
INTERNATIONAL PROGRAMS TO PROVIDE SCHOOL-AGE CHILDREN WITH NUTRITION

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ABSTRACT

A short scientific report is devoted to the global experience of organizing meals for schoolchildren. The main priorities in the formation of rations and the form of organization of supply have been determined. Children's nutrition is the most important component of the formation of a child's health, it contributes to the preservation of health, resistance to physical factors of the environment, high physical and mental capacity. Before the COVID-19 crisis, at least one in every two primary school students received daily school meals in 161 countries (equivalent to 388 million children). For millions of vulnerable children in poor countries around the world, free school meals are a vital component of their daily diet. A balanced school meal program is the key to optimizing the nutrition of the entire population of the country. School feeding programs play an important political role and are increasingly implemented by governments as a priority in national development strategies. Over the past decade, low-income countries have significantly increased their financial and policy efforts for school feeding, resulting in an increase in the number of school children receiving school meals. While school feeding programs in high- and middle-income countries are largely financed through domestic resources such as taxes and other sources, programs in low-income countries rely heavily on international donor support. According to the leading domestic hygienists, despite the ongoing conflict, one of the important priorities of our country is the continuation of the reform of school nutrition in order to bring it into line with international quality standards. Adhering to the basic principles of a complete and rational diet, you can achieve success even in conditions of limited resources.

Keywords: *hygiene of children and adolescents, children's health, world experience in the organization of schoolchildren's meals, preventive medicine.*

The World Food Program (WFP) is a branch of the United Nations dedicated to providing food assistance and is the largest humanitarian organization in the world. WFP primarily conducts school feeding programs in low and middle-income countries and provides additional support to national school feeding programs in politically stable countries that have established their own state programs. The school feeding strategy initiated by WFP for the period 2020–2030 aims to ensure healthy nutrition for every schoolchild through

an integrated and multi-sectoral approach [1–4]. Before the COVID-19 crisis, at least one in every two primary school students received daily school meals in 161 countries (equivalent to 388 million children). Globally, approximately 39 billion school meals were missed due to school closures during the pandemic and lockdowns in 2020 [5]. For millions of vulnerable children in poor countries around the world, free school meals are a vital component of their daily diet [5; 6].

Over the past few years, there has been a significant increase in the number of school feeding programs in low-income countries, but coverage remains low. For instance, between 2013 and 2020, the number of children receiving school meals worldwide increased by 9 percent. Low-income countries have significantly strengthened their financial and political efforts towards school feeding, leading to a 36 percent increase in the number of schoolchildren receiving meals [4; 7].

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While school feeding programs in high and middle-income countries are primarily funded through domestic resources, such as taxes and other sources, programs in low-income countries heavily rely on international donor support [4; 6]. Over the past decade, various countries have introduced state-run school feeding programs or are transitioning away from external program support in the short to medium term [8–10]. Other countries are seeking to establish or reinstate effective school feeding programs in response to the COVID-19 pandemic [5; 11]. In the context of the 2020–2030 school feeding strategy, the World Food Program (WFP), in collaboration with partners and governments, aims to ensure that all young schoolchildren have access to quality school-based nutrition, accompanied by a broader integrated package of health and nutrition services. In the School Feeding Strategy for 2020–2030, WFP outlines its vision for collaboration with governments and partners to jointly ensure access to high-quality school-based nutrition for all primary school children, complemented by a more comprehensive integrated package of health and nutrition services [4].

The World Health Organization emphasizes that school feeding programs are as important for children's health as vaccination programs [12]. Currently, governments are not inclined to supplement school feeding with other school interventions (such as promoting handwashing with soap before meals, deworming, nutrition education, agricultural diversification, improved water supply and sanitation, as well as micronutrient supplementation) to achieve long-term results [13]. Less than seven percent of governments implement school feeding exclusively with food items; all other countries combine school feeding with additional health and nutrition interventions [5; 8; 9]. In Africa, national school feeding programs aimed to improve access to education and higher academic achievement [14; 15]. Various studies show that school health and nutrition programs lead to improved learning outcomes.

In high-income countries, the primary focus is on the quality of school nutrition [1; 2; 8; 16; 17]. School feeding programs in economically developed countries are associated with health promotion, nutrition education, and aspects of sustainable development. High-quality free school nutrition is considered a fundamental approach to creating a fair and sustainable food environment [4]. According to a survey conducted by the World Health Organization (WHO) in 2016–2017, 142

out of 160 WHO member states (89%) implement some form of health and nutrition program in schools [18]. In WHO regions in the Americas, Europe, and the Western Pacific, these programs aim to reduce or prevent intentional weight gain and obesity. Conversely, in WHO regions in Africa and South-East Asia, efforts primarily focus on preventing undernutrition.

