

Line of care for the attention to morbimortality from external causes in adolescents and young people

Linha de cuidado para a atenção à morbimortalidade por causas externas em adolescentes e jovens
Línea de atención para atención a la morbimortalidad por causas externas en adolescentes y jóvenes

Mariana Marques^I

ORCID: 0000-0002-3414-4462

Rosângela Barbiani^I

ORCID: 0000-0002-1841-774X

Carlise Rigon Dalla Nora^{II}

ORCID: 0000-0001-5501-2146

Luiza Cremonese^{III}

ORCID: 0000-0001-7169-1644

Taiana Beltrame de Miguel^I

ORCID: 0000-0002-7381-6313

Rosane Mortari Ciconet^I

ORCID: 0000-0001-9911-5796

Elson Romeu Farias^{IV}

ORCID: 0000-0002-2618-1773

^IUniversidade do Vale do Rio dos Sinos. Porto Alegre, Rio Grande do Sul, Brazil.

^{II}Universidade Federal do Rio Grande do Sul. Porto Alegre, Rio Grande do Sul, Brazil.

^{III}Universidade Federal de Santa Maria. Santa Maria, Rio Grande do Sul, Brazil.

^{IV}Escola de Saúde Pública Rio Grande do Sul. Porto Alegre, Rio Grande do Sul, Brazil.

How to cite this article:

Marques M, Barbiani R, Dalla Nora CR, Cremonese L, Miguel TB, Ciconet RM, et al. Line of care for the attention to morbimortality from external causes in adolescents and young people. Rev Bras Enferm. 2022;75(Suppl 2):e20200428. <https://doi.org/10.1590/0034-7167-2020-0428>

Corresponding author:

Rosângela Barbiani
E-mail: robarbiani@gmail.com



ABSTRACT

Objectives: to describe the development and modeling of a line of care for the prevention and attention of morbimortality from external causes in adolescents and young people within the scope of the municipal management of the Unified Health System. **Methods:** methodological study operationalized in three stages: situational analysis; literature review; development, and modeling. Descriptive statistical analysis and content analysis of the thematic type were used to produce evidence and support the development of the line of care. **Results:** by upholding the evidence of the study, it was elaborated a line of care, whose theoretical and methodological proposal included: 1) conceptual matrix, 2) educative matrix, 3) assistance matrix, and 4) operative matrix. **Final Considerations:** the lines of care are strong tools for articulating the levels of health care, being a resolute and feasible proposal given its cost-effectiveness for complex health demands such as the morbimortality of adolescents and young people from external causes.

Descriptors: Adolescent; External Causes; Morbimortality Indicators; Comprehensive Health Care; Nursing Research Methodology.

RESUMO

Objetivos: descrever o desenvolvimento e modelagem de uma linha de cuidado para a prevenção e atenção à morbimortalidade por causas externas em adolescentes e jovens, no âmbito da gestão municipal do Sistema Único de Saúde. **Métodos:** estudo metodológico operacionalizado em três etapas: análise situacional; revisão de literatura; desenvolvimento e modelagem. Análise estatística descritiva e de conteúdo do tipo temática foram utilizadas para produzir evidências e embasar a elaboração da linha de cuidado. **Resultados:** apoiando-se nas evidências do estudo, elaborou-se uma linha de cuidado, cuja proposta teórico-metodológica contemplou: 1) matriz conceitual, 2) matriz educativa, 3) matriz assistencial e 4) matriz operativa. **Considerações Finais:** as linhas de cuidado são instrumentos potentes para a articulação dos níveis de atenção à saúde, sendo uma proposta resolutiva e exequível haja vista seu custo-efetividade para demandas complexas em saúde como a morbimortalidade de adolescentes e jovens por causas externas.

Descritores: Adolescente; Causas Externas; Indicadores de Morbimortalidade; Assistência Integral à Saúde; Pesquisa Metodológica em Enfermagem.

