves access to high-quality health information, facilitates early identification of health concerns – particularly related to mental well-being, stress, lifestyle behaviours, and vaccination attitudes – and promotes more consistent preventive counselling across schools. Students perceive these platforms as accessible and supportive. At the same time, school nurses are able to focus more on students with greater support needs, while encouraging students' self-management and responsibility for their own health.

Conclusions: Trusted digital health platforms complement the professional judgement of school nurses and strength-

en the preventive role of school health care. The Estonian experience demonstrates that integrating such platforms into routine practice improves health literacy, supports timely health interventions and optimizes the use of limited resources. This model offers transferable solutions for other European countries, including the sharing of standardized digital counselling tools, multilingual platform adaptations, and collaborative tools for school nurse networks, contributing to stronger cooperation in European school health care.

Külli Reinsali (contact person)
Tallinn School Health Care Foundation, Tallinn, Estonia
e-mail: kylli.reinsalu@kth.ee

Nursing Leadership at Foundation for School Health Care in Tallinn: Benefits for Nurses and Students

Pillemai Pihlak, Laura Somelar

School nurses often work independently and face demanding situations, heavy workloads, limited feedback, and insufficient professional support, increasing the risk of burnout and potentially compromising service continuity and quality of care for students. Nursing leadership plays a central role in shaping work culture, promoting staff well-being, and supporting consistent, safe, and student-centred school health services. The aim of the presentation is to describe the role of a leading school nurse in providing emotional and professional support to school nurses and to outline a structured, practice-based support approach for burnout prevention and team stability. This descriptive practice-based work is grounded in professional experience at the Foundation for School Health Care in Tallinn and integrates the perspectives of a mental health nurse and a leading school nurse, informed by relevant scientific literature. The approach highlights visible, accessible, and supportive leadership grounded in care, including regular one-to-one meetings, early recognition of fatigue, mental health consultations, team meetings and case discussions, unified care principles, training opportunities, and mentorship. Based on professional experience and reflective practice, these approaches support job satisfaction, team cohesion, professional resilience, and consistent care delivery. Supportive nursing leadership is a key factor in sustaining school health services and high-quality care.

Pillemai Pihlak
Foundation for School Health Care, Tallinn, Estonia

Laura Somelar (contact person)
Foundation for School Health Care, Tallinn, Estonia
e-mail: laura.somelar@kth.ee

Violence in Intimate Relationships among University Students: A Ten-Year Perspective

Matea Matić Ličanin, Jelena Šakić Radetić, Tomislav Kurevija, Ivana Slišković, Martina Rikert, Antonija Matić, Dunja Damjanović, Lea Sarić, Maja Miškulin, Ivan Miškulin

Intimate partner violence among young people remains a major public health problem, with only slow progress in reduction globally, while changes in partner communication have enabled new forms of psychological control and digital abuse. The aim of this study is to repeat a survey conducted among students of the University of Osijek in 2015 and compare current findings with baseline data collected ten years earlier. A repeated cross-sectional study will be conducted using an anonymous self-administered questionnaire comparable to the original instrument, including questions on sociodemographic characteristics, attitudes toward intimate partner violence, and previous experiences of psychological, physical, and sexual violence. The baseline study included 880 students and showed generally appropriate attitudes toward intimate partner violence; however, experiences of violence were relatively frequent, with psychological violence being the most common form. More appropriate attitudes were observed among female students, students of biomedicine and natural sciences, and those who had not repeated a study year. The repeated survey may provide insight into temporal changes and support the development of targeted preventive interventions in the student population.

Matea Matić Ličanin (contact person)
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia
e-mail: mamatic@mefos.hr

Jelena Šakić Radetić
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Tomislav Kurevija
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Ivana Slišković
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Martina Rikert
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Antonija Matić
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Dunja Damjanović
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Lea Sarić
Faculty of Medicine, University of Osijek, Osijek, Croatia;
Primary Healthcare Centre Osijek, Osijek, Croatia

Maja Miškulin
Faculty of Medicine, University of Osijek, Osijek, Croatia

Ivan Miškulin
Faculty of Medicine, University of Osijek, Osijek, Croatia

Impact of the COVID-19 Pandemic on Sleep Quality among Students of Josip Juraj Strossmayer University of Osijek

Matea Matić Ličanin, Ivana Kotromanović Šimić, Darko Kotromanović, Nika Lovrinčević Pavlović, Barbara Šimatić, Ana Jurkić, Vedrana Švedl Blažeka, Vera Musil, Jelena Kovačević, Miškulin Ivan

Sleep quality is an important determinant of student health and academic functioning. The aim of this study was to compare sleep quality among students of Josip Juraj Strossmayer University of Osijek before the COVID-19 pandemic and during the pandemic. A comparative repeated cross-sectional study was based on two surveys conducted in 2016 and 2022. The 2022 survey used an anonymous questionnaire including sociodemographic data, COVID-19-related variables, and core sleep-quality items on sleep timing, sleep latency, sleep duration, sleep disturbances, daytime dysfunction, and self-rated sleep quality. The same core questions enabled comparison with the pre-pandemic survey. The analysis will compare sleep patterns and overall sleep quality between the two periods and assess whether the pandemic was associated with poorer sleep indicators. This topic is relevant today because many current graduates studied during the pandemic and altered sleep quality from that period may be linked to impaired mental health, which may adversely affect later academic outcomes and wellbeing. Taken together, these circumstances may increase the need for psychological support in the student population, while the available support capacities do not always adequately meet these needs.

Matea Matić Ličanin (contact person)
Faculty of Medicine, University of Osijek, Osijek, Croatia; Primary Healthcare Centre Osijek, Osijek, Croatia
e-mail: mamatic@mefos.hr

Ivana Kotromanović Šimić
Faculty of Medicine, University of Osijek, Osijek, Croatia

Darko Kotromanović
Faculty of Medicine, University of Osijek, Osijek, Croatia; University Medical Centre Osijek, Osijek, Croatia

Nika Lovrinčević Pavlović
Faculty of Medicine, University of Osijek, Osijek, Croatia

Barbara Šimatić
Faculty of Medicine, University of Osijek, Osijek, Croatia; Primary Healthcare Centre Osijek, Osijek, Croatia

Ana Jurkić
National Memorial Hospital of Vukovar, Vukovar, Croatia

Vedrana Švedl Blažeka
Faculty of Medicine, University of Osijek, Osijek, Croatia

Vera Musil
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia

Jelena Kovačević
Faculty of Medicine, University of Osijek, Osijek, Croatia; Institute of Emergency Medicine of the Brod-Posavina County, Slavonski Brod, Croatia

Ivan Miškulin
Faculty of Medicine, University of Osijek, Osijek, Croatia

A Critical Policy Analysis of the National Sexual Health Strategy for Malta and Gozo

Matthew Baldacchino, Kirstin Mitchell

Malta's Sexual Health Strategy exists within a post-colonial, Catholic context, and is shaped by Malta's microstate behaviours. While positive developments exist, there remains a lack of community- and stakeholder-driven input, and little state accountability on its implementation. This study aimed to analyse the Strategy against the views of professional stakeholders in Malta using two RQs: To what extent does the Strategy reflect international standards and best practices in policy? How do stakeholders perceive the Strategy's theoretical effectiveness and potential implementation? A multi-paradigm qualitative mixed-methods analysis was performed, alongside thematic analysis of the Strategy and key informant interviews. Kingdon's 'Multiple Streams Framework' and Bacchi's 'What Does the Problem Represent' Approach guided the policy review and interview structure. The Strategy identifies key challenges but is silent on abortion, migrant health, and education (selectively framing SRHR). While improving on earlier iterations, the Strategy fails to consider rights-based approaches, including intersectionality. Compared with more expansive definitions and national policies, Malta lacks research to underpin recommendations, actionable measures with clear responsible parties, and accountability frameworks. Notably, participant-led policymaking and participatory approaches are missing. Based on the findings, we recommend future iterations of the Strategy push for legislative change, incorporate participatory action, and prioritise reinvigorated policymaking.

Matthew Baldacchino (contact person)
University of Glasgow, Glasgow, Scotland
e-mail: matthewbaldacchino.mb@gmail.com

Kirstin Mitchell
School of Health and Wellbeing, University of Glasgow, Glasgow, Scotland

Early Childhood Development Policy and Systems across Europe

Emma Little, Kelli Kennedy, Amy Barnes, Paolina Marone, Vera Rangelova, Aleksandra Jovic, Michelle Black

Background: Coherent early childhood policies are essential, as the early years fundamentally shape lifelong health and economic success. Evidence on child development data and policies across Europe is limited. This study provides an overview of multisectoral Early Childhood Development (ECD) policies in 30 European countries, focusing on primary health services of early detection, intervention, and parenting support.

Methods: A mixed-methods evidence synthesis including: a rapid review of academic and grey literature; a bespoke survey distributed to policy stakeholders; and select stakeholder interviews to explore promising practices.

