

Development of a Pilot Care Pathway for Child and Adolescent Obesity: An Experience Report

Elaboração de um Piloto de Linha de Cuidado em Obesidade Infantojuvenil: Um Relato de Experiência
Desarrollo de una Ruta Piloto de Atención para la Obesidad Infantil y Adolescente: Un Informe de Experiencia

RESUMO

Relato do processo de elaboração de uma linha de cuidado para obesidade infantojuvenil em um município da Região Metropolitana do Rio de Janeiro, no contexto de uma intervenção-piloto. Estudo descritivo sobre a construção da linha de cuidado em duas regionais de saúde, conduzido em oito fases: formação do grupo de trabalho, diagnóstico situacional, estruturação do cuidado, definição de protocolos, validação de experiências locais, qualificação profissional, aprimoramento de indicadores e seminários de lançamento. A intervenção-piloto permitiu desenvolver estratégias para a implementação e expansão da linha de cuidado. Destacou-se a formalização de um grupo técnico, essencial para a governança e sustentabilidade da iniciativa, além da qualificação da força de trabalho e aprimoramento da vigilância alimentar e nutricional. O processo participativo fortaleceu a articulação entre os níveis de atenção da Rede de Atenção à Saúde, ampliou a visibilidade da obesidade infantojuvenil e possibilitou a estruturação de fluxos assistenciais regionais, favorecendo a continuidade e replicação da experiência.

DESCRIPTORIOS: Atenção primária à saúde; Serviços de Saúde; Saúde da criança; Saúde do adolescente; Obesidade.

ABSTRACT

This report describes the process of developing a care pathway for childhood and adolescent obesity in a municipality of the Metropolitan Region of Rio de Janeiro, within the context of a pilot intervention. Descriptive study on the construction of the care pathway in two health regions, conducted in eight phases: formation of a working group, situational diagnosis, care structuring, definition of protocols, validation of local experiences, professional training, improvement of indicators, and launch seminars. The pilot intervention enabled the development of strategies for implementing and expanding the Healthcare pathway. The formalization of a technical group was highlighted as essential for governance and sustainability, alongside workforce training and the enhancement of food and nutrition surveillance. The participatory process strengthened coordination among different levels of the Health Care Network, increased awareness of childhood and adolescent obesity, and enabled the structuring of regional care flows, facilitating continuity and replication of the experience.

DESCRIPTORS: Primary Health Care; Health Services. Child Health; Adolescent Health; Obesity.

RESUMEN

Informe del proceso de elaboración de una línea de cuidado para la obesidad infantil y juvenil en un municipio de la Región Metropolitana de Río de Janeiro, en el contexto de una intervención piloto. Estudio descriptivo sobre la construcción de la línea de cuidado en dos regiones de salud, llevado a cabo en ocho fases: formación de un grupo de trabajo, diagnóstico situacional, estructuración del cuidado, definición de protocolos, validación de experiencias locales, capacitación profesional, mejora de indicadores y seminarios de lanzamiento. La intervención piloto permitió desarrollar estrategias para la implementación y expansión de la línea de cuidado. Se destacó la formalización de un grupo técnico, esencial para la gobernanza y sostenibilidad de la iniciativa, además de la capacitación de la fuerza laboral y el fortalecimiento de la vigilancia alimentaria y nutricional. El proceso participativo fortaleció la articulación entre los niveles de atención de la Red de Atención a la Salud, amplió la visibilidad de la obesidad infantil y juvenil y permitió la estructuración de flujos asistenciales regionales, favoreciendo la continuidad y replicación de la experiencia.

DESCRIPTORIOS: Atención Primaria de Salud; Servicios de Salud; Salud Infantil; Salud del Adolescente; Obesidad.

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Rodrigues PAF, Marques HB, Oliveira ACR, Barbosa RBC

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RECEIVED: 03/10/2025 APPROVED: 03/25/2025

How to cite this article: Rodrigues PAF, Marques HB, Oliveira ACR, Barbosa RBC. Development of a Pilot Care Pathway for Child and Adolescent Obesity: An Experience Report. *Saúde Coletiva* (Edição Brasileira) [Internet]. 2025 [acesso ano mês dia];15(95):15508-15517. Disponível em: DOI: 10.36489/saudecoletiva.2025v15i95p15508-15517



Phillipe Augusto Ferreira Rodrigues

Physical Education Professional. PhD in Physical Education. Centro Universitário UNIABEU, Bedford Roxo, Rio de Janeiro, RJ, Brazil. Contributed to the conception, revision, and approval of the final version.

ORCID: <https://orcid.org/0000-0003-3722-4385>



Hugo Braz Marques

Nutritionist. PhD in Public Health. Ministry of Health, Rio de Janeiro, RJ, Brazil. Contributed to the conception, revision, and approval of the final version.