RESUMEN

Objetivos: describir el desarrollo y modelado de una línea de cuidado para la prevención y atención a la morbimortalidad por causas externas en adolescentes y jóvenes, en el ámbito de la gestión municipal del Sistema Único de Salud. **Métodos:** estudio metodológico realizado en tres etapas: análisis situacional; revisión de literatura; desarrollo y modelado. Análisis estadístico descriptivo y de contenido del tipo temático han sido utilizados para producir evidencias y basar la elaboración de la línea de cuidado. **Resultados:** apoyándose en las evidencias del estudio, elaborado una línea de cuidado, cuya propuesta teórico-metodológica incluyó: 1) matriz conceptual, 2) matriz educativa, 3) matriz asistencial y 4) matriz operativa. **Consideraciones Finales:** las líneas de cuidado son instrumentos potentes para la articulación de los niveles de atención de salud, siendo una propuesta resolutiva y ejecutable haya vista su costo-efectividad para demandas complejas en salud como la morbimortalidad de adolescentes y jóvenes por causas externas.

Descriptorios: Adolescente; Causas Externas; Indicadores de Morbimortalidad; Atención Integral de Salud; Investigación Metodológica en Enfermería.

EDITOR IN CHIEF: Dulce Barbosa
ASSOCIATE EDITOR: Ana Fátima Fernandes

Submission: 09-14-2020 **Approval:** 02-11-2022

INTRODUCTION

External causes, especially violence, have been monitored worldwide, considering their relevant impact on the population between 10 and 24 years of age, specifically males. Adolescents and young people are the primary victims of a process that affects family, friends, and society. In addition, external causes contribute significantly to the increase in mortality, injuries, and disability in this group⁽¹⁾ and significantly impact the population's economy and health conditions. Injuries and violence represent a substantial proportion of the global disease burden in adolescents, particularly among low- and middle-income countries⁽²⁻³⁾.

In Brazil, external causes, especially assaults, are the leading cause of death among adolescents, especially those aged between 15 and 19 years, due to the vulnerability of this population segment⁽⁴⁾. In that context, despite its limitations, the health sector has been standing out as a pioneer and strategic field in the care of victims.

Despite the magnitude of the phenomenon, public policies aimed at reducing juvenile mortality from external causes are not very effective against the problem, and this highlights the demand for research that points to resolute perspectives for the Health Care Network⁽⁵⁻⁶⁾.

In the health field, actions that effectively and preventively affect this phenomenon require integrating levels and flows of care and network management. Such ordering of the Unified Health System (SUS) has been implemented since 2010, consolidated through Ordinance N°. 3/2017(7) of the Ministry of Health, ratifying the guidelines of the Health Care Network (known in Brazil as RAS) and the lines of care (LC) as one of the strategies for organization and production of care⁽⁷⁻⁸⁾. Thus, nursing has been a pioneer in implementing this new proposal at all system levels of care⁽⁹⁾.

The lines of care configure central axes of integral care actions composed of guides, flows, clinical and care protocols, and the attribution of health and management responsibilities that enable the continuity of the health care process in its entirety⁽¹⁰⁾.

This study, considering the need for resolute proposals to address juvenile mortality, sought to advance the operationalization of the model of attention and care management implemented by SUS through the development of a line of care for the prevention and attention of morbimortality from external causes and the promotion of health and life of adolescents and young people. It is worth noting that investing in adolescent health - providing the means to ensure the right to health, well-being, education, and full and equal participation in society - is fundamental in preparing them to reach their highest potential as adults⁽¹¹⁾.

Therefore, this work is inserted into the global agenda of health promotion, in which nursing is fundamental to achieving sustainable development goals, among which is universal health coverage, through good health and well-being, with the offer of integral and humanized care⁽¹²⁾. The World Health Organization (WHO) report, in partnership with the International Council of Nursing and the Nursing Now Campaign, states that no global agenda will be achieved without the nursing workforce and its role in multi-professional health teams⁽¹³⁾. The Nursing Now Campaign started in 2018 and ended in 2020 when was celebrated the 200th-anniversary profession's pioneer, Florence Nightingale⁽¹⁴⁾. The campaign had international and national purposes of increasing

nurses' visibility and appreciation, stressing the importance of the profession for the qualification of health services.

After launching the campaign in Brazil⁽¹⁵⁾, academic environments were considered strategic to execute educational interventions to give visibility to the profession. Nursing Now was born to put nursing in the spotlight and the leadership, considering its fundamental role in implementing health policies⁽¹⁵⁾. Hence, this study addresses the phenomenon of premature and preventable mortality of the adolescent and young population, due to external causes, as a priority agenda for public health, a field excelled by nurses in areas of assistance, management, research, and health education.

From this perspective, the study had its guiding question: What guidelines, pathways, and flows should be part of a line of care to prevent morbimortality from external causes in adolescents and young people?