In six WHO regions, 119 countries reported having national dietary guidelines [18]. Food standards are essential tools to ensure the quality of nutrition and differ from nutrient-based dietary guidelines and standards. Dietary recommendations based on the consumption of local food items are widespread in all WHO regions, but many African countries still do not have national standards. Specific dietary recommendations for different population groups (e.g., preschool children, school-age children) have the greatest impact and are more practical to implement. In 49% of countries, qualified dietitians and nutritionists are responsible for planning school nutrition.

In Europe, all 27 EU member states, as well as the United Kingdom, Norway, and Switzerland, have national school nutrition policies [17–22]. These policies are mandatory in half of the countries and voluntary in the other half. Food standards are also most prevalent in European countries: over 90% use food standards to ensure a balanced menu, followed by portion size guidelines (76%) and nutrient-based meal standards (68%) [1; 2; 17].

In Ukraine, recommendations for school nutrition were previously regulated by the Cabinet of Ministers of Ukraine Resolution dated November 22, 2004, No.1591 "On the Approval of Food Norms in Educational and Children's Health and Recreation Institutions" [19]. Additionally, there were orders from the Ministry of Education and Science of Ukraine and the Ministry of Health of Ukraine dated June 1, 2005, No.242/329, and an order from the Ministry of Education of Ukraine and the Ministry of Health dated August 15, 2006, No.620/563, which established the procedure for organizing children's nutrition in preschools, general education, extracurricular educational institutions, and health resorts. The nutrition of privileged categories of students was regulated by the Cabinet of Ministers of Ukraine Resolution dated June 19, 2002, No.856 "On the Organization of Nutrition for Certain Categories of Students in General Education Institutions".

Hygiene standard "Draft Sanitary Regulations for General Secondary Education Institutions" one

of the appendices of which includes "Recommendations for the Healthy Nutrition of Children in General Education Institutions" has been approved at the legislative level. According to leading domestic hygienists, despite the ongoing war, one of the essential priorities for our country is to continue the reform of school nutrition, with the goal of aligning it with international quality standards. However, as the experience of international programs providing school-age children with nutrition shows, there are no dogmas in implementing the school nutrition system. By adhering to the basic principles of adequate and rational nutrition, success can be achieved even in conditions of limited resources.

Conclusions

1. The implementation of international programs for providing school-age children with food depends on the economic and social conditions and should be accompanied with other preventive activities.

2. The priority directions in the field of school meals are developing system of catering and promoting health diet.

3. Main challenges of the national nutrition programs for children and adolescents are resource limitations.

DECLARATIONS:

Disclosure Statement

The authors have no potential conflicts of interest to disclosure, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

Data Transparency

The data can be requested from the authors.

Statement of Ethics

The authors have no ethical conflicts to disclosure.

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Consent for publication

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References

1. Heiko LI, Yurochko TP. Healthy nutrition policy for children of early school age in Ukraine: literature review. *Investments: practice and experience*. 2020;(15-16):81-91. DOI: 10.32702/2306-6814.2020.15-16.81. [In Ukrainian].
2. Vatan MM, Babienko VV, Levkovska VY. Nutrition of primary school children: world and Ukrainian realities. *J Education Health Sport*. 2021;11(11):286-94. DOI: 10.12775/JEHS.2021.11.11.028.
3. Vatan MM, Babienko VV. Nutrition of young children – is there dependence on the place of residence. *J marine med*. 2023;(1):137-44. DOI: 10.5281/zenodo.10052974.
4. The impact of COVID-19 on school feeding around the world: A Special Report from the State of School Feeding Worldwide 2020. Rome: World Food Program; 2020. 20 p. Available at: <https://docs.wfp.org/api/documents/WFP-0000127651/download>
5. Cohen JFW, Hecht AA, Hager ER, Turner L, Burkholder K, Schwartz MB. Strategies to Improve School Meal Consumption: A Systematic Review. *Nutrients*. 2021;13(10):3520. DOI: 10.3390/nu13103520. PMID: 34684521.
6. Cohen JFW, Verguet S, Giyose BB, Bundy D. Universal free school meals: the future of school meal programmes? *Lancet*. 2023;402(10405):831-3. DOI: 10.1016/S0140-6736(23)01516-7. PMID: 37562420.
7. Bean MK, Adams EL, Buscemi J. Free Healthy School Meals for All as a Means to Advance Child Health Equity. *JAMA Pediatr*. 2023;177(8):753-4. DOI: 10.1001/jamapediatrics.2023.1955. PMID: 37358872.
8. Forrestal S, Potamites E, Guthrie J, Paxton N. Associations among Food Security, School Meal Participation, and Students' Diet Quality in the First School Nutrition and Meal Cost Study. *Nutrients*. 2021;13(2):307. DOI: 10.3390/nu13020307. PMID: 33499016.
9. Zemrani B, Gehri M, Masserey E, Knob C, Pellaton R. A hidden side of the COVID-19 pandemic in children: the double burden of undernutrition and overnutrition. *Int J Equity Health*. 2021;20(44). DOI: 10.1186/s12939-021-01390-w. PMID: 33482829
10. Priya J. What impact does malnutrition have on the effectiveness of vaccination? *VaccinesWork*, 2 Nov 2020 [Internet]. Available at: <https://www.gavi.org/vaccineswork/what-impact-does-malnutrition-have-effectiveness-vaccination> [accessed 18 Oct 2023].

