

LETTER TO THE EDITOR

Open Access



Revising the WHO Essential Medicines List for paediatric rheumatology update

Waheba Slamang^{1,2}, Nicola Smith³, Chris Scott², Helen Foster^{4*}  and on behalf of the Paediatric Global MSK Task Force

Dear Editor,

As the current World Health Organisation (WHO) Essential Medicines List (EML) for 'Joint diseases in children' does not reflect current best practice [1], the Paediatric Global Musculoskeletal Task Force (TF) 2021 survey [2] worked to identify 'Essential' medicines for rheumatic diseases, which informed our application to the WHO in 2021. With feedback from the WHO (to give more information about the use of these medicines in clinical practice), a further revised application to the WHO is planned for late 2022 and will focus on the medicines primarily used in JIA.

Healthcare professionals working in paediatric rheumatology and members of the TF were invited to participate in an anonymous online survey to update opinion about medicines to be included in the EML for JIA, and to identify challenges to their access, availability, administration, and safety.

We had 173 respondents from 46 countries across all continents, median years of clinical practice 10 years (range 0.5-35) including: paediatric rheumatologists ($n=118$); nurses/nurse practitioners ($n=21$); trainees in adult or paediatric rheumatology ($n=14$); and general paediatricians ($n=11$). Survey data were analysed with descriptive statistics.

The most important medicines to be included in the WHO EML for JIA are listed in Table 1. The

availability of subcutaneous ($n=107/173$; 62%), intravenous ($n=94/173$; 54%), and intra-articular medicines ($n=83/173$; 48%), as well as the affordability of subcutaneous ($n=111/173$; 64%) and intravenous medicines ($n=103/173$; 60%), were identified as important factors limiting delivery of care. Timely access to day-case facilities (including general anaesthesia/sedation and availability of imaging to perform intra-articular injections), and geographic challenges (e.g. patients home being remote from the infusion centre), were additional limiting factors. Most responders reported the procedures for intra-articular injections ($n=138/171$; 81%), subcutaneous injections ($n=123/173$; 71%), and intravenous injections ($n=140/173$; 81%) to be always available or available most of the time.

Our survey demonstrates that the main barrier to these medicines being used in clinical practice is their availability and affordability rather than the availability of personnel to perform these procedures or concerns about procedure complication such as infection.

These survey data are in line with the previous 2021 survey in terms of the medicines considered most important for inclusion in the EML. The survey data will support our revised TF application in 2022 for medicines deemed to be 'most essential' in the treatment of JIA i.e. intra-articular steroids (*triamcinolone hexacetonide as the medicine of choice*), an IL1 inhibitor (*anakinra as the medicine of choice*) and *tocilizumab*, in addition to methotrexate and TNF inhibitors

*Correspondence: h.e.foster@newcastle.ac.uk

⁴ Population and Health Sciences Institute, Newcastle University, Newcastle Upon Tyne, UK

Full list of author information is available at the end of the article



© The Author(s) 2022. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

Table 1 Medicines to be included in the WHO EML for JIA (those selected as most important are underlined)

Medication	N (%)	Medication	N (%)
<u>Methotrexate</u>	173 (100%)	<u>TNF Inhibitor</u>	168 (97%)
–Methotrexate	–143 (83%)	–Adalimumab	–152 (88%)
–Methotrexate (Subcutaneous)	–147 (85%)	–Etanercept	–115 (66%)
Sulphasalazine	55 (32%)	–Infliximab	–77 (45%)
		<u>IL6 Inhibitor</u>	151 (87%)
		–Tocilizumab (Intravenous)	–121 (70%)
		–Tocilizumab (Subcutaneous)	–90 (52%)
Hydroxychloroquine	77 (45%)	<u>IL1 Inhibitor</u>	123 (71%)
		–Anakinra	–120 (69%)
		–Rilonacept	–4 (2%)
		–Canakinumab	–31 (18%)
<u>Intra-articular Steroids</u>	157 (91%)	Abatacept	39 (23%)
–Triamcinolone Hexacetonide	–134 (77%)		
–Triamcinolone Acetonide	–35 (30%)		
Methylprednisolone Acetate	–32 (19%)		
<u>Prednisolone</u>	150 (87%)	Rituximab	75 (43%)
Methylprednisolone (Intravenous)	123 (71%)	Tofacitinib	54 (31%)
Azathioprine	45 (26%)	Baricitinib	19 (11%)
Ciclosporin	33 (19%)	Leflunomide	2 (1%)
Total N 173			

already listed in the WHO EML. The provision of this range of medicines in the WHO EML will facilitate their improved access, availability and affordability, to enable standard care in many more countries around the world.

Abbreviations

EML: Essential Medicines List JIA; : Juvenile Idiopathic Arthritis; TF: Paediatric Global Musculoskeletal Taskforce; TNF: Tumour Necrosis Factor; WHO: World Health Organisation.

Acknowledgements

We are grateful to the Paediatric Rheumatology European Society (PReS) for supporting this work and to all participants, including Paediatric Global Musculoskeletal Task Force members for completing the survey.

Authors' contributions

The concept and case of need was led by HF, WS and CS. NS set up the online survey and analysed the data. All authors read and approved the final manuscript.

Authors' information

Professor Helen Foster, FRCPCH, FRCP, MD, DCH, Cert Med Ed, MBBS (Hons).
Chair of the Paediatric Global Musculoskeletal Task Force.
Professor of Paediatric Rheumatology.
Newcastle University, UK.
h.e.foster@newcastle.ac.uk
Professor Christiaan Scott, MBChB.
Co-Chair Paediatric Global MSK Task Force.
Associate Professor Paediatric Rheumatologist.
Red Cross War Memorial Children's Hospital.
University of Cape Town.
Cape Town, South Africa.
chris.scott@uct.ac.za

Dr. Waheba Slamang MBChB FCPaed (SA) MPhil Paed Rhem (UCT).
Consultant Paediatric Rheumatologist.

Red Cross War Memorial Children's Hospital.

University of Cape Town.

Cape Town, South Africa.

waheba.slamang@gmail.com

Dr. Nicola Smith PhD.

Research Associate.

Translational and Clinical Research Institute, Newcastle University, UK.

nicola.smith@newcastle.ac.uk

Funding

Not applicable, this work was not funded.

Availability of data and materials

All data generated or analysed during this study are included in this published article (and its supplementary information files).

Declarations

Ethics approval and consent to participate

Formal ethics approval was not required. Survey respondents consented to participation by submitting a completed online survey response.

Consent for publication

Not applicable.

Competing interests

The authors declare they have no competing interests.

Author details

¹PReS Global Musculoskeletal Task Force Research Fellow, University of Cape Town, Cape Town, South Africa. ²Paediatric Rheumatology, University of Cape Town, Cape Town, South Africa. ³Translational and Clinical Research Institute,

Newcastle University, Newcastle upon Tyne, UK. ⁴Population and Health Sciences Institute, Newcastle University, Newcastle Upon Tyne, UK.

Received: 5 October 2022 Accepted: 7 October 2022

Published online: 14 October 2022

References

1. Foster HE, Scott C. Update the WHO EML to improve global paediatric rheumatology. *Nat Rev Rheumatol*. 2020;16(3):123.
2. Scott C, Smith N, James R, Whitehead B, Green R, Foster HE, et al. Revising the WHO Essential medicines list for paediatric rheumatology. *Pediatr Rheumatol Online J*. 2021;19(1):10.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