OBJECTIVES

Describe the development and setting up a line of care (LC) for the prevention and attention of morbimortality from external causes in adolescents and young people in the context of municipal management of the Unified Health System.

METHODS

Ethical aspects

This research was approved by the Ethics Committee of the *Universidade do Vale do Rio dos Sinos* (UNISINOS) and by the Research Ethics Committee of the *Secretaria Municipal de Saúde de Porto Alegre* (SMSPA).

Design of study

A methodological study describing the steps for the development of a line of care, through the stages of situational analysis, literature review, and development of the "line of care" model, according to the guidelines of the Unified Health System (SUS) for the organization and generation of integrated health care networks⁽¹²⁻¹⁷⁾.

Place of study, work steps and collection of data

As an initial reference and evidence base, the study had one research, conducted in 2017, on prevention and attention to morbimortality in adolescents and young people in a capital city in southern Brazil⁽¹⁸⁾. The results pointed out the prevalence of external causes in 75.49% of deaths. Among those deaths, 91.27% were male, 61.05% white, distributed among homicides (78.45%), transport accidents (10.04%), and suicides (4.31%). The geographical origin of the victims revealed areas of social vulnerability, characterized by conflicts and disputed territories of drug trafficking⁽¹⁸⁾.

In 2018, the study expanded and was updated, creating new indicators for detailing the line of care. Among those indicators, we highlight the adolescents' and young people's perceptions and suggestions about their health needs, their relationship with the territory and with the network, and the professionals' propositions regarding the services of the specialized health-care network⁽¹⁹⁾.

The initial stage was the situational analysis, developed in two phases: an ecological study describing the distribution of deaths from external causes in the historical series 2010-2018 and the characterization of victims aged 10-24 years, city residents. The second phase of the situational analysis was qualitative by furthering the data obtained in the initial study through seven focus groups conducted in the territories, with representatives of the health network, leadership and community services, and young people and adolescents, in the context of primary and specialized care. The District Health Managers appointed the participants to the focus groups. The inclusion criteria were: at least two years of experience in the current job; and, in the case of community representatives, adolescents, and young people, two years living in their territories. The meetings were held in health units, schools, and community centers, depending on the availability of each region. All the meetings were recorded and later transcribed.

In the second stage, a narrative review was carried out, consisting of the systematization of the SUS programmatic and normative frameworks and the evidence from the scientific literature regarding the phenomenon under study.

The third stage worked with the results of the analysis of the previous stages to generate and develop the proposed line of care, outlined in four axes: conceptual, educative, assistance, and operative.

Analysis of data

For the quantitative data analysis were used descriptive statistics with frequency distribution. In order to analyze the qualitative data, content analysis of the thematic type was used.

RESULTS

The synthesis generated in the previous steps brought together evidence and elements for categorizing four main axes for the prevention and attention of morbimortality from external causes in adolescents and young people, namely: 1) conceptual, 2) educative, 3) assistance and 4) operative.

In the category "conceptual matrix," the pillars on which the formulation and implementation of the line of care should be guided were synthesized, identifying essential and structural elements that need to be known and built by health teams and managers. It was adopted the reference of the Health Care Network (known as RAS) to define the LC as a tool for micromanagement of care, i.e., a form of articulation of resources and health production practices, guided by clinical guidelines, among the care units of a given health region, for the timely, agile, and unique guidance of users through the possibilities of diagnosis and therapy, in response to the epidemiological needs of most significant relevance^(12,15,20). Health care is multidisciplinary and user-centered, with a matrix model of attention that includes promotion, prevention, surveillance, and assistance actions focused on the necessities of a population group or individuals⁽¹²⁾.

The category "educative matrix" - considering the population reference of adolescents and young people (10-24 years old) - is essential and should be incorporated into all action and

