

Annual Working Group Report Form

(To be submitted to ESH WG Coordinator before December 31, 2024)

Year/time period of report: 2024

Name of Working Group: Hypertension in Children and Adolescents

Name of Working Group Section (if applicable):

Composition of Working Group

Chair:

Stella Stabouli

Email: sstaboul@auth.gr

Year of appointment: 2022

Vice-Chair:

Dorota Drozd

Email: dadrozd@cm-uj.krakow.pl

Year of appointment: 2022

Secretary:

Name: Denes Pall

Email: pall.denes@gmail.com

Year of appointment: 2018

Working Group Members:

Current number of members: 36

New members approved this year: 5

Activities of the year

Publications on behalf of the Working Group

Published this year:

- Lurbe E, Mancia G, Drozd D, Erdine S, Fernandez-Aranda F, Litwin M, Sinha MD, Simonetti G, Stabouli S, Wühl E. HyperChildNET COST Action CA19115: report of the task force. Blood Press. 2024 Dec;33(1):2421214. doi: 10.1080/08037051.2024.2421214. Epub 2024 Nov 1. PMID: 39484852.
- Evripidou K, Alvarez-Pitti J, De Blas-Zapata A, Chainoglou A, Goulas I, Herberigs K, Hamdani G, Stabouli S; HyperChildNET Working Group 1. Office BP

measurement using conical cuffs in children and adolescents with obesity. Blood Press. 2024 Dec;33(1):2411294. doi: 10.1080/08037051.2024.2411294. Epub 2024 Oct 11. PMID: 39391937.

- Chainoglou A, Sarafidis K, Taparkou A, Farmaki E, Chrysaidou K, Gidaris D, Kollios K, Kotsis V, Stabouli S. Serum neutrophil gelatinase-associated lipocalin and cystatin C is associated with blood pressure in ex-preterm children and adolescents. J Hypertens. 2024 Dec 1;42(12):2196-2205. doi: 10.1097/HJH.0000000000003868. Epub 2024 Sep 5. PMID: 39248130.
- Stabouli S, Beropouli S, Goulas I, Chainoglou A. Diagnostic evaluation of the hypertensive child. Pediatr Nephrol. 2024 Feb;39(2):339-343. doi: 10.1007/s00467-023-06127-1. Epub 2023 Aug 31. PMID: 37650959.
- Kozioł-Kozakowska A, Wójcik M, Herceg-Čavrak V, Cobal S, Radovanovic D, Alvarez-Pitti J, Hartgring I, Piórecka B, Gabbianelli R, Drożdż D. Dietary Strategies in the Prevention and Treatment of Hypertension in Children and Adolescents: A Narrative Review. Nutrients. 2024 Aug 21;16(16):2786. doi: 10.3390/nu16162786. PMID: 39203922; PMCID: PMC11357530.

In preparation:

- Stabouli et al. Transition of hypertensive youth from pediatric to adult care units among ESH Excellence Centers
- Lurbe et al. Blood Pressure values in healthy normal weight children and adolescents in Europe: Auscultatory and Oscillometric measurements.
- Evripidou et al. Challenges in Blood Pressure measurement techniques in children and adolescents with obesity.
- Stabouli et al. Validation status of BP devices in paediatric population.
- HyperChildNET taskforce members. Developing tools for the assessment of BP values in youth.
- Stabouli et al. Survey for validation and use of BP measuring devices in children and adolescents by the HyperChildNET WG 1 on devices.

Meetings organized/planned this year:

ESH endorsement: yes/no

- HyperChildNET Meeting in Germany, Heilberg, September 4-6, 2024 (ESH endorsement: No)
- HyperChildNET Meeting in Switzerland, Bellinzona, April 24-26, 2024 (ESH endorsement: No)
- Pediatric Hypertension Training School, June 27-29, 2024, Prague 2024 (ESH endorsement: No)

Participation to the ESH Annual Meeting

WG scientific meeting; main program

- The WG on Hypertension in children and adolescents session on the 1st day of the meeting was very well attended (full room). It was dedicated on ESH guidelines in clinical practice and included the following topics:
ESH guidelines in clinical practice: diagnosis and management of hypertension in children and adolescents. Chairs: T. Seeman, S. Stabouli
Screening for hypertension in adolescents (D. Drozdz,)
Out of office BP measurements: when and how (G. Hamdani)
Diagnostic evaluation of hypertensive adolescent (T. Seeman)
Pharmacological treatment for adolescent hypertension (E. Wuhl)
 - There was only one oral session approved among proposals by members of the scientific committee: Oral session 3. Children and Adolescents. Chairs: D. Drozdz, E. Wuhl. Presentation of 6 orals (4/6 on women and pregnancy) and a mini lecture (Task and challenges in the transitioning of adolescents into adult care. Presenter: S. Stabouli)
 - Also, only a moderated e-poster session 3
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Scientific projects

Completed this year:

- HyperChildNET taskforce members. **A Core Team amongst the members of the ESH WG in children and adolescents** identified scientific projects that needed urgent increase in knowledge and developed proposal submitted to the European Union for financial support resulting in the first European Network for Hypertension in Children and Adolescents, the HyperChildNET COST ACTION which provided important progress in the field. Empar Lurbe was the Chair of the Action and Elke Wühl was the Vice-Chair.
- HyperChildNET taskforce members. Developing tools for the assessment of BP values in youth.
- Stabouli et al. Survey for validation and use of BP measuring devices in children and adolescents by the HyperChildNET WG 1 on devices.