Results: Cross-sector co-ordination for ECD policy is lacking, with 33% of countries adopting a multisectoral approach. While most countries offer developmental monitoring, less than 25% use evidence-based tools or have publicly available data on uptake. Information on children who are developmentally on track, and those experiencing developmental difficulties, is sparse, with available data limited to a single country. A national Early Childhood Intervention service is available in 17% of countries. Most countries provide a universal parenting offer but reach and breadth of services vary.

Conclusions: A fragmented policy landscape, lack of systematic developmental monitoring and surveillance systems limit effective policy decisions. By investing in multisectoral approaches to ECD, learning from promising practices, Europe can unlock the full potential of its youngest citizens, fostering long-term wellbeing and economic growth.

Emma Little
Yorkshire and Humber School of Public Health, Leeds, UK; Department of Health Sciences, University of York, York, UK

Kelli Kennedy
Department of Health Sciences, University of York, York, UK

Amy Barnes
Department of Health Sciences, University of York, York, UK

Paolina Marone
UNICEF Regional Office for Europe and Central Asia, Geneva, Switzerland

Vera Rangelova
UNICEF Regional Office for Europe and Central Asia, Geneva, Switzerland

Aleksandra Jovic
UNICEF Regional Office for Europe and Central Asia, Geneva, Switzerland

Michelle Black (contact person)
Department of Public Health Policy and Systems, University of Liverpool, Liverpool, UK
e-mail: michelle.black@liverpool.ac.uk

How Adult Are Young Adults? – A Clinical Adolescent Psychiatry Perspective

Nadja Hriberšek

Young adulthood represents a prolonged and heterogeneous transitional period rather than a clearly defined state of full maturity. From the perspective of clinical adolescent psychiatry, this phase is characterized by ongoing neurobiological, psychological, and social development, alongside increased vulnerability to the onset of mental disorders. Although individuals reach chronological adulthood, many continue to exhibit adolescent dynamics, such as identity instability, conflicts, addictions, and difficulties in assuming adult roles and responsibilities. These patterns often stem from earlier developmental processes and are shaped by both early vulnerabilities and broader social factors. The transition into adulthood is further complicated by challenges in key life domains such as education, employment, and romantic relationships, which may be disrupted or delayed, particularly in individuals with mental health difficulties. At the same time, developmental continuity means that early behavioural, emotional, and regulatory patterns may persist into adulthood and influence functioning and relationships. With this contribution, I aim to present the vulnerabilities of the transition from adolescence to early adulthood, based on clinical experience and a review of recent research in this field. field.

Nadja Hriberšek (contact person)
University Psychiatric Hospital Ljubljana, Ljubljana, Slovenia
e-mail: hribersek.nadja@gmail.com

Home-schooling - Is It the Best Solution and When?

Nataša Dragaš-Zubalj, Helena Zoretić,
Gordan Zubalj, Simeun Dragaš

The aim of this paper was to present the case of a girl with a mental health disorder, which manifests itself in the form of social anxiety and depression and home-schooling. Anna is a 4th grade elementary school student. She has a twin sister. Both live with their mother in the family home of their mother's parents in a separate apartment. They see their father very rarely. The family is under the supervision of the Croatian Center for Social Work due to Anna's non-attendance at school. Difficulties with attending classes began in the second grade, which the mother associates with the death of her grandfather. At first, they were occasional and were accompanied by her mother's persuasion for Anna to get out of the car and enter school. Then they became frequent despite previous preparations. Absences were occasionally excused by her mother, and occasionally by the paediatrician. Anna was involved in extracurricular activities, which she has also given up in the meantime. At the school's initiative, supervision of the family was initiated and the student was included in the counselling work of a psychologist. The school doctor is aware of the above and comes to the class on the day the student is in school and observes Anna's functioning in class. She does not notice any deviations in her behaviour. Anna comes to school less and less often, which affects her sister, who also begins to miss school. Despite psychotherapy, comprehensive treatment by a child psychiatrist, cooperation between the school and the school doctor with the mother, and an agreement on a gradual return to school, Anna avoids leaving the house at all, so her mother initiates the procedure for home-schooling. The Ministry of Science and Education approves the request by the end of the school year, and the school organizes the implementation. Anna accepts this form of teaching and cooperates. We ask ourselves a number of questions. Is this form of schooling optimal for Anna? Is her mental disorder a reason for home-schooling or the opposite? Will home-schooling further encourage Anna's isolation from her peers? How will isolation affect Anna's mental health? Will Anna have problems returning to school? Have we really helped Anna or just her mother? I conclude that the problem is multi-layered and not just Anna's, but the entire family's. Therefore, it is necessary to include the mother and twin sister in the psychotherapy process at the same time. School is a natural form of learning and growing up, and our goal is to get Anna back to school.

Nataša Dragaš-Zubalj (contact person)
Teaching Institute of Public Health, Primorje-Gorski Kotar County, Rijeka, Croatia; Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia, General Hospital Bar, Stari Bar, Montenegro
e-mail: natasa.dragas-zubalj@zzjzpgz.hr

Helena Zoretić
Teaching Institute of Public Health, Primorje-Gorski Kotar County, Rijeka, Croatia; Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia, General Hospital Bar, Stari Bar, Montenegro

Gordan Zubalj
Teaching Institute of Public Health, Primorje-Gorski Kotar County, Rijeka, Croatia; Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia, General Hospital Bar, Stari Bar, Montenegro

Simeun Dragaš
Teaching Institute of Public Health, Primorje-Gorski Kotar County, Rijeka, Croatia; Faculty of Kinesiology, University of Zagreb, Zagreb, Croatia, General Hospital Bar, Stari Bar, Montenegro

Comparative Analysis of Health Complaints and Visits to the School Nurse in a Mainstream School and a School for Students with Special Educational Needs

Irina Serenok, Olga Sizõi

School nurses play a key role in supporting student health, but it is not clear how their workload and students' needs differ between school types. This study compared how often and why students visited the school nurse in a mainstream school and a school for students with special educational needs (SEN) during the 2023/2024 and 2024/2025 academic years. Data were collected from the nurses' official visit logs, recording each student's reason for coming. The study included students from Tallinn Õismäe Russian Lyceum (mainstream school) and Tallinn Lasnamäe Basic School (SEN school). The results showed that SEN students visited the nurse much more frequently (an average of 1.4–1.8 visits per student per year) compared to mainstream students (0.7 visits per student). The reasons for visits also differed. Mainstream students most often came with headaches and stomach aches, while SEN students had more respiratory symptoms. Notably, visits for mental health concerns in the SEN school increased sharply, from 1.7% to 6.6% over the two years. In conclusion, students with special educational needs have more frequent and diverse health concerns, requiring a higher workload for school nurses. These findings highlight the need for differentiated school health services, with SEN schools requiring more staff, specialized mental health competencies, and closer collaboration with support professionals.

Irina Serenok
Foundation for School Health Care, Tallinn, Estonia

Olga Sizõi (contact person)
Foundation for School Health Care, Tallinn, Estonia
e-mail: olga.sizoi@kth.ee

Visual Conditions Among Orphaned Children in Togo: Improving Early Detection in Vulnerable Children Through Dutch Youth Preventive Healthcare Expertise

Cécile SchatSavy, Paula van Dommelen

Visual impairment can hinder children's development, particularly in Togolese orphanages where access to preventive healthcare is limited. This study aimed to determine the prevalence of visual conditions among Togolese orphaned children and to identify opportunities to strengthen early detection. In total, 673 children from 17 orphanages were examined by a medical team led by a Dutch youth healthcare professional in collaboration with Togolese staff. Visual acuity was assessed using LEA symbols and Echarts with monocular occlusion, combined with structured clinical inspection of the anterior eye structures, possible strabismus, and eyeball movements. Visual conditions were identified in 109 children (16.2%), of whom 61 (56.0%) were referred for ophthalmological evaluation. Among these referred children, 73 ocular conditions were diagnosed, most commonly ametropia (54.8%), for which corrective lenses were provided. Conjunctival disorders (17.8%) and glaucoma (12.3%) were also observed. Many affected children (63.9%) had additional health problems, underscoring the need for integrated preventive care. The findings show that basic screening methods are feasible and effective yet highlight unmet needs for systematic eye health programmes in orphanage settings. Through collaboration with Togolese partners and Dutch expertise in youth preventive healthcare, the team aims to improve early detection and reduce preventable visual impairment among vulnerable children.