ORCID: <https://orcid.org/0000-0002-2379-9412>



Ana Carolina Rocha de Oliveira

Nutritionist. Master's Degree in Food, Nutrition, and Health. State University of Rio de Janeiro – Graduate Program in Food, Nutrition, and Health – Rio de Janeiro, RJ, Brazil. Contributed to the conception, revision, and approval of the final version.

ORCID: <https://orcid.org/0000-0001-8868-6593>



Raphael Barreto da Conceição Barbosa

Nurse. PhD in Public Health. National School of Public Health Sérgio Arouca (ENSP/FIOCRUZ). Contributed to the conception, revision, and approval of the final version.

ORCID: <https://orcid.org/0000-0001-9838-9736>

INTRODUCTION

In Brazil, childhood obesity is a relevant public health issue, affecting approximately 31% of children and adolescents, with 4.6% being severely obese. Strategies such as PROTEJA⁽¹⁾, The School Health Program (PSE - *Programa Saúde na Escola*) and Food Guides have been adopted to face this challenge.⁽²⁻³⁾ In a large municipality in the metropolitan region of Rio de Janeiro, where the prevalence reached 37%⁽⁴⁾, The initiative to implement a structured care line through the Health Care Network (RAS - *Rede de Atenção à Saúde*) was established. This article aims to report the process of developing a care line for childhood and adolescent obesity (LCOI - *linha de cuidado em obesidade infantojuvenil*) in two health regions of the municipality, selected for a pilot intervention.

CONTEXT

The municipality that hosted the experiment is large, with a prevalence

of overweight among people aged 0 to 20 years that has been higher than the state and national averages since 2017, according to the Food and Nutrition Surveillance System (SISVAN - *Sistema de Vigilância Alimentar e Nutricional*). In 2021, when the LCOI was first implemented, this rate reached 37%. At the time, 9,499 children and adolescents were being served by Primary Health Care (PHC), indicating low coverage or under-reporting of anthropometric data, considering the estimated population of 121,055 people in the child and adolescent cycle. Given this scenario, the municipality defined childhood and adolescent obesity as a priority in the Municipal Health Plan and in Early Childhood, establishing reduction targets. The organization of the RAS through an LCOI was seen as a strategy to achieve these targets.

The analysis of the institutional conditions for implementing LCOI from the PHC revealed challenges and potential. Among the difficulties, the following stand out: the invisibility of obesity, high turnover of professionals,

underutilization of information systems, lack of institutionalized flows and disarticulation between levels of care. However, factors such as the approach of the topic in public authorities, the execution of the PSE, the existence of working groups on Chronic Noncommunicable Diseases (NCDs) and the implementation of an information system in the network were considered facilitators to make the initiative viable.

The pilot intervention took place in two territories of the municipality and was structured in eight phases, namely: 1) formation of the working group; 2) situational health diagnosis; 3) outline of the care structuring matrix in the RAS and definition of reference protocols; 4) identification of local experiences and validation of regionalized flows; 5) offering of a qualification course for professionals working in PHC; 6) qualification of process indicators; 7) preparation of guiding and communication documents; 8) seminars to launch the line of care.

Below, we present the stages carried out in the two health regions, between



March and November 2022.

Formation of a Working Group

The initial phase involved the creation of a technical group to plan, coordinate, implement, monitor and evaluate the LCOI, under the coordination of a sub-secretariat responsible for managing the RAS. The working group was formalized in an Ordinance published in the Official Gazette of the Municipality (DOM - *Diário Oficial do Município*), and was named the Obesity Working Group (WG).

The Obesity WG included representatives from technical areas such as Noncommunicable Diseases and Injuries and Food and Nutrition – both at the PHC level, in addition to the coordinators of Secondary Care (outpatient and hospital), the intelligence team linked to the Secretary's office, municipal public health foundations and a Third Sector organization. The functions and responsibilities of the group were established, which, even after the implementation of LOCI, should continue its activities, monitoring all its phases.

Situational health diagnosis

The health situational diagnosis phase comprised eight meetings of the Obesity WG, held between March 10 and May 12, 2022. With the support of the group, the intelligence sector of the Health Department conducted a technical feasibility study to define the priority health regions for the intervention.

