Received: 12 August 2018 | Accepted: 28 August 2018
DOI: 10.1111/pedi.12765

ISPAD CLINICAL PRACTICE CONSENSUS GUIDELINES

ISPAD Clinical Practice Consensus Guidelines 2018: Introduction to the Limited Care guidance appendix

Ethel Codner[1] | Carlo Acerini[2] | Maria E. Craig[3] | Sabine Hofer[4] | David M. Maahs[5]

[1]Institute of Maternal and Child Research, School of Medicine, University of Chile, Santiago, Chile
[2]Department of Pediatrics, University of Cambridge, Cambridge, UK
[3]Institute of Endocrinology and Diabetes, Westmead, New South Wales, Australia
[4]Department of Pediatrics, Medical University of Innsbruck, Innsbruck, Austria
[5]Division of Pediatric Endocrinology, Stanford University, Stanford, California

Correspondence
Prof. Ethel Codner, MD, Institute of Maternal and Child Research, School of Medicine, University of Chile, Santiago, Chile.
Email: ecodner@med.uchile.cl.

During the last decades, the number of children and young people affected with diabetes has increased and in parallel, the approval of sophisticated technology in affluent countries for the treatment of type 1 diabetes in children has led to significant disparities in the type of care that is available within and between different regions of the world.[1] International efforts to benchmark data via pediatric diabetes registries have led to improvement in important outcomes such as HbA1c and severe hypoglycemia in many regions of the world.[2] Programs such as Life for a Child (www.idf.org/lifeforachild) and Changing Diabetes in Childhood (www.cdic-data.net) are working in partnership with colleagues in the developing world to improve care for children, adolescents, and young adults with diabetes worldwide. These efforts have led to an increase in survival and improvement of metabolic control in some resource-limited countries.[1] These results are a proud accomplishment and indication that high-quality diabetes care can be delivered worldwide.

In this edition of the ISPAD guidelines, evidence-based and recommended care is described throughout the chapters. We acknowledge that achieving all of these standards of care may not be possible in those nations lacking a well-developed service base. Therefore, this *´limited care´* appendix includes *"recommended care"* levels that should be available to all young people with diabetes, and should be the aim of any health-care system, irrespective of its current organizational status and wealth. In 2014, ISPAD in collaboration with the International Diabetes Federation (IDF) produced the Global IDF/ISPAD Guideline for Diabetes in Childhood and Adolescence, introducing three levels of care: Recommended care, Comprehensive care, and Limited care, which is freely available at www.ispad.org.[3]

This Limited Care appendix in the 2018 guidelines aims to provide a "basic" guidance for the attainment of the major objectives of diabetes care in those health-care settings with restricted resources affecting the availability of drugs, personnel, technologies, and procedures. Our limited care guidance, therefore, assumes the minimum level of care that anyone with diabetes should receive. This level of care should aim to achieve with limited and cost-effective resources a high proportion of what can be achieved by standard *"recommended care."* This Limited Care appendix should not be considered a substitute for improving care but rather an acknowledgment of existing realities and efforts to improve care and outcomes for children, adolescents, and young adults with diabetes.

An important component of the *"recommended care"* described in the 2018 Limited Care guidance appendix relates to the need of a multidisciplinary team with training in the care of children with diabetes.[4] Ideally, team members should include trained pediatric diabetes physicians, dieticians/nutritionists, nurses, social workers/psychologists, and family advisors. Resource-limited conditions for holistic diabetes care may be handicapped by the inexperience and poor knowledge of practitioners and poor support services, including lack of educators and other allied health-care personnel. ISPAD, together with Global Pediatric Endocrinology and Diabetes (GPED) a nonprofit organization endorsed by major regional Pediatric Endocrine Societies, have developed training programs in diabetes in resource-limited countries.[5] Part of this collaboration has included training of physicians and health-care professionals in places that lack highly trained

Editors of the 2018 ISPAD Clinical Practice Compendium: Ethel Codner, Carlo Acerini, Maria E.Craig, Sabine Hofer, and David M. Maahs.

© 2018 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd

specialists. Also, ISPAD in partnership with the European Society of Pediatric Endocrinology (ESPE) has sponsored the Pediatric Endocrinology Training Center of Africa (PETCA) in Nairobi (Kenya) and the Pediatric Endocrinology Training Center of West Africa (PETCWA) in Lagos (Nigeria) which have trained over 80 African pediatricians in endocrinology and diabetes care. More information on teaching materials, fellowships, and educational opportunities are available from ISPAD's home page www.ispad.org.