Cécile SchatSavy
Children's Aid Association Togo, Zoetermeer, The Netherlands

Paula van Dommelen (contact person)
Expertise group Child Health, Netherlands Organisation for Applied Scientific Research (TNO), Leiden, The Netherlands
e-mail: paula.vandommelen@tno.nl

Care for the Wellbeing of Vulnerable Children, Adolescents, and Young People in Slovenia

Polonca Truden-Dobrin, Gregor Jurak, Primož Kotnik, Evgen Benedik, Simona Klemenčič, Valentina Stefanova Kralj, Daša Kokole, Nina Perger, Tanja Kamin, Bernarda Vogrin, Tjaša Kotnik, Sonja Paulin, Jerneja Kožar, Kaja Krajc, Manca Glušič, Sonja Dravec

Adolescent overweight and obesity represent an important public health challenge in Slovenia. Building on previous national research initiatives, this project aimed to strengthen the capacity of key sectors supporting adolescents with overweight and obesity and to improve early detection and treatment decision-making for those aged 15–19. The project was implemented in collaboration between the NIPH Slovenia and the UL FSS. A Knowledge, Attitudes and Practices (KAP) assessment was conducted among healthcare professionals, psychosocial workers, and other stakeholders. An online survey examined existing training and educational programmes related to childhood and adolescent obesity. The KAP assessment identified key gaps in knowledge, coordination, and service provision for adolescents with overweight and obesity. Stakeholders reported a need for improved training and cross-sector collaboration in order to reduce stigma and support adolescents in life-style change. The results informed the development of tailored training modules addressing prevention, early detection, and management of obesity. Pilot training workshops were then delivered across health, social, education, NGO, and community sectors and subsequently evaluated. The project strengthened professional capacities and provided practical training tools to improve prevention and management of adolescent overweight and obesity in Slovenia. The results support further development of coordinated approaches to promote healthy lifestyles among young people.

Polonca Truden Dobrin (contact person)
National Institute of Public Health (NIJZ), Ljubljana, Slovenia
e-mail: polonca.truden@nijz.si

Gregor Jurak
Faculty of Sports, University of Ljubljana, Ljubljana, Slovenia

Primož Kotnik
Department of Paediatric Endocrinology, Diabetes and Metabolism, Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Evgen Benedik
Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia; Biotechnical faculty, University of Ljubljana, Ljubljana, Slovenia

Simona Klemenčič
Department of Paediatric Endocrinology, Diabetes and Metabolic Disease, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Valentina Stefanova Kralj
Division of Paediatrics, University Medical Centre Ljubljana, Ljubljana, Slovenia

Daša Kokole
WHO Regional Office for Europe, Ljubljana, Slovenia

Nina Perger
Faculty of Social Sciences, University of Ljubljana, Ljubljana, Slovenia

Tanja Kamin
Faculty of Social Sciences, University of Ljubljana, Ljubljana, Slovenia

Bernarda Vogrin
Institute of Adolescent Medicine and Preventive Paediatrics, Faculty of Medicine, University of Maribor, Maribor, Slovenia; National Institute of Public Health (NIJZ), Ljubljana, Slovenia; Pedenjped d.o.o., Lenart v Slovenskih Goricah, Slovenia

Tjaša Kotnik
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Sonja Paulin
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Jerneja Kožar
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Kaja Krajc
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Manca Glušič
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Sonja Dravec
National Institute of Public Health (NIJZ), Ljubljana, Slovenia

Early Preventive Sexual Health Education in Primary Schools: The Role of the School Nurse

Natalja Korobkova, Sandra Matjash

Early childhood is a critical period for developing body awareness, autonomy, and understanding of personal boundaries. In Estonia, structured sexual health education is mainly introduced in lower secondary school, leaving a preventive gap in the early school years. This study aimed to assess primary school students' baseline knowledge of body awareness and to introduce an age-appropriate preventive education program. A descriptive cross-sectional assessment was conducted among 99 students in grades 1–3 in March 2026 during school nurse-led sessions using structured verbal questions. The intervention addressed body boundaries, personal rights, safe and unsafe secrets, trusted adults, risky situations, and help-seeking skills. Results showed limited baseline knowledge: only 4% of students correctly identified male genital organs and 1% identified female genital organs, while about 10% reported previous exposure to pornographic content. These findings indicate substantial gaps in early body-related knowledge. School nurses can play an important role in delivering developmentally appropriate preventive education that strengthens children's protective skills and supports child safeguarding in the school environment.

Natalja Korobkova (contact person)
Foundation for School Health Care, Tallinn, Estonia
e-mail: natalja.korobkova@kth.ee

Sandra Matjash
Foundation for School Health Care, Tallinn, Estonia

Online Health Information Seeking

Vera Musil, Matea Vukoje

Introduction: The Internet has rapidly established to grow into a default information source about medical condition. The study aims to examine online searching for health information by parents of children diagnosed with malignant diseases.

Methods: The qualitative research was conducted over three months and comprised 50 respondents. Data were collected by questionnaire Public Internet Use for Health Information Searching.

Results: More than a half of the respondents explored Internet for health information. Respondents with confidence in such resources attributes were mothers, unemployed, secondary education, children on maintenance therapy. Attributes for those who were more likely to use it without checking with health care professionals were mothers, secondary education, employed, children on active treatment. Satisfaction with information found online compared to obtained from health care professionals was significantly lower. Correlation between regularity of internet search and satisfaction with information obtained from health care professionals was not significant.

Conclusions: Although the results suggest that dissatisfied parents may have different approaches to information, it is crucial to ensure proactive communication from healthcare professionals. Parent education must be focused on trusted sources to avoid misinformation and ensure safe care for children.

Vera Musil (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia; Institute of Public Health of Zagrebačka County, Zaprešić, Croatia
e-mail: vmusil@snz.hr

Matea Vukoje
Department of Paediatric Haematology and Oncology, Division of Paediatrics, University Medical Centre Zagreb, Zagreb, Croatia

Human Papillomavirus Vaccination: From Program Introduction to Current Outcomes

Vesna Bilić-Kirin, Lucija Eškutić

Background: HPV vaccination is an essential public health measure to prevent HPV-related diseases and cancers. This study presents the efforts of the School Medicine Service at the Teaching Institute of Public Health of Osijek-Baranja County and evaluates HPV vaccination coverage from program inception to the present.

Methods: HPV vaccination was introduced in 2016 for eighth-grade students and is administered by the School Medicine Service. Since 2023, the program includes children from the fifth grade. Promotion involved individualized consultations with parents and students, digital appointment scheduling, and electronic educational materials. A vaccination point was established on the university campus to facilitate access for students and young adults.

Results: Coverage increased steadily. Among eighth-grade students, vaccination rose from 15% in 2017/2018 to 65% in 2023/2024. Coverage was 20% for seventh-grade students, 19% for sixth grade students, and 28% for fifth-grade students. A total of 591 young adults were vaccinated at the campus point.

Conclusions: The sustained increase demonstrates the effectiveness of proactive, school-based strategies with continuous education and accessible services. Collaboration between healthcare professionals, parents, and schools builds trust and improves acceptance. Campus-based vaccination further enhances uptake among young adults and provides a replicable model for other regions.

Vesna Bilić-Kirin (contact person)
Teaching Public Health Institute of Osijek-Baranja County, Osijek, Croatia; Faculty of Medicine, University of Osijek, Osijek, Croatia
e-mail: vesna.bilic-kirin@zzjzosijek.hr

Lucija Eškutić
Teaching Public Health Institute of Osijek-Baranja County, Osijek, Croatia

Education Program

Vlatka Gabrić

Introduction: Based on the Regulations on Primary and Secondary Education of Students with Developmental Disabilities (Official Gazette 24/15), students who have difficulties in mastering the regular school curriculum may initiate a procedure for determining an appropriate education program. The aim of the paper is to show the number of students who were assigned an appropriate form of education in the 2023/24 school year.

Methods: The respondents are students from the first to the eighth grade of the elementary schools Kraljice Jelene-Solin, Vjekoslav Paraća-Solin and Petar Kružića-Klis in the 2023/24 school year. By reviewing preventive health records, it was determined which students were assigned an appropriate form of education.

Results: In the 2023/24 school year, 1,787 students attended these three elementary schools. The decision determining the appropriate educational program was given to 42 students (2.35%). The regular program with individualized procedures was assigned to 15 students (35.71%). The regular program with content adjustment and individualized procedures was assigned to 22 students (52.38%). The special program with individualized procedures was assigned to 5 students (11.9%).

Conclusions: Slightly more than 2% of students had their education changed, which allowed students to receive education in accordance with their abilities.

Vlatka Gabrić (contact person)
Teaching Institute of Public Health of Split-Dalmatia County, Split, Croatia
e-mail: vlatka.gabric@nzje-split.hr

Students' Attitudes and Knowledge About the Connection Between Cancer and Smoking, Considering the Level and Type of Study

Zrinka Puharić, Nina Petričević, Ivan Knežević, Ljiljana Đermanović, Filip Puharić

Introduction: Lung cancer is the most common cause of death from cancer. Smoking is the strongest factor that contributes to the development of cancer.

Methods: The study examines students' attitudes and knowledge about the connection between cancer and smoking, considering the level and type of study.