11. Melendez-Illanes L, Gonzalez-Diaz C, Alvarez-Dardet C. Advertising of foods and beverages in social media aimed at children: high exposure and low control. *BMC Public Health*. 2022;22:1795. DOI: 10.1186/s12889-022-14196-4. PMID: 36138364
12. Wineman A, Ekwueme MC, Bigayimpunzi L, Martin-Daihirou A, de Gois V N Rodrigues EL, Etuge P, et al. School Meal Programs in Africa: Regional Results From the 2019 Global Survey of School Meal Programs. *Front Public Health*. 2022;10:871866. DOI: 10.3389/fpubh.2022.871866. PMID: 35692321.
13. Alqahtani Y, Assiri OAA, Al-Shahrani NSS, Alyazidi NSS, Alshahrani MSH. Relationship between nutritional habits and school performance among primary school students in Asser Region. *J Family Med Prim Care*. 2020;9(4):1986-90. DOI: 10.4103/jfmpc.jfmpc_885_19. PMID: 32670952.
14. Valizadeh P, Ng SW. The New school food standards and nutrition of school children: Direct and Indirect Effect Analysis. *Econ Hum Biol*. 2020;39:100918. DOI: 10.1016/j.ehb.2020.100918. PMID: 32992091.
15. Wrottesley SV, Mates E, Brennan E, Bijalwan V, Menezes R, Ray S, et al. Nutritional status of school-age children and adolescents in low- and middle-income countries across seven global regions: a synthesis of scoping reviews. *Public Health Nutr*. 2023;26(1):63-95. DOI: 10.1017/S1368980022000350. PMID: 35156607.
16. Global nutrition policy review 2016-2017: country progress in creating enabling policy environments for promoting healthy diets and nutrition Geneva: World Health Organization; 2018. 174 p. Available at: <https://www.who.int/publications/i/item/9789241514873>
17. Order of the Ministry of Education and Science of Ukraine and the Ministry of Health of Ukraine No.242/329 on 01 Jun 2005 "On Approval of the Procedure for the Organization of Children's Nutrition in Educational and Health Institutions". Verkhovna Rada [Parliament] of Ukraine. Legislation of Ukraine. Available at: <https://zakon.rada.gov.ua/laws/show/z0661-05#Text> [in Ukrainian].
18. Order of the Ministry of Education and Science of Ukraine and the Ministry of Health of Ukraine No.620/563 on 15 Aug 2006 "On urgent measures for the organization of children's nutrition in preschool, general education, and out-of-school educational institutions". Verkhovna Rada [Parliament] of Ukraine. Legislation of Ukraine. Available at: <https://is.gd/28TCRi> [in Ukrainian].
19. Resolution of the Cabinet of Ministers of Ukraine No.856 on 19 Jun 2002 "On the Organization of Meals for Certain Categories of Pupils in Comprehensive Educational Institutions". Verkhovna Rada [Parliament] of Ukraine. Legislation of Ukraine. Available at: <https://zakon.rada.gov.ua/laws/show/856-2002-p#Text> [in Ukrainian].
20. Order of the Ministry of Health Care of Ukraine No.2205 on 22 Sep 2020 "On the approval of the Sanitary Regulations for general secondary education institutions". Verkhovna Rada [Parliament] of Ukraine. Legislation of Ukraine. Available at: <https://zakon.rada.gov.ua/laws/show/z1111-20> [in Ukrainian].
21. Berzin VI, Stelmakhivska VP. Hygienic aspects of the problem of nutrition of children of school age in modern conditions. *Health of society*. 2018;7(2):87-90. DOI: 10.22141/2306-2436.7.2.2018.137733. [In Ukrainian].
22. Sorokman TV, Popelyuk NO. Monotonization of children's diet as a factor of micronutrient balance violation. *Clin Exp Pathol*. 2023;22(1):42-8. DOI: 10.24061/1727-4338.XXII.1.83.2023.07. [In Ukrainian].

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