Ongoing:

- Stabouli et al. Survey on transition of hypertensive youth from pediatric to adult care from the pediatric point of view
- Stabouli et al. Validation status of BP devices in paediatric population.

In planning for next year:

- Stabouli et al. Validation status of BP devices in pediatric population.
- WG members. A new scientific project on areas that need urgent increase of knowledge including the design of pediatric trials on organ damage and anti-hypertensive drug treatment along with BP goals for cardiovascular protection

starting in childhood will be further submitted to the European Union for financial support.

Educational projects

Completed this year:

- Pediatric Hypertension Training School, June 27th-29th, 2024, Prague 2024.
- Online workshop for paediatricians on hypertension in children and adolescents, April 26th, 2024.
- Webinars Co-organised by the HyperChildNET COST Action and the European Academy of Paediatrics, March 7th and 14th, 2024.

Ongoing:

- ebook: Arterial Hypertension in Children and Adolescents

In planning for next year:

- Members of the WG are in the organizing committee of the upcoming International Congress in Hypertension in Children and adolescents, on May 8-11, 2025 that is endorsed by ESH.

Collaborations with other WGs/Scientific Societies:

- European Academy of Pediatrics
- European Society for Paediatric Nephrology

Other remarks:

WG members were involved in the Core Group and Empar Lurbe was the Chair of the COST ACTION HyperChildNET

Filed by (full name): Stella Stabouli

Date: 31/12/2024

Appendix:

Full board composition

Chair: Stella Stabouli

Vice-Chair: Dorota Drozdz

Secretary: Denes Pall

List of all current WG members 2024

Name	Surname	Country	e-mail
Antza	Christina	Greece	kris-antza@hotmail.com
Azukaitis	Karolis	Lithuania	karolis.azukaitis@mf.vu.lt
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Stabouli	Stella	Greece	sstaboul@auth.gr
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Stojanovic	Jelena	UK	Jelena.Stojanovic@gosh.nhs.uk
Wühl	Elke	Germany	Elke.Wuehl@med.uni-heidelberg.de

Short history of WG

The Working Group on Blood Pressure in Children and Adolescents was founded in 2009 by Empar Lurbe, who was the Chair of WG. In 2022 there was a rotation of the WG board, and the current Chair is Stella Stabouli, the Vice Chair is Dorota Drozd and the Secretary is Dennis Pall.

Under the leadership of Empar Lurbe for 14 years the WG developed the European guidelines on behalf of ESH for the Management of High Blood Pressure in Children and Adolescents in 2009. In 2016 the WG updated the 2009 guidelines as, over the 7 years elapsed from their publication, a large body of new knowledge had been acquired, making modifications and expansion of the previous recommendations necessary. The Guidelines were translated and published in different languages and countries in Europe and South

America. They have been published in the most important journals in the field of pediatrics and primary care.

In the ESH 2023 guidelines for the management of arterial hypertension the WG contributed to a section on the management of high BP in Children and Adolescents updating and/or reconfirming previous recommendations and for the 1st time the management of high BP in children and adolescents was combined with adult recommendations.

Areas requiring urgent increase in knowledge have been identified and scientific projects have been developed and some of them submitted to the European Union for financial support. Among others those related to obtain robust reference values for office, home and ambulatory BP based on a European pediatric population; to collect information about early organ damage so as to refine risk stratification and use the information to set intermediate objectives during treatment; to conduct large, long-term randomized therapeutic trials using onset of organ damage and to obtain information about when to initiate anti-hypertensive drug treatment and to decide which BP goals to achieve.

The WG has been organizing specific sessions at the ESH annual meetings devoted to cover the most important issues in this field, receiving more and more abstract submissions from healthcare professionals every year. Members of the Working Group also participate in the annually organized summer schools.

The Working group was involved in the organization of the 1st International Congress in Hypertension in Children and adolescents endorsed by the ESH, held in Valencia in February 2018 and the 2nd one in Warsaw in May 2019 and the upcoming 3rd one in 2025.

A Core Team amongst the members of the WG identified scientific projects that needed urgent increase in knowledge and developed proposal submitted to the European Union for financial support resulting in the first European Network for Hypertension in Children and Adolescents, the HyperChildNET COST ACTION which provided important progress in the field. Empar Lurbe was the Chair of the Action and Elke Wühl was the Vice-Chair. Members of the WG, including Stella Stabouli, Mietek Litwin, Dorota Drozd and Serap Erdine were in the Core Group of the action.