Results: "Smoking causes lung cancer" (χ 2, P = 0.019), biomedicine and health and social sciences have the largest difference in the answers "I agree" and "I completely agree". Biotechnical sciences were divided into "I completely disagree" and "I completely agree". "Lung cancer patients are mostly smokers" (χ 2, P = 0.004) the largest number of students in the arts are undecided. Biotechnical sciences were distributed "I completely disagree" to "I completely agree", while in biomedicine and health and social sciences, the largest differences are in "I agree" and "I completely agree". The strongest correlation was found "Smoking is the most important factor" (r = 0.149): 116 (35.8%) respondents agree, 27 (8.4%) disagree, and 39 (12%) have no opinion at the undergraduate level. At the graduate level, 94 (29%) agree, 9 (3.7%) disagree, and 30 (9.3%) have no opinion. The smallest correlation is with "Cigarette smoking and e-cigarettes are equally harmful" (r = 0.000). At the undergraduate level 107 (33%) agree, 27 (8.3%) disagree, and 48 (14.8%) have no opinion. At the graduate level 83 (25.6%) agree, 22 (6.8%) disagree, and 31 (9.6%) have no opinion.

Conclusions: There is no statistically significant difference or correlation in attitudes and knowledge between different study levels and type of study.

Zrinka Puharić (contact person)
University of Applied Sciences, Bjelovar, Croatia
e-mail: zpuharic@vub.hr

Nina Petričević
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Ivan Knežević
Emergency Department, Osijek, Croatia

Ljiljana Đermanović
Institute of Public Health Bjelovar-Bilogora County, Bjelovar, Croatia

Filip Puharić
Institute of Public Health Bjelovar-Bilogora County, Bjelovar, Croatia

Case Presentation: Miller Fisher Syndrome in an Adolescent

Alenka Stepišnik, Biljana Živin Filipič, Gregor Jurinčič, Sentilija Delalić, Tanja Loboda

Background: Miller Fisher syndrome (MFS) is a rare variant of Guillain–Barré syndrome, particularly in children, characterized by ophthalmoplegia, ataxia, and areflexia.

Case report: We present a case of a 17-year-old male admitted with distance diplopia, dysarthria, and gait instability. One week before admission, he had experienced symptoms of an upper respiratory tract infection, and human coronavirus HKU1 infection was confirmed. Four weeks earlier, he had had a self-limiting episode of diarrhoea. Neurological examination revealed a broad-based ataxic gait, dysarthria with reduced palatal movement, and absent lower-limb reflexes. No ophthalmoplegia was detected clinically. Brain magnetic resonance imaging and cerebrospinal fluid analysis were unremarkable. Serum testing demonstrated strongly positive anti-GQ1b and anti-GT1a ganglioside antibodies. The patient received intravenous immunoglobulin (IVIg) for five consecutive days. Clinical improvement became evident within a few days of treatment initiation, with gradual normalization of speech and complete resolution of ataxia. Deep tendon reflexes remained absent at discharge and were still absent at the three-month follow-up despite otherwise near-complete neurological recovery.

Conclusions: We report a rare case of MFS in an adolescent with disease-specific antiganglioside antibodies and rapid clinical improvement following early treatment with IVIg. Despite near-complete neurological recovery within three weeks, areflexia persisted at the three-month follow-up.

Alenka Stepišnik (contact person)
Department for Paediatrics, General Hospital Izola, Izola, Slovenia
e-mail: alenka.stepisnik@sb-izola.si

Biljana Živin Filipič
Department for Paediatrics, General Hospital Izola, Izola, Slovenia

Gregor Jurinčič
Department for Paediatrics, General Hospital Izola, Izola, Slovenia

Sentilija Delalić
Department for Neurology, General Hospital Izola, Izola, Slovenia

Tanja Loboda
Department of Child, Adolescent and Developmental Neurology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Common Symptoms, Uncommon Diagnosis: Severe Complications of Acute Bacterial Rhinosinusitis in a Child - Case Report

Alja Lodrant, Daša Zmagaj

Acute bacterial rhinosinusitis is an infection of the paranasal sinuses, most commonly occurring as a complication of viral rhinosinusitis. In children, the most frequent clinical manifestations resemble those of a viral upper respiratory tract infection and include nasal obstruction or congestion, anterior or postnasal discharge, cough, and fever. In contrast, headache and facial pain are less commonly reported. As a result, the initial presentation may be nonspecific, and in some cases, the first clinical signs may already reflect the development of serious complications. Among these, preseptal cellulitis is the most common, followed by postseptal orbital and intracranial complications, including cavernous sinus thrombosis and subperiosteal abscess formation. We present the case of a 12-year-old girl who presented to the emergency department with seemingly common symptoms of fever and headache, which were found to be manifestations of severe complications of acute bacterial rhinosinusitis. These included thrombosis of the left superior ophthalmic vein, left jugular vein, and cavernous sinus, as well as a subperiosteal abscess located above the right sphenoid sinus. We also review acute bacterial rhinosinusitis and its complications in children.

Alja Lodrant (contact person)
General Hospital Slovenj Gradec, Slovenj Gradec, Slovenia; Primary Healthcare Centre Ravne na Koroškem, Ravne na Koroškem, Slovenia
e-mail: alja.lodrant@sb-sg.si

Daša Zmagaj
Primary Healthcare Centre Ravne na Koroškem, Ravne na Koroškem, Slovenia

Occurrence of Arterial Hypertension Among Adolescents and Extensiveness of Risk Factors That Contribute to Its Development

Anja Jovanović, Draženka Todorović Medić

Arterial hypertension is an increasingly recognized health concern among adolescents. The global prevalence of paediatric hypertension has increased from 1.3% in the 1990s to 6.0% in the 2010s, while the cause of primary hypertension still remains unknown despite extensive research. The aim of this study was to assess the occurrence of hypertension and examine the association with lifestyle-related risk factors. A retrospective–prospective study included 50 adolescents aged 13–18 years, divided into a hypertensive group (n=25) and a control group (n=25), matched by age and sex. Data were collected from medical records and a structured questionnaire addressing physical activity, sleep patterns, dietary habits, and substance use. Adolescents with hypertension had a significantly higher body mass index compared to controls ($p<0.001$). They also reported poorer subjective sleep quality ($p=0.035$) and lower levels of physical activity ($p=0.043$). No consistent significant differences were observed in dietary habits. Certain risk behaviours were more frequently reported in the control group, likely reflecting lifestyle modifications following diagnosis in hypertensive adolescents. Increased body weight, reduced physical activity, and impaired sleep quality were identified as key modifiable factors associated with hypertension. Early recognition and targeted preventive strategies may contribute to improved cardiovascular health outcomes in this population.

Anja Jovanović (contact person)
Faculty of Medicine, University of Novi Sad, Novi Sad, Serbia
e-mail: jovanovicanja.mail@gmail.com

Draženka Todorović Medić
Faculty of Medicine, University of Novi Sad, Novi Sad, Serbia; Institute of Child and Youth Health Care Vojvodina, Novi Sad, Serbia

Age-related Changes in the Structure of Urogenital Morbidity: A Cohort Comparison Between First Grade (2015/2016) and Eighth Grade (2022/2023)

Bernarda Krnić, Zvonimira Papeš Ibrišević, Angelika Tičinović Ivančić

Background: School health examinations provide an opportunity to monitor developmental and pubertal urogenital disorders. The aim of this study was to assess changes in prevalence and structure of urogenital morbidity within the same cohort of students examined in the first grade of primary school in 2015/2016 and re-examined in the eighth grade in 2022/2023.

Methods: This longitudinal cohort comparison included 1,997 first-grade students examined in 2015/2016 and 1,668 eighth-grade students from the same generation examined in 2022/2023. Diagnoses included developmental conditions (adhesions/phimosis, undescended or retractile testes, hydrocele, hypospadias) and pubertal conditions (varicocele, gynecomastia). Prevalence rates were calculated and compared using chi-square testing, with $p < 0.05$ considered statistically significant.

Results: Overall prevalence of urogenital disorders significantly decreased from 16.1% in the first grade to 10.3% in the eighth grade ($p < 0.001$), representing a 36% relative reduction. Developmental conditions showed a marked decline: adhesions/phimosis decreased from 10.8% to 3.0%, and undescended/retractile testes from 2.0% to 0.24%. In contrast, pubertal conditions increased substantially. Varicocele prevalence rose from 0.1% to 3.7%, and gynecomastia from 0.1% to 2.5%. Consequently, the morbidity pattern shifted from predominance of developmental anomalies in early childhood to predominance of pubertal disorders in adolescence.

Conclusions: This cohort analysis demonstrates a significant age-related reduction in overall urogenital morbidity accompanied by a pronounced structural shift in diagnostic distribution. Early school years are characterized by developmental anomalies that largely resolve spontaneously or after treatment, while adolescence is marked by emergence of hormonally mediated conditions. These findings highlight the importance of systematic school examinations in both early detection of congenital conditions and targeted evaluation of pubertal disorders during adolescence.