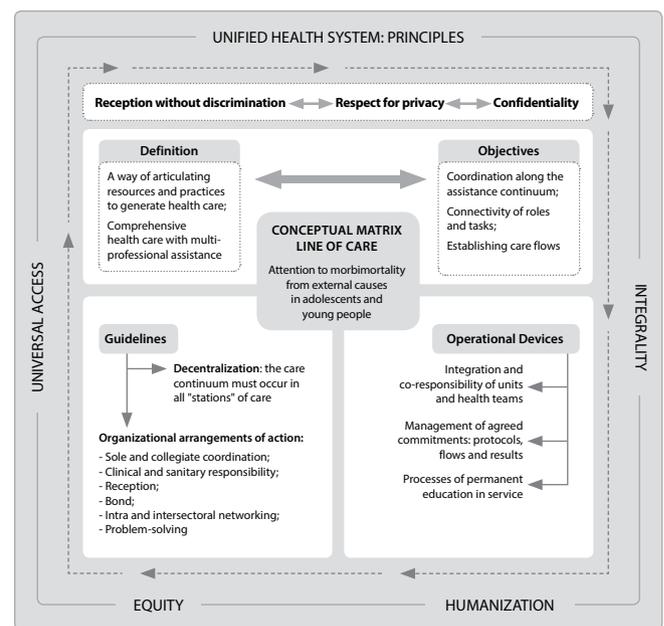
attendance of the attention stations when the connection and approach favor dialogue about self-care and appreciation of life. Health education processes are emphasized, including for network professionals and managers, with Primary Care being the strategy that organizes care and actions. That is because it is closer to adolescents and young people and their territories, enhancing intersectoral actions to promote health and prevent unnecessary diseases, including external causes.

In the "assistance matrix" category of the line of care, the strategic elements and flows for the articulation of resources and health production practices of the LC were compiled. These should also be guided by clinical guidelines articulated among health region services to respond to the most relevant needs^(12,15,20).

The line of care category "operative matrix" was based on the conceptual, care, and educative matrixes and systematized the phases necessary to implement the line of care for the prevention and attention of morbimortality from external causes in adolescents and young people.

Next, there is the conception of the structural layout of the line of care, from which actions and care acts derive. Each one has its strategic specificity and, at the same time, a synergic link to building a *continuum* in the design and activation of the line of care. Those four matrixes will be presented in detail as follows.

The conceptual matrix exhibits the definition, principles, guidelines, and operational devices that create the LC image and design as a tool for micro-management of care production, according to Figure 1.



Source: Adapted^(12,15,20-21)

Figure 1 - Conceptual matrix of the line of care for prevention and attention of morbimortality from external causes in adolescents and young people, Porto Alegre, Rio Grande do Sul, Brazil, 2020

The educative matrix, shown in Figure 2, is based on two premises: the first concerns the co-responsibility of all levels of attention (primary, secondary and tertiary) to contemplate health education activities, in the individual and collective sphere, according to the characteristics of the care provided, the time

and bond that the user maintains with the service. The second premise elects the Primary Health Care network as the privileged locus for promoting health education activities, which implies the planning of these actions with resources allocated to ensure the sustainability of initiatives as an integral part of the services provided in the context of comprehensive health care.

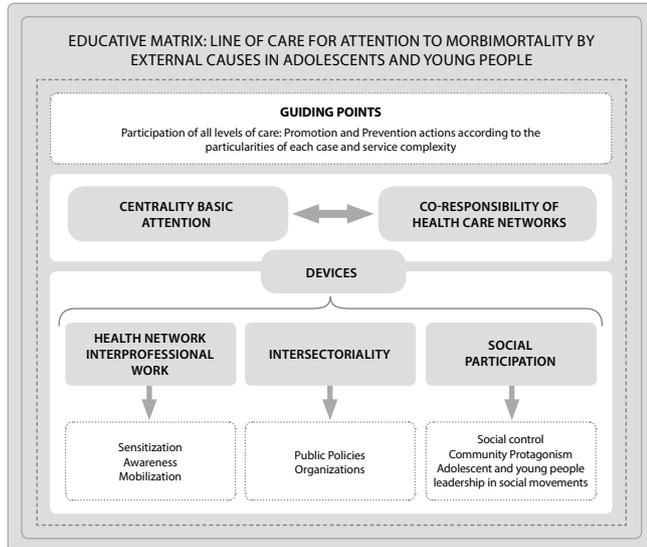


Figure 2 - Educative matrix of the line of care for prevention and attention of morbimortality from external causes in adolescents and young people, Porto Alegre, Rio Grande do Sul, Brazil, 2020

Considering the centrality of Primary Health Care and the co-responsibility of the other levels of attention in health promotion, the line of care educative dimension should operate with three interdependent systems. The first system deals with the sensitization, awareness, and mobilization of the stakeholders involved (internal network, community network, and intersectoral network): the highlight goes to the collective and interdisciplinary work of the Family Health Strategy teams (ESF), the Community Health Agents (ACS), teams of the Family Health Support Center (NASF) and Basic Health Care (Nasfs-AB), and the Basic Health Unit teams that ought to assume their role as educators and incorporate adolescents and young people into their actions.