Indicators related to childhood and adolescent obesity were analyzed, grouped into three categories. The first, Morbidity, considered the prevalence of excess weight in children and adolescents, the prevalence of risk of overweight in children aged 0 to 4 years, and the number of hospitalizations due to obesity and associated or presumed causes. The second, Exposure Factors, included the Social Vulnerability Index, the number of units of the Minha

Casa Minha Vida program, the number of establishments such as fast food, pizzerias, snack bars, ice cream shops, and supermarkets, in addition to the number of shopping malls and teams of the Family Health Strategy. The third category, Protective Factors, included the number of APS units, the number of school units, the presence of spaces that promote healthy eating, the availability of squares, parks and football fields, as well as the existence of cycle paths.

Based on the overall score given to each health region, it was observed that territories C, B and E presented the best viability for the intervention, due to the combination of high prevalence of overweight among children and adolescents, greater presence of environmental risk factors and better structure of the healthcare network for implementing the LCOI. Territories A, D and F obtained an intermediate classification, which indicated good viability, but with challenges related to the availability of health equipment and less coordination between sectors.

In addition to the quantitative indicators, the final decision on the selected territories considered strategic elements discussed with the Obesity WG, such as a history of obesity prevention and management actions, strengthening of PHC and professional training. The survey of health units and professionals in the National Registry of Health Establishments reinforced the choice of regions C and B as the most suitable for implementing the pilot project.

Outline of the care structuring matrix in the RAS, definition of reference protocols

Between May 30 and July 11, 2022, four meetings took place on the care structuring matrix at the three levels of the RAS, segmented by phase of the life cycle for the regions. The age strata were defined based on the WHO nutritional classification⁽⁵⁾ and availability of services, covering pregnant women, children under 5 years old, children

aged 5 to 10 years old, adolescents aged 10 to 15 years old and 15 to 20 years old.

There was also a review of Ministry of Health protocols and legal frameworks on obesity, followed by a discussion of the essential components for organizing care in PHC. The PROTEJA strategy⁽¹⁾ was prioritized by overcoming the moralizing approach and considering environmental interventions. In addition, the current dietary guidelines and the Instruction for the care of overweight and obese children and adolescents in PHC⁽⁶⁾ were used as a reference for the construction of the LCOI.

Identification of local experiences and validation of regionalized flows

Four meetings were held between August 15 and November 10, 2022, in order to stimulate critical reflections on the biomedical conception and moral regulation around childhood and adolescent obesity, identify inspiring experiences underway in the territories, and validate the preliminary flows outlined by the Obesity WG. An experience of mapping the community food environment in Territory C stood out.

Critical points detected in this phase highlighted the under-recording of anthropometric and food consumption data, few units with access to electronic medical records and incipient regulation of the RAS for the prevention and management of obesity.

Offer of qualification course in childhood and adolescent obesity

Between August 29 and September 2, 2022, a course on care related to childhood and adolescent obesity was held, developed by the Third Sector organization and aligned with the health concept adopted for the LCOI.

The course had a hybrid format, combining video classes, mind maps, case studies and readings, in addition to face-to-face meetings in a computer lab partnered with the Health Depart-

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ment, where participants discussed the content with the mediation of a tutor. The topics covered included stigma, public policies and food and nutrition surveillance (VAN). During the period, 83% of the PHC professionals in the

two health regions were trained.

Qualification of process indicators

Between September 12 and July 11, 2022, 11 meetings were held with the Obesity WG. These meetings were

aimed at qualifying indicators to measure the effectiveness of the implementation of the LCOI in health territories and at creating a guidance document for professionals. These indicators are listed in Table 1.

Table 1 – Monitoring indicators for the line of care in childhood and adolescent obesity

Code	Indicator definition	Calculation method	Unit of measurement
LC1	Number of children and adolescents (0-19 years) with nutritional status (BMI) recorded in the Food and Nutrition Surveillance System (SISVAN) in 2021 and 2022	Total number of children and adolescents with monitoring date in the time and space considered (T_{ca})	Absolute number; Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality
LC2	Percentage variation of children and adolescents (0-19 years) with nutritional status (BMI) recorded in the Food and Nutrition Surveillance System (SISVAN) between 2021 and 2022	$[(T_{ca} \text{ with follow-up date 2022}) - (T_{ca} \text{ with follow-up date 2021}) \text{ in the time and space considered} \div (T_{ca} \text{ with follow-up date 2021 in the space considered})] \times 100$	Percentage; Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality
LC3	Percentage of positive markers of food consumption recorded in SISVAN between 2021 and 2022	$[(\text{Total food consumption records in the 0-19 age group monitored in 2022}) - (\text{Total food consumption records in the 0-19 age group monitored in 2021}) \div (\text{Total food consumption records in the 0-19 age group monitored in 2021})] \times 100$	Percentage Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality.
LC4	Percentage of negative markers of food consumption recorded in SISVAN between 2021 and 2022	$(\text{Frequency of positive markers of food consumption}) \div (\text{Total records contained in SISVAN on food consumption}) \times 100$	Percentage Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality
LC5	Percentage of negative markers of food consumption recorded in SISVAN between 2021 and 2022	$(\text{Frequency of negative markers of food consumption}) \div (\text{Total records contained in SISVAN on food consumption}) \times 100$	Percentage Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality.
LC6	Number of food consumption records of children and adolescents (0-19 years) with positive and negative markers in the Food and Nutrition Surveillance System (SISVAN) between 2021 and 2022	Total de registros de consumo alimentar saudável no SISVAN; Total de registros de consumo alimentar não saudável no SISVAN	Absolute number Time: 2021 and 2022 Space: Health Unit; Health Region; Municipality.
LC7	PHC professionals participating in a qualification course on childhood and adolescent obesity in 2022	$(\text{Total number of professionals inserted in the APS of the Health Region who participated in the qualification course on childhood and adolescent obesity carried out in technical cooperation with the Desiderata Institute in 2022}) \div (\text{Total number of professionals inserted in the health region in 2022}) \times 100$	Percentage Time: 2022 Space: Health Region.