Bernarda Krnić (contact person)
Institute of Public Health of Zagrebačka County, Zaprešić, Croatia
e-mail: bernarda.krnic@zzjz-zz.hr

Zvonimira Papeš Ibrišević
Institute of Public Health of Zagrebačka County, Zaprešić, Croatia

Angelika Tičinović Ivančić
Institute of Public Health of Zagrebačka County, Zaprešić, Croatia

Physical Exercise in Children and Adolescents with Type 1 Diabetes Mellitus According to ISPAD Guidelines

Božica Matković, Marjeta Majer, Lovela Machala Poplašen, Tatjana Petričević Vidović

Introduction: In children and adolescents with type 1 diabetes mellitus (T1DM), large fluctuations in blood glucose levels occur during physical exercise. Patients with T1DM show altered counterregulatory hormonal responses, meaning that their ability to regulate blood glucose levels via hormones that counteract the effects of insulin (such as glucagon, cortisol, adrenaline, and growth hormone) is impaired or irregular. This dysfunction may contribute to an increased risk of hypoglycaemia and impaired metabolic homeostasis during physical activity. People with diabetes not only have impaired glucagon secretion, but also the half-life of endogenous insulin is different from that of pharmacological insulin, and it is not possible to remove exogenous insulin from the circulation if blood glucose levels fall. Studies show that children and adolescents, as well as their parents, fear hypoglycaemia during physical exercise, and therefore children and adolescents with T1DM often avoid physical exercise. This paper summarizes clearly defined recommendations for physical exercise in children and adolescents with type 1 diabetes (T1DM) according to the ISPAD guidelines (International Society for Paediatric and Adolescent Diabetes). The guidelines indicate that aerobic physical activity and resistance exercise reduce glycated hemoglobin (HbA1c), improve cardiovascular health, lipid profile and psychosocial well-being in children and adolescents with type 1 diabetes (T1DM).

Conclusions: Physical exercise in combination with insulin therapy and proper nutrition should be one of the basic methods in the treatment of T1DM in children and adolescents. Although maintaining optimal blood glucose levels is a key limiting factor for achieving the recommended level of physical activity in children and adolescents with T1DM, it can be mitigated by well-defined recommendations according to the ISPAD guidelines on physical activity.

Božica Matković (contact person)
Teaching Institute of Public Health Dr. Andrija Štampar, Zagreb, Croatia
e-mail: bozica.matkovic@stampar.hr

Marjeta Majer
Andrija Štampar School of Public Health, School of Medicine, University of Zagreb,
Zagreb, Croatia

Lovela Machala Poplašen
Andrija Štampar School of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Tatjana Petričević Vidović
Teaching Institute of Public Health Dr. Andrija Štampar, Zagreb, Croatia

Mental Health Referral and Access Among Adolescents Undergoing Urine Toxicology Testing in a Paediatric Emergency Department

Emine Gülfem Anaç, Eylem Şerife Kalkan, Şükran Bayrak, Sinem Akgül, Özlem Tekşam, Melis Pehlivantürk Kızılkan

Paediatric Emergency Departments (PEDs) are often the first contact for adolescents with substance use (SU), yet opportunities for psychosocial screening are frequently missed and toxicology testing may serve as the only form of screening. This retrospective study evaluated mental health referral and follow-up among 1,298 adolescents (12-18 years) undergoing urine toxicology testing in a PED (2020-2025) comparing suspected SU and intentional intoxication (int intox). Records were reviewed for demographics, toxicology results, HEEADSSS documentation, referrals to Adolescent Psychiatry (AP) and Adolescent Medicine (AM), and subsequent AM attendance. Overall, 52.8% were male (mean age:16.2 years); 77.5% were tested for suspected SU and 22.5% for int intox. Toxicology positivity was higher in the suspected SU group (13.4% vs. 4.1%, p<0.001). PED-HEEADSSS assessment rates were low in both groups (2% vs 3%). AP referral rates were higher in the int intox (88% vs 33%, p<0.001). AM referral rates were similar in both groups (13.2% vs 13%), whereas attendance was higher in the int intox group (81.5% vs. 46.7%, p=0.010). AM-HEEADSSS assessments revealed that 6.9% with negative toxicology results reported SU, and risk behaviours were more frequent in the suspected SU group. Low psychosocial screening, referral and service utilization rates highlight the need for structured screening with validated tools, timely referral, and active follow-up of adolescents with suspected SU in PED settings.

Emine Gülfem Anaç (contact person)
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye
e-mail: emine.anachacettepe.edu.tr

Eylem Şerife Kalkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Şükran Bayrak
Department of Paediatrics, Faculty of Medicine, Hacettepe University, Ankara, Türkiye

Özlem Tekşam
Department of Paediatrics, Faculty of Medicine, Hacettepe University, Ankara, Türkiye

Melis Pehlivantürk Kızılkan
Hacettepe University Faculty of Medicine, Division of Adolescent Medicine, Ankara, Türkiye

Scolioscreen: A Cluster Randomized Multicentre Study Evaluating The (Cost-)efficacy of Preventative School Screening for Early Detection of Adolescent Idiopathic Scoliosis

Ester Rijks, Annemarijn Weber, Paul Willems, Rianne Reijs, Silvia Evers, Liesbeth Jütten-Brouwer, Sander van Kuijk, Martje Foolen, Maarten Remmers, Nynke Simons, Eva Jacobs

Background: Adolescent idiopathic scoliosis (AIS) is a common condition. Larger progressive curves can lead to long-term disability, cardiopulmonal restrictions, psychosocial complaints and higher chances of operation. Dutch school screening for AIS was discontinued 15 years ago because of lack of evidence supporting screening- and non-operative treatment efficacy. Today, increasing evidence has shown this. However, no standard screening in youth Healthcare is performed, leading to an increasing number of children presenting with severe spinal curves requiring surgery.

Objective: To assess effectiveness of school-based scoliosis screening in preventing progression of scoliotic curves to a degree that necessitates surgical treatment among children with AIS compared to no screening. To examine cost-effectiveness and utilities of implementing school screening from a societal perspective.

Outcomes: Clinical (cost-)efficacy, expressed in proportion of adolescents with AIS and indication for surgery, impact on overall referral rate to orthopaedics, percentage of confirmed scoliosis, economic evaluation.

Methods: School based Randomized Controlled Trial, comparing the intervention group (schools implementing screening) and control group (schools without screening). 10.000 children (10-14 years) of primary (>500) and secondary schools (>90) are screened with Adams Forward Bending Test and Bunell Scoliometer. If screening reveals >5 degrees (positive), referral to orthopaedic follows. Children are tracked until cessation of growth (≥4 years).

Ester Rijks (contact person)
Department of Orthopaedic Surgery, University Medical Centre Maastricht, Maastricht, The Netherlands; Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Youth Health Care, Brabant Southeast Public Health Service, Eindhoven, The Netherlands
e-mail: ester.rijks@mumc.nl

Annemarijn Weber
Department of Orthopaedic Surgery, University Medical Centre Maastricht, Maastricht, The Netherlands

Integrated Disability Support at the University of Zagreb: A Good Practice Model for Inclusive Higher Education

Hana Škornjak Periša, Marjeta Majer, Jesenka Jeličić, Valentina Novak Žižić

Background: Students with disabilities at the University of Zagreb (UNIZG) receive coordinated support at both university and faculty levels through the Office for Students with Disabilities and the school health service. This paper examines the institutional framework and measures for inclusion and equal educational opportunities at the UNIZG.

Methods: We conducted a descriptive analysis of institutional support structures and service data for students registered with the Office in 2026. Service components and the distribution of disability types were examined.

Results: In 2026, 633 students with disabilities were registered out of approximately 69,000 students. They included students with visual (n=26), hearing (n=20), motor impairments (n=77), chronic illnesses (n=113), mental disorders (n=88), specific learning difficulties (n=159), autism (n=23), ADHD (n=24), multiple impairments (n=33), and unknown difficulties (n=70). Coordinators and student representatives at each faculty, together with the school health service, ensure accessible, embedded support within the academic environment. Support measures comprise tailored teaching and examination adjustments, adapted materials, assistive technology, a university-wide elective "Peer support for students with disabilities", teacher training, and 24-hour assistance in student dormitories for students with severe motor impairments.

Conclusions: The UNIZG model demonstrates an integrated, multi-level approach to disability support in higher education.