Likewise, the School Health Program (PSE) and partnerships with professors (schools and universities) are excellent strategies to address and implement health education actions and accident and violence prevention. In this sense, professionals need to be aware of the risk situations that involve adolescents and young people in the territories, activating the existing means and stakeholders for prevention and protection actions. The use of the Adolescent Health Booklet⁽²²⁾ stands out as an instrument for dialogue about self-care and for knowledge about the changes that occur in this phase of development, which should be routinely used in health units while attending this public.

The second system deals with the educative dimension from the perspective of health promotion, which assumes intersectoriality. The intersectoral articulation ought to propose the integration and capillarization for the territory of all initiatives that promote the culture of peace, the appreciation of life, and the experience of adolescence and youth with healthy attitudes, choices, and

environments. This intersectoral articulation can integrate the public policies (education, culture, leisure, sports, social welfare, public security) and their equipments/players, such as schools, social welfare reference centers, municipal guards, cultural and activities programs, sports, and leisure. It can also include the organizations of the protection network and in the System of Guarantees of Rights, such as the Guardianship Council, Public Prosecutor's Office, Childhood and Youth Court, and the services to deal with situations of violence.

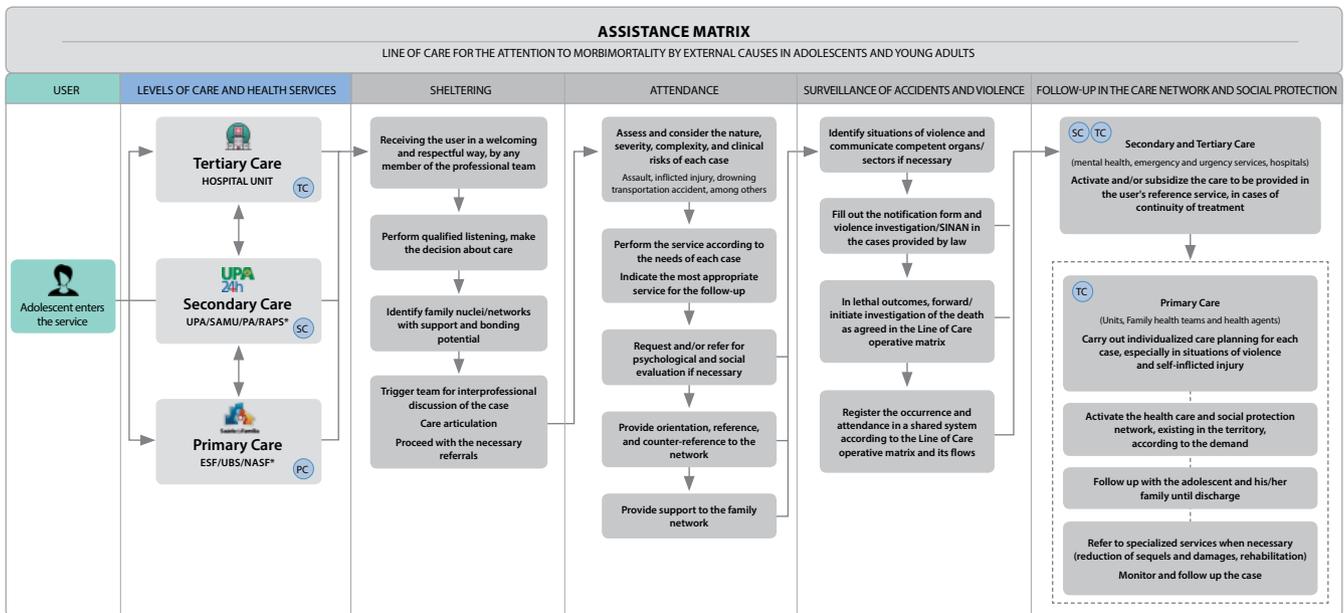
The third system covers the social participation which should be encouraged in two levels of comprehensiveness. The first level is with the instances of social control, where the Municipal Council for the Rights of Children and Adolescents, the Municipal Health Council, and the Local Health Committees and their equipment/instances stand out, including support for fundraising for projects. A second level counts on the participation of social movements, groups, youth leadership, and organizations with adolescents and young people in the territory as protagonists, who are indispensable partners for health education and promotion actions. The organizational and mobilization potential of those stakeholders is strategic for the success of the initiatives, from planning to execution.