Source: Own elaboration.

Preparation of guidance document and communication materials

At this stage, documents were prepared to guide the LCOI and communication with health professionals. The main document, entitled “Line of Care”, was structured into chapters covering the feasibility of implementation, VAN, mapping of the food environment, organization of care in PHC, care flows and intersectoral actions. It included guidelines on active search, food and nutrition education, expanded anamnesis, matrix support and specific therapeutic plans for each health region.

Based on this material, an LCOI Pocket Guide was created, containing only the care flows by age group, allowing quick access during care. The documents were made available in printed and digital versions. In addition, two posters were developed: one to inform

users about the line of care and another to guide professionals about VAN and appropriate recording in medical records.

Care Line Forum and Seminar

In the final stage of implementation, two events were held to disseminate the LCOI among municipal management and healthcare professionals.

The first was a Forum, aimed at professionals from different levels of municipal management, where the LCOI was launched by the Health Department. The second was a Seminar aimed at PHC and Secondary Care professionals. During the seminar, the care flows of the territories were presented and participants received a printed version of the pocket guide.

CONCLUSION

Implementing an LCOI in a large

municipality was challenging, but the pilot project in two regions enabled strategies and objectives for its implementation. The formalized technical group strengthened governance, ensuring continuity even with political changes. The main challenges included a lack of human resources, weak employment relationships, a bio-medical-centric approach, and limitations in the VAN.

The intervention was aligned with the National Food and Nutrition Policy, training professionals, organizing therapeutic itineraries, and highlighting childhood and adolescent obesity. The Health Department's approach to entities focused on adequate nutrition encouraged more educational campaigns and legislative actions. With the expansion to other regions, a formal evaluation is recommended to support future replications in different municipal contexts.

REFERENCES

1. Brasil. Ministério da Saúde. Secretaria de Atenção Primária à Saúde. Departamento de Promoção da Saúde. PROTEJA. Estratégia Nacional para Prevenção e Atenção à Obesidade Infantil: orientações técnicas. Brasília: Ministério da Saúde; 2021.
2. Brasil. Manual de Atenção às pessoas com Sobrepeso e Obesidade no âmbito da Atenção Primária à Saúde (APS) do SUS - Versão preliminar [Internet]. Ministério da Saúde, Secretaria de Atenção Primária à Saúde, Departamento de Promoção da Saúde; 2021. Disponível em: <https://aps.saude.gov.br/biblioteca/visualizar/MjA1Nw==>
3. Henriques P, O'Dwyer G, Dias PC, Barbosa RMS, Burlandy L. Políticas de Saúde e de Segurança Alimentar e Nutricional: desafios para o controle da obesidade infantil. Ciênc saúde coletiva [Internet]. 2018Dec;23(12):4143–52. Available from: <https://doi.org/10.1590/1413-812320182312.34972016>
4. BRASIL. Ministério da Saúde. Secretaria de Atenção Primária à Saúde. Sistema de Vigilância Alimentar e Nutricional: Relatórios de acesso público. Brasília: Ministério da Saúde, 2023. Disponível em: <https://sisaps.saude.gov.br/sisvan/relatoriopublico/index>. Acesso em 24 dez. 2023.
5. Organização Mundial da Saúde. Multicenter Growth Reference Study Group. Enrolment and baseline characteristics in the WHO Multicenter Growth Reference Study. Acta Paediatr. 2006; sup 450: 7–15.
6. Brasil. Ministério da Saúde. Instrutivo para o cuidado da criança e do adolescente com sobrepeso e obesidade no âmbito da Atenção Primária à Saúde. Brasília: Ministério da Saúde; 2022.