Hana Škornjak Periša (contact person)
School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: hskornjakperisa@gmail.com

Marjeta Majer
School of Medicine, University of Zagreb, Zagreb, Croatia

Jesenka Jeličić
Student Health Protection Office, University of Zagreb, Zagreb, Croatia

Valentina Novak Žižić
Office for Students with Disabilities, University of Zagreb, Zagreb, Croatia

Paul Willems
Department of Orthopaedic Surgery, University Medical Centre Maastricht, Maastricht, The Netherlands

Rianne Reijs
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands; Department of Youth Health Care, Living Lab Public Health Mosa, South Limburg Public Health Service, Heerlen, The Netherlands

Silvia Evers
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

Liesbeth Jütten-Brouwer
Department of Orthopaedic Surgery, University Medical Centre Maastricht, Maastricht, The Netherlands

Sander van Kuijk
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

Martje Foolen
Department of Youth Health Care, Brabant Southeast Public Health Service, Eindhoven, The Netherlands

Maarten Remmers
Department of Youth Health Care, North Limburg Public Health Service, Venlo, The Netherlands

Nynke Simons
Department of Social Medicine, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

Eva Jacobs
Department of Orthopaedic Surgery, University Medical Centre Maastricht, Maastricht, The Netherlands

Transition of Care for a Young Person with Complex Needs: A Case Report on Intersectoral Gaps in the Croatian Health, Education, and Social Welfare Systems

Hana Škornjak Periša, Nataša Marić

Introduction: Transition of care (TOC) for children and adolescents with chronic conditions and developmental disabilities remains poorly defined in Croatia. Families and school professionals routinely contact School and Adolescent Medicine (SAM) specialists when navigating simultaneous transitions across health, education, and social welfare systems. We present the case of a 15-year-old male with multiple neurological diagnoses, including flaccid paraparesis and neurogenic bladder, requiring intermittent catheterization several times daily. Upon enrolment in a specialized vocational school in Zagreb, residential accommodation was denied due to a protocol requiring catheterization.

Methods: The assigned SAM physician reviewed medical, legal, and institutional documentation, consulting with multiple stakeholders in an effort to ensure continuity of care and the most appropriate form of support. Results: Home-based teaching with periodic school attendance was subsequently approved under national education regulations. The student continues to receive daily care from his mother, who holds formal caregiver status and is legally authorized to perform intermittent catheterization.

Conclusions: This case exposes critical systemic gaps in TOC for children with complex needs in Croatia, where equitable outcomes remain contingent on parental persistence and individual professional initiative. Transdisciplinary collaboration and clearer regulatory frameworks are essential, and SAM specialists hold significant untapped potential as coordinators of transition care, uniquely positioned through longitudinal relationships with this population.

Hana Škornjak Periša (contact person)
School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: hskornjakperisa@gmail.com

Nataša Marić
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia

Trends in the Growing Enrolment of Students with Disabilities in Zagreb, Croatia

Ivana Bubanj

Background: According to Croatian Health Insurance Fund (HZZO) data, 32,101 children in Croatia have disabilities or significant developmental difficulties, representing about 7% of all students – an increase from 20,325 (4%) a decade earlier. School doctors report a growing number of children with severe disabilities who require formal educational support and often a teaching assistant at the start of primary school.

Methods: This study examined children assessed for first-grade enrolment in 2024/25 at the School Medicine Clinic in Špansko, Zagreb, including those whose enrolment was postponed for medical reasons. These findings were compared with data for 2025/26 and projected data for 2026/27 to identify trends in support needs.

Results: In 2024/25, 318 children were examined, and 45 (14%) had enrolment postponed. The main reasons were socio-emotional immaturity (22), speech and language disorders (17), ASD (3), intellectual disabilities (2), and CNS impairments (1). Six students (1.9%) ultimately enrolled with a formal form of schooling, three requiring a teaching assistant. In 2025/26, 294 children were examined, and 25 (8,5%) had enrolment postponed. Leading causes shifted toward speech and language disorders (11), emotional immaturity (8), ASD (3), ADHD (2), and CNS impairments (1). Nine students (3%) ultimately enrolled with a formal form of schooling, three requiring a teaching assistant. In 2026/27, 301 children were scheduled for assessment, including 43 with previously postponed enrolment. So far, leading causes are speech and language disorders (20), emotional immaturity (11), ASD (5), ADHD (3), intellectual disabilities (2), and CNS impairments (2). Sixteen students (5.3%) require formal schooling, with five assigned a teaching assistant.

Conclusions: These findings indicate a continued rise in early educational support needs.

Ivana Bubanj (contact person)
Andrija Štampar Teaching Institute of Public Health, School of Medicine, University of Zagreb, Zagreb, Croatia
e-mail: ivana.bubanj@stampar.hr

Let´s Get Physical

Ivana Sikirica, Katarina Tomelić Ercegović, Josipa Glavaš

Background: According to recent data, Croatia is among the top European countries in terms of the number of obese and overweight children. We compared the nutritional status of children in Trogir, Omiš and Split, and their involvement in sports activities.

Methods: The data of 628 children (320 girls and 308 boys) were taken from systematic examinations in the 8th grade of primary school. We collected BMI and sports activities data.

Results: In Trogir, 22.3% of children are overweight, and 9.8% are obese. In Omiš, 16.9% of pupils are overweight and 5% are obese, and 14.7% are overweight and 3.4% are obese in Split. In rural areas around Trogir 57,6% of students are involved in sports, while children in the city of Omiš are the most active (71.2% of them participate in some sport activity). The lowest proportion of overweight/obese children who participate in sports is in Trogir (40.3%). In Omiš 59.1% of such children participate in sports.

Conclusions: The highest number of overweight/obese children was observed in Trogir, and they participate in sports the least. Increased body mass is not only caused by the lack of sports activities, but it is necessary to constantly promote physical activity among children.

Ivana Sikirica (contact person)
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia
e-mail: ivana.sikirica@nzjz-split.hr

Katarina Tomelić Ercegović
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

Josipa Glavaš
Teaching Public Health Institute of Split-Dalmatian County, Split, Croatia

School-based Educational Intervention for School Staff on Epilepsy and Type 1 Diabetes, First Aid and Administration of Emergency Medications - A Case Report

Laura Mijatović, Dario Arnautalić

Pupils with epilepsy and type 1 diabetes may experience medical emergencies during school hours. The aim of this report was to describe a school-based educational intervention designed to improve school staff knowledge and skills in managing these conditions. In November 2025 an educational intervention was conducted in a rural primary school where two pupils had type 1 diabetes and two had epilepsy. The intervention consisted of a two-hour session including a lecture and workshop for 11 school staff, delivered by a school physician and school nurse. The lecture covered key topics in epilepsy and type 1 diabetes, focusing on first aid procedures, while the workshop included hands-on practice using training kits for buccal midazolam and a demonstration of how to administer intranasal glucagon. The intervention also included recommendations to prepare individual emergency kits and assign supportive roles to classmates during everyday school activities and to school staff in emergencies to promote safety and inclusion. No formal evaluation was conducted, but school staff reported increased confidence and interest in repeating the education. Providing effective support for pupils with chronic conditions requires school staff education, clear protocols and individualised emergency action plans. Peer awareness initiatives may further reduce stigma and strengthen inclusion.

Laura Mijatović (contact person)
Public Health Institute of Vukovar-Srijem County, Vinkovci, Croatia
e-mail: lauramijatovic006@gmail.com

Dario Arnautalić
Public Health Institute of Vukovar-Srijem County, Vinkovci, Croatia

Assessment of Risk Factors for Development of Allergic Diseases in Slovenian Twins

Lilijana Besednjak-Kocijančič

Background: Twin studies offer a unique opportunity to examine the relative contributions of genetic and environmental factors to allergic sensitisation. Monozygotic twins completely share their genetics and early-life environment, while dizygotic twins share only half their genetics and all their early-life environment.

Objectives: To assess the impact of some maternal, perinatal and environmental factors on development of allergic diseases in Slovenian twins.

Methods: Study included 26 monozygotic and 94 dizygotic twin pairs. Maternal (age, living location, education level, type of conception, delivery mode, antibiotic treatment) and neonate data (pet-keeping, gestation age, birth weight, having older siblings, pet keeping add other data) were obtained by a questionnaire. Allergic aetiology of the disease was confirmed with allergy testing in at least 3 years old child.

Results: An allergic disease developed 38.3% of children from the study group. Between monozygotic and dizygotic twins, there was no difference in allergic diseases prevalence. Positive family history, maternal antibiotic treatment (P=0.03), child's oxygen management (P<0.01) and birth weight below 2.500g (P<0.01) were associated with development of an allergic disease. Caesarean delivery was associated with higher prevalence of atopic dermatitis (P<0.001).

Conclusions: Our study confirmed that apart heredity only few maternal and perinatal factors contribute to the development of allergic diseases in Slovenian twins.

Lilijana Besednjak-Kocijančič (contact person)
Primary Healthcare Centre Nova Gorica, Nova Gorica, Slovenia
e-mail: bekoli86@gmail.com

Using Generative AI to Identify Healthcare Transition Needs in Young Adults with Chronic Conditions: Insights from Electronic Health Records

Maartje Vletter, Jane Sattoe, Mark Scheper

Background: Transitioning from paediatric to adult healthcare is a pivotal phase for adolescents and young adults (AYAs) with chronic conditions. Effective healthcare transition (HCT) supports continued healthcare engagement and stable psychosocial outcomes. Electronic Health Records (EHRs) contain information on the biopsychosocial status of AYAs, including indicators of transition readiness. This study aims to evaluate the use of generative AI (GenAI) to summarize electronic health record data and identify healthcare transition needs in adolescents and young adults with chronic conditions.