The assistance matrix aims to set in motion the conceptual matrix with the connecting thread of the principle of comprehensive care, i.e., the premise that all levels of health are co-responsible for the appropriate attention, at the right time, considering the specificities of the adolescent and youth population and the risks involved in critical events such as accidents and violence. That perspective also incorporates the approach of promotion, prevention, and assistance at all levels, according to the particularities of services and health problem(s) to be addressed.

It is worth noting that the Primary Health Care is the articulating center of the line of care, and, for that, it must be able to count on the resources of the territory from the matrix model of communication and articulation among professionals of the reference teams, Nasfs-AB teams, Street Outreach Office teams, and professionals working in different strategies and programs at this level of attention. In the sphere of the specialized network, the centers of psychosocial attention and rehabilitation can be activated, when appropriate, through the Specialized Rehabilitation Centers (CER).

Figure 3 shows the modeling of the assistance matrix for the prevention and attention of morbimortality from external causes in adolescents and young people. It is formed of four dimensions of care (reception, attendance, surveillance of accidents and violence, and segmentation in the care and social protection network), which must be observed in all network stations according to the national guidelines for situations of violence⁽²³⁾.

The operative matrix proposes a methodological outline for implementing the line of care, aiming to integrate its "stations" among the levels of attention. This matrix covers the following stages: elaboration, implantation, and implementation within the service network. This phase is decisive for the LC feasibility since it depends on the technical-political articulation of several network players. This model shows the design of the LC for the municipal context. Figure 4 presents the ten stages for developing the line of care.



*UPA/SAMU/PA/RAPS – Emergency Care Unit/Mobile Emergency Care Service/Emergency Care/Psychosocial Care Network; ESF/UBS/NASF – Family Health Strategy/Basic Health Unit/Family Health Support Center.

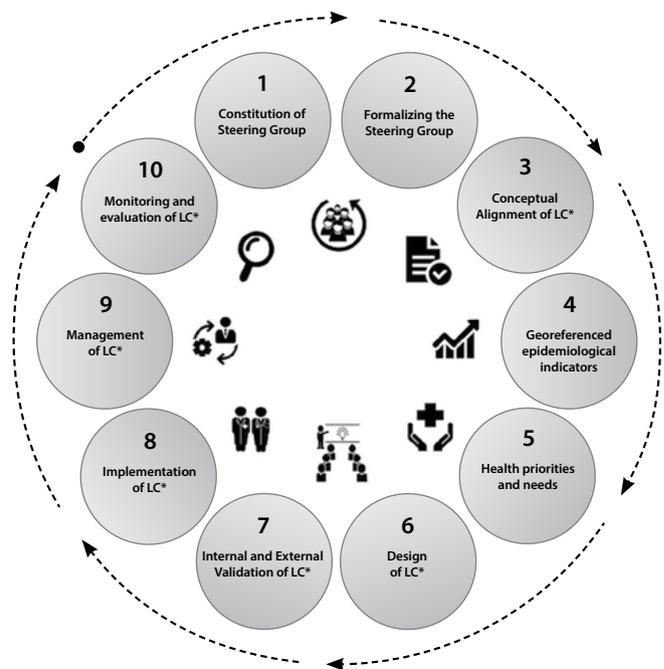
Figure 3 - Assistance matrix of the line of care for prevention and attention of morbimortality from external causes in adolescents and young people, Porto Alegre, Rio Grande do Sul, Brazil, 2020

The first stage is to constitute a steering group of the process, composed of representatives of the management and all levels of attention, to operate the governance of the line of care. The steering group of the municipality's LC can have representatives from the following areas: primary care, urgency and emergency care, hospital care, mental health, technical area of the adolescent/youth life cycle, and epidemiological surveillance. It can also include intersectoral instances such as the Guardianship Council, Social and Educational Service (adolescents in conflict with the law), representatives of the policy of Social Assistance, Public Security, and Municipal Guard.

The second stage is formalizing the steering group by defining competencies, purposes, work schedule with network disclosure, and other instances involved (state manager, social control, among others); it ought to have a permanent and interdisciplinary character.