With the publication of these Limited Care guidelines in mind, ISPAD also strongly urges all governments to step up their efforts to make available the resources necessary to deliver *"recommended care"* levels of support to all children and young adults with diabetes. Even today, almost a century after the discovery of insulin, the most common cause of death in a child with diabetes from a global perspective is a lack of access to insulin.[6,7] The World Health Organization (WHO) in 2015 released an updated recommendation of lists of essential medicines for children and adults, which included different types of insulin, glucagon, and metformin.[8] Despite these recommendations, there are still places where these medicines are not available.[9,10] Initiatives such as the IDF's "Life For a Child" and the Changing Diabetes in Children programs are helping this process by facilitating the improved provision of materials such as insulin, blood glucose test strips, and other support. Governments and their health authorities need to make the care of children with diabetes a priority as soon as possible and should assist diabetes organizations by waiving export/import taxes and by clearing administrative obstacles so that these resources can reach patients as quickly and efficiently as possible.[11]

Finally, we emphasize that this Limited Care appendix was developed to assist practitioners in resource-constrained environments to improve the quality of care with available resources at hand. It is, by no means, an endorsement of a lesser level of, or commitment to, outstanding diabetes care. On the contrary, it highlights the differences in present practice and access to resources that currently exist worldwide and emphasizes the urgent need to address these inequities.

ORCID

Ethel Codner http://orcid.org/0000-0002-2899-2705
Carlo Acerini http://orcid.org/0000-0003-2121-5871
Maria E. Craig http://orcid.org/0000-0001-6004-576X
Sabine Hofer http://orcid.org/0000-0001-6778-0062
David M. Maahs https://orcid.org/0000-0002-4602-7909

REFERENCES

1. Beran D, Yudkin JS, Atkinson MA. Global reality of type 1 diabetes care in 2013. *Diabetes Care*. 2013;36:e144.
2. Burry E, Ivers N, Mahmud FH, Shulman R. Interventions using pediatric diabetes registry data for quality improvement: a systematic review. *Pediatr Diabetes*. 2018; https://doi.org/10.1111/pedi.12699
3. IDF/ISPAD. *Global IDF/ISPAD Guideline for Diabetesin Childhood and Adolescence*. International Diabetes Federation; 2011.
4. Beran D, Yudkin JS. Looking beyond the issue of access to insulin: what is needed for proper diabetes care in resource poor settings. *Diabetes Res Clin Pract*. 2010;88:217-221.
5. Zacharin M, Chanoine JP, Cassorla F, et al. Promoting excellence in the care of pediatric endocrine diseases in the developing world. *Pediatrics*. 2013;131:e573-e578.
6. Beran D, Hirsch IB, Yudkin JS. Erratum. Why are we failing to address the issue of access to insulin? A national and global perspective. *Diabetes Care*. 2018;41:1125-1131.
7. Beran D, Basey M, Wirtz V, Kaplan W, Atkinson M, Yudkin JS. On the road to the insulin centenary. *Lancet*. 2012;380:1648.
8. WHO. The selection and use of essential medicines. WHO Press. World Health Organization, Geneva, Switzerland.
9. Rowlands A, Acosta-Gualandri A, Guevara-Aguirre J, Chanoine JP. WHO and national lists of essential medicines in Mexico, central and South America, and the Caribbean: are they adequate to promote paediatric endocrinology and diabetes care? *BMJ Glob Health*. 2016;1:e000114.
10. Atun R, Davies JI, Gale EAM, et al. Diabetes in sub-Saharan Africa: from clinical care to health policy. *Lancet Diabetes Endocrinol*. 2017;5:622-667.
11. Beran D, Ewen M, Lipska K, Hirsch IB, Yudkin JS. Availability and affordability of essential medicines: implications for global diabetes treatment. *Curr Diab Rep*. 2018;18:48.

How to cite this article: Codner E, Acerini C, Craig ME, Hofer S, Maahs DM. ISPAD Clinical Practice Consensus Guidelines 2018: Introduction to the Limited Care guidance appendix. *Pediatr Diabetes*. 2018;19(Suppl. 27):326–327. https://doi.org/10.1111/pedi.12765