Methods: A GenAI program will generate concise summaries of large volumes of EHR data. Parameters related to transition readiness will be used to identify the status and needs of AYAs prior to HCT. The program will be applied to review 100 EHRs of AYAs with chronic conditions undergoing HCT.

Results: This retrospective EHR review will provide insight into the availability and quality of relevant HCT information, and highlight challenges encountered during the development of an AI application in a healthcare environment.

Conclusions: The insights gained will help improve transitional care strategies and support healthcare professionals in facilitating successful transitions to adult care. In addition, lessons learned regarding the responsible development and implementation of GenAI-based applications in healthcare will be shared.

Maartje Vletter
Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, the Netherlands

Jane Sattoe
Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, the Netherlands

Mark Scheper (contact person)
Research Centre Innovations in Care, Rotterdam University of Applied Sciences, Rotterdam, the Netherlands; Livinglab Responsible AI, Rotterdam University of Applied Sciences Rotterdam, Rotterdam, the Netherlands; Faculty of Medicine and Science, Macquarie University, Sydney, Australia
e-mail: m.c.scheper@hr.nl

Therapeutic Challenges in Atopic Dermatitis with Concurrent Molluscum Contagiosum Infection: A Clinical Case

Manca Škulj, Nika Jutraž, Tina Vesel Tajnšek, Tadej Avčin, Olga Točkova

Atopic dermatitis (AD) is a chronic, non-contagious, pruritic disease marked by skin barrier dysfunction, inflammation, and microbiome dysbiosis. The underlying molecular mechanisms determine a variable phenotype, which can be further altered by an increased skin susceptibility to infections. We present an AD case in a child where inflammation at predilection sites persisted despite consistent basic skin care and topical treatment with pimecrolimus and glucocorticoids. Diagnostics excluded IgE-mediated hypersensitivity, however, laboratory results showed decreased zinc levels, further impairing skin regeneration and immune response. Upon observing clinical signs of deterioration and appearance of pustular efflorescences on eczematoid lesions, we suspected secondary impetiginization. Microbiological testing confirmed Staphylococcus aureus, prompting systemic flucloxacillin treatment. The disease course was later complicated by numerous umbilicated papules, clinically and dermoscopically characteristic of molluscum contagiosum. This condition required immediate excochleation, antiseptic measures, and the discontinuation of topical immunosuppressive therapy at the sites of molluscum appearance. Timely recognition and management of secondary complications in AD are crucial for thorough therapeutic adjustment. Topical immunosuppressants are contraindicated during active viral infections because they inhibit epidermal immune cells (Langerhans cells and T-lymphocytes). The resulting inhibition of cytokine response and reduced antigen presentation weaken cell-mediated immunity, facilitating viral replication and preventing spontaneous lesion regression.

Manca Škulj (contact person)
Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: manca.skulj@gmail.com

Nika Jutraž
Department of Dermatovenereology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tina Vesel Tajnšek
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Olga Točkova
Department of Dermatovenereology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Strategies to Improve Health Literacy Among Teachers and Students: A Documentary Analysis of 50 School Medical Conditions Policies in England

Nicola J. Gray

Background: Data from the 2022 HBSC study show that 25% of 11–15yearolds in England report a chronic illness, with 35% of these students saying it affects school attendance or participation. Schools are required to have a medical conditions policy under Department for Education statutory guidance. This abstract explores such policies' potential to increase health literacy in schools.

Methods: School websites across England's nine regions were searched for publicly accessible policies, using purposive sampling to achieve diversity of school types. Content analysis of policies sought information about (a) staff training and (b) wholeschool awareness about health and medicines, each categorised as "a lot," "mentioned," or "none." Data were exported into Excel® and analysed descriptively.

Results: Across the 50 policies sampled from all nine regions, most included information about staff training (58% a lot; 32% mentioned; 10% none). Wholeschool awareness was less prominent but still frequently present (30% a lot; 40% mentioned; 30% none).

Conclusions: School medical conditions policies can support health literacy development, although intentions stated in policy may not reflect implementation. Primary healthcare professionals could use these policies as a starting point for engagement with schools to strengthen staff training and wholeschool awareness, complemented by ongoing support and capacity-building.

Nicola J. Gray (contact person)
University of Huddersfield, Huddersfield, UK; Université Clermont Auvergne, Chamalières, France
e-mail: N.J.Gray@hud.ac.uk

Driving Policy Engagement to Address the Physical Activity, Health and Climate Change Nexus in Slovenian Children

Shawnda A. Morrison

Although Slovenian children exhibit generally adequate physical fitness across their school-going years, secular trends in girls and boys indicate persistent, recent declines. Physical activity indicators related to sources of influence in Slovenia remain well-ranked compared to international peers, but behavioural influences need improvement (e.g. physical activity outside of school, on summer holidays, with family and peers). Significant seasonal variations in physical activity patterns of children are apparent, especially in summer, when hot, humid conditions prevail, air quality declines (e.g. wildfire), and traditional winter activities (e.g. alpine skiing) can exact a toll on planetary health, especially as global temperatures continue to rise. Stronger policy engagement in Slovenia is critical to buttress its longstanding tradition of fostering lifelong physical activity habits in children to combat against the rapid rise in complex, systems-based environmental pressures. Examples of national-level initiatives created to accelerate policy action for health in the age of climate change are detailed, including: creating a world-first physical activity indicator dedicated to seasonal variation for the Active Healthy Kids Global Matrix initiative; translating global knowledge of outdoor active play and OneHealth to the Slovenian context, and engaging with the Lancet Countdown series on Health and Climate Change's call for policy collaborators.

Shawnda A. Morrison (contact person)
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia
e-mail: shawnda.morrison@fsp.uni-lj.si

Hereditary α-Tryptasemia in Paediatric Patients Presenting with Anaphylaxis: A Report of Three Cases

Silvija Mörec Jakopič

In this report, we describe three paediatric patients who presented with anaphylaxis and persistently elevated BT levels. Clinical evaluation and laboratory testing were performed, including measurement of tryptase and genetic analysis to determine the CNV of the *TPSABl* gene. In this report, we describe three paediatric patients who presented with anaphylaxis and persistently elevated BT levels. Clinical evaluation and laboratory testing were performed, including measurement of tryptase and genetic analysis to determine the CNV of the *TPSABl* gene. Anaphylaxis is a severe and potentially life-threatening systemic hypersensitivity reaction in which mast cell degranulation leads to the release of mediators, including tryptase, resulting in elevated serum tryptase levels during the acute reaction. In addition to this transient increase, elevated basal serum tryptase (BT) measured after recovery may indicate an underlying mast cell-related condition. However, increased BT is not always associated with mastocytosis and may also result from hereditary α-tryptasemia (HaT), an autosomal dominant genetic trait. HaT is characterized by increased copy number variation (CNV) of the *TPSABl* gene encoding the a-tryptase subunit, leading to increased production of α-tryptase and persistently elevated BT levels. All three patients were found to have increased CNV of *TPSABl* gene. The presence of HaT explained the elevated BT levels observed in these patients. These findings are important of considering hereditary α-tryptasemia in the diagnostic evaluation of paediatric patients with elevated BT or recurrent anaphylaxis. Genetic testing for HaT can support accurate interpretation of laboratory results and contribute to more appropriate clinical characterization and management of these patients and also their relatives.

Silvija Mörec Jakopič (contact person)
General Hospital Jesenice, Jesenice, Slovenia
e-mail: silvijajakopic@yahoo.com

Wilson Disease as a Cause of Acute Liver Failure in a Boy with Autism Spectrum Disorder and Avoidant/ Restrictive Food Intake Disorder

Tajda Jagodic, Jernej Brecelj, Anja Praprotnik Novak, Matjaž Homan

We present the case of a 10-year-old boy with autism spectrum disorder, avoidant/restrictive food intake disorder (ARFID), and marked sensory hypersensitivity who was admitted with acute liver failure. He presented with fatigue, jaundice, hepatosplenomegaly, ascites, and peripheral oedema. Laboratory findings showed bicytopenia, hypoalbuminemia, coagulopathy, and only mildly elevated liver enzymes. His underlying neurodevelopmental disorders posed significant diagnostic and therapeutic challenges. Given his highly selective eating behaviour and the use of multiple dietary supplements of unknown origin, toxic liver injury was important differential diagnosis. Extensive evaluation, including liver biopsy and quantification of copper in urine and liver tissue, established Wilson disease (Leipzig score: 4). Initial genetic testing did not identify pathogenic variants in the ATP7B gene; additional analyses of intronic regions and promoter sequences are ongoing. Chelation therapy with trientine was initiated, but the patient refused oral treatment. To ensure drug administration and nutritional support, a percutaneous gastrostomy tube was inserted. Following treatment initiation, rapid clinical and biochemical improvement was observed. This case emphasizes that Wilson disease should always be considered in children presenting with acute liver failure and highlights the diagnostic and therapeutic challenges associated with coexisting neurodevelopmental disorders.