The third stage is the conceptual alignment of the line of care consisting of legal frameworks, convergent networks and policies, components (points), existing protocols, clinical and health guidelines. The approaches to the thematic field need to be inserted into the LC planning schedule under the permanent education modality, topicalizing the experience itself as a problematizing element and generator of learning and knowledge.

The fourth and fifth stages refer to the diagnostic study, divided into Phase 1 and Phase 2. In Phase 1, georeferenced epidemiological indicators are included: identification and analysis of the proportional and spatial distribution of morbimortality from external causes and the occurrences and their outcomes (lethal and nonlethal). Mapping occurrences, morbidities, attendance/follow-up flows in the network, and surviving victims' profiles are recommended indicators. Regarding lethal outcomes, further investigation of the weekday, time and location, circumstances of the event, and sociodemographic data of the victims are relevant for the LC planning.



*LC – line of care.

Figure 4 – Ten stages for developing the line of care for prevention and attention of morbimortality from external causes in adolescents and young people, Porto Alegre, Rio Grande do Sul, Brazil, 2020

In Phase 2, regarding the fifth stage, are the priorities and health necessities to be addressed (external causes: types of violence, injuries, and accidents) in the form of a line of care: identification of regions, vulnerable groups, sentinel events which should generate notifications, active search or attendances, network points (existing and necessary and assistance gaps) and strategic intra-sectoral and inter-sectoral partners. Risk and protection factors should be identified for each type of health problem/external cause. In this sense, we suggest the participation of execution

instances of the municipality's socio-education to include the needs of the system's former inmates, given the social and health vulnerability to which adolescents are exposed in their territories.

The sixth stage is the design of the line of care based on the proposed educative matrix and assistance matrix (reception, attendance, surveillance of accidents and violence, and segmentation in the care and social protection network) and information from the diagnostic study. At this stage, attendance and communication flow and clinical and health responsibilities of each level of attention must be defined, and the other intersectoral network points must be made considering the specificities of each event/health problem. The health network points (manager/technical area, Primary Health Care, epidemiological surveillance; emergency and urgent care; regulatory complex, mental health, and hospitals) need to establish intra-operative flows, with Primary Health Care as the care orderer, which demands and establishes the other flows with the social assistance and related networks (guardianship councils, civil society organizations, schools, among others, with the technical and political support of the management). It is noteworthy that the participation of adolescents and young people is crucial to understanding the reality and effectiveness of the line of care.

Still, in the sixth stage, it is suggested to lay down a system to investigate all types of deaths from external causes whose victims are adolescents and young people and the benchmarking of information systems that should be shared in a network. The notification of accidents, assaults, and self-harm addressed to the adolescent territory, and young people need a specific and resolute flow.

The seventh stage deals with validation. It could be internal, with the proposal's presentation and discussion with the services involved, or external, with partners and other related instances. Validation is essentially a collective process and demands a formal and symbolic pact of the lines of care. Therefore, it may require adjustments and several rounds of negotiation, including a timeline for its implementation and the participation of social control, especially the health councils and the children and adolescents' rights councils.

The eighth stage is implementation. According to the situational diagnosis, it is necessary to define the area(s) and/or region(s) as pilot experience, converging all promotion and prevention actions to the territory with the activation of the LC health care devices. It is necessary to form a local steering group to exercise the LC governance in the territory. Notifications of attendances due to attempted homicide and suicide should generate a warning signal in the health network and trigger monitoring actions and the activation of protection networks. The actions must rely on social assistance, the guardianship council, and the Public Prosecutor's Office.

The ninth stage is the line of care management, in which the steering group is responsible for supporting, following up, and monitoring the first year of the LC operation locally through periodic meetings with local references and other points of attention. Primary Health Care is responsible for case management and the activation of the line of care.

The tenth stage is monitoring and evaluation, a process that must be continuous. After the trial period, there should be recommendations and proposals for some required adjustments and for implementing the LC in the other municipality regions, according to the identified priorities. The steering group and the local steering

group are the instances responsible for concluding the evaluation process and discussing it with the municipal manager. Partnerships with universities can be signed to monitor and research the process.