Tajda Jagodic (contact person)
General Hospital Jesenice, Jesenice, Slovenia
e-mail: tajda.jagodic@gmail.com

Jernej Brecelj
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Anja Praprotnik Novak
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Matjaž Homan
University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Playful Individual Fascial Exercise for Children and Adolescents with Special Care Needs (Pilot Study)

Darja Popović, Katja Logar, Tina Bregant

Background: Fascial exercise is a modern, specifically directed form of movement for improving mechanical and sensory properties of fascial system by elastic loads, dynamic stretching, multidirectional movements, and proprioceptive perception, hereby increasing resistance, flexibility, and efficiency of force transmission in the body.

Methods: Physiotherapists (DP, KL) at Cirius Kamnik are developing exercise program »FIZ-FAS«, with elements of play, movement and treatment of the fascial system. The pilot study involves six children, aged 8-12 years, who exercise twice a week for 45 minutes, for six weeks. To evaluate standardized tests are used: 1) seated bend test before and after each training session to determine the direct effects of exercise; 2) stand-up and -off test before and after the start of six-week training to assess changes in balance and explosive power.

Results: We have observed improved motor skills as well as participation satisfaction.

Conclusions: We observe that combination of fascial therapy and play contributes significantly to improving the motor skills and quality of life of children and adolescents with special needs. Further research is needed to confirm long-term effects and standardize the exercise.

Darja Popović
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia

Katja Logar
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia

Tina Bregant (contact person)
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia
e-mail: tina.bregant@cirius-kamnik.si

Impact of Robot-assisted Occupational Therapy Compared to the Effects of Classical Occupational Therapy Approaches on Hand Function in Children and Adolescents with Perinatal Brain Injury

Tina Bregant, Renata Pavlinič, Patricija Šinkovec

Background: Repeated goal-oriented intensive therapy (motor/restraint/robotic training) contribute to better recovery and restoration of arm function.

Methods: The 4-week study involved 32 children and adolescents with impaired upper limb function due to an acute perinatal brain insult. Robotic training involved 9 females and 7 males of average age 17.9 years. Standard occupational therapy involved 6 females and 10 males, of average age 16.85 years. Standard instruments for assessing the function of the hand (ARAT, Box & Blocks, muscle strength) were used.

Results: ARAT showed an improvement of 9.53% in robotic training group and 5.69% in the standard group; Box & Blocks assessment showed a greater improvement in the control group of 2.34%. Muscle strength in the upper limbs increased by 7.60% in the experimental and by 4.60% in the control group.

Conclusions: Both classical approaches of occupational therapy and robot-assisted treatment have impact on the improvement of upper limb function even several years after the insult occurred with benefits in both gross and fine motor skills.

Tina Bregant (contact person)
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia
e-mail: tina.bregant@cirius-kamnik.si

Renata Pavlinič
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia

Patricija Šinkovec
Centre for Education, Rehabilitation and Training – CIRIUS Kamnik, Kamnik, Slovenia

Case Report: Anaphylaxis Differential Diagnosis

Tina Vesel Tajnšek, Marina Praprotnik, Tadej Avčin

Introduction: Anaphylaxis is a clinical emergency, and all healthcare professionals should be familiar with its recognition, acute management but also possible differential diagnoses.

Case presentation: 11 years old boy suddenly appeared ill in March with a severe cough, difficulty breathing, tightness in the chest and throat, wheezing, nausea and dizziness. Within one hour he had eaten mango and traditional Slovenian cake »gibanica«. His father gave him loratadine. The paramedics measured heart rate 120/min, blood pressure 90/56 mm Hg and treated him with adrenaline intramuscularly and salbutamol inhalation, after which his condition improved. Day after beside pharyngitis dry cough, breathing difficulties, quieter left basal breathing with late inspiratory crackles were noticed. Bronchodilator test was positive and he continued treatment with salbutamol puffs. There were no changes on the chest X-ray. Afterwards available information was that he needed salbutamol in kindergarten, house dust mite allergy was associated with rhinitis, months before he was occasionally coughing and during last three days, he had more cough and nasal discharge. Rhinovirus was isolated from the nasopharynx. The basal tryptase level did not increase during the reaction. Allergological tests are planned.

Conclusions: We believe that the presentation of this case demonstrates possible other diagnoses besides anaphylaxis, e.g. infection, bronchitis, asthma and aspiration.

Tina Vesel Tajnšek (contact person)
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia
e-mail: tina.vesel@kclj.si

Marina Praprotnik
Department of pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

Tadej Avčin
Department of allergology, rheumatology and clinical immunology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Assessment of Physical Growth and Motor Development as Predictors of Overall Physical Fitness in Children and Adolescents with Asthma

Urška Kocutar, Andreja Kukec, Uroš Krivec, Gregor Starc

Asthma is one of the most common chronic diseases in children and may significantly affect physical fitness and daily functioning. At the same time, physical fitness and regular physical activity play an important role in asthma management and overall health outcomes. This pilot study aims to assess the association between asthma and different domains of physical fitness, as well as a composite index of overall physical fitness, in children and adolescents. A cross-sectional epidemiological study will include children aged 6–7 and 12–13 years from Slovenian primary schools. Asthma status will be determined using questionnaire data and clinical records, while physical fitness will be assessed using standardized SLOfit measurements across four domains: aerobic capacity, muscular fitness, neuromotor function, and flexibility, along with a composite physical fitness index. Multivariate logistic regression will be used to assess the association between observed phenomena. The findings are expected to improve understanding of how asthma relates to specific domains of physical fitness and support the development of targeted public health and clinical interventions.

Urška Kocutar (contact person)
Department of Public Health, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; General Hospital Celje, Celje, Slovenia
e-mail: urska.kocutar@gmail.com

Andreja Kukec
Department of Public Health, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Uroš Krivec
Department of pulmonology, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Gregor Starc
Faculty of Sport, University of Ljubljana, Ljubljana, Slovenia

Parental Smoking and Children's Exposure to Passive Smoking: Habits, Attitudes and Health Implications

Zrinka Puharić, Anamarija Jurčev-Savičević,
Katja Vnučec, Ljiljana Đermanović, Filip Puharić

Introduction: Second-hand smoke (SHS) exposure remains a major global health challenge for children. The WHO estimates that 60% of children worldwide are exposed to parental smoking.

Methods: examined parental habits, attitudes, and behaviours related to passive smoking using standardized surveys during systematic health examinations of first-grade children.

Results: 118 (29.4%) parents smoke. 114 (96.6%) have cared children's health. 64 (54.2%) smoke indoors in the presence of child. Non-smoking parents would not allow child to smoke, while smoking parents would approve of smoking ($p<0.01$, $\chi2 = 15.55$). Mothers smoke more in the presence of child outdoors and indoors ($p<0.01$, $\chi2 = 7.95$). More respondents from the city are concerned about the harmful effects of their smoking on the health of children ($p<0.01$, $\chi2 = 9.66$). The higher the level of education, the greater the concern of parents for the health of children ($p<0.01$, $\chi2 = 15.05$) and they smoke outdoors ($p<0.01$, $\chi2 = 17.04$). Working parents are more concerned about children health ($p<0.01$, $\chi2 = 9.42$) and smoke less in outdoor space ($p<0.01$, $\chi2 = 6.17$) compared to stay-at-home parents. The better the financial situation of the family, the greater the concern for the health of children ($p<0.01$, $\chi2 = 9.91$).

Conclusions: Passive smoking can cause a number of health problems for children. Parental education and adherence to it are important.

Zrinka Puharić (contact person)
University of Applied Sciences, Bjelovar, Croatia
e-mail: zpuharic@vub.hr

Anamarija Jurčev-Savičević
Teaching Institute of Public Health of Split and Dalmatian County, Split, Croatia; School of Medicine, University of Split, Split, Croatia

Katja Vnučec
Clinical Hospital Dubrava, Zagreb, Croatia

Ljiljana Đermanović
Institute of Public Health Bjelovar-Bilogora County, Bjelovar, Croatia

Filip Puharić
Institute of Public Health Bjelovar-Bilogora County, Bjelovar, Croatia

We gratefully acknowledge the generous support of our sponsors, exhibitors and partners:

GOLD SPONSOR

MSD

SILVER SPONSORS

Biogen

PharmaPro

BRONZE SPONSOR

MAICO

SYMPOSIUM SPONSORS

AstraZeneca

Swixx BioPharma
Symposium Sponsor & Exhibitor

EXHIBITORS

Krka

Medison Pharma

MOOR ortotika in protetika

Pharmagea

Roche

Trust-IT Services

Viatris

ADDITIONAL SUPPORT

Kongresni urad Slovenije

NULA SALUS
INFANTIS
NISI CURA
MATRIS
LACTANTIS