DISCUSSION

The conceptual and methodological construct of the line of care began to be developed in Brazil two decades ago by authors who idealized the materialization/implementation of the integrality principle in health services and work processes under the guidance of the user-centered care model^(17,24-26). A decade ago, the Unified Health System implemented the lines of care as micro-care management tools aligned to this model at all levels of attention. However, the challenges of its consolidation are complex because of the current fragmentation throughout the system^(12,27). Despite the difficulties, the line of care has been recognized as a potent combination of technologies developed to facilitate the execution of the objectives set by the Brazilian public health system⁽²⁸⁾.

Nurses and other professionals dealing with adolescents and young people need to organize their work process, flows, and itineraries from the perspective of comprehensive health care⁽²⁹⁾, valuing users and their needs as a central element of the line of care for SUS strengthening and consolidation. Thus, to fulfill the demand for care coordination for this population, it is essential to have an attention network that meets their health needs through continuous attention, permeated by accountability, reception, and commitment to planning actions⁽²⁷⁾.

The lines of care were created to facilitate the user's access to the health services they need. It is a design flow within the health system, where public and private organizations take part, although they are not necessarily inserted in the health system⁽²⁰⁾. Thus, they should be flexible to the users' needs, with organized itineraries, the establishment of flows, and reorganization of work processes to reduce adolescents and young people barriers. They are also an extremely important tool for the work processes of Primary Health Care teams⁽²⁰⁾. The lines of care organize the flows and work processes, defining the Primary Care team and the manager responsible for specific care in the Health Care Network to optimize services and resources⁽²⁰⁾. In this sense, adopting lines of care as organizers of health work presupposes the connection of health teams with the population of the health region where they work.

Consistent with these basic principles of the line of care, the results presented allow us to visualize the applicability of the proposal aimed at the quality of care for adolescents and young people through the creation and implementation of orderly flows, with guaranteed access and care for the prevention and attention of morbimortality from external causes in adolescents and young people in the scope of the Unified Health System. The proposed line of care sought to integrate protection, promotion, surveillance, prevention, and assistance actions aimed at adolescents and young people, considering the health problems and risks prevalent in those phases of development.

A study⁽²⁹⁾ that sought to identify adolescents' social networks in need of particular health care showed as a source of social support the church, school, family, friends, and neighbors, besides the institutional network formed by the hospital, emergency care, and outpatient services. The challenge is to transform an essentially

fragmented and episodic health care network into one capable of responding to the health requirements of adolescents and young people in an integrated and continuous network⁽²⁹⁾. Thus, an efficient line of care should guarantee the user complete access to health actions and services, whose supply must occur according to the demands generated by users in their necessities and vulnerabilities⁽¹³⁾. Among the actions indicated in this study, we point out health education, in the sphere of health promotion and prevention of diseases, the organization of interoperable information systems capable of monitoring events, places, and risky health problems, and the strengthening of the health network.

There is a belief that it is essential to integrate services through assistance networks and the interdependence of stakeholders and organizations⁽⁴⁾. Thus, it is not enough to have information systems, flowcharts, protocols, and regulations if they are not implemented daily in the interaction between the various services and with the different subjects (managers, professionals, or users)⁽³⁰⁾. The initiative to implement the LC needs to be supported by intra-institutional information, logistics, and continuing education systems in the management sphere. Moreover, in the territory and region, it is necessary to articulate integration strategies with protection networks and other intersectoral policies.

Other important elements for the proper functioning of the LCs are the training and sensitization of health professionals⁽³¹⁾. Health professionals must welcome and create a bond of trust with adolescents and young people, valuing their subjectivity. Listening is extremely important to understand their health needs⁽²⁹⁾.

Despite the efforts and achievements after implementing the National Policy for Reduction of Morbidity and Mortality from Accidents and Violence⁽³²⁾ and the National Program for Reduction of Lethal Violence against Adolescents and Youth⁽³³⁾, there is still much to improve. Thus, it remains a civilizing challenge to put juvenile mortality on the agenda of monitoring indicators as a priority for its strategic actions integrating a State policy. In the nobility of this political determination are the tangible possibilities of reversing this worrisome scenario and, above all, the perspectives of a full-blown and dignified life for young citizens.

Study limitations

The limitations of this study refer to the need for validation and evaluation of the line of care. Because it is an incipient proposal, it is not yet possible to show data on the application of the LC in the municipality. The lack of literature on the subject made it difficult to compare models and results. Future research could validate and evaluate the application of this line to target populations, such as adolescents and young people, or even consider other age groups like children, adults, or elderly people.

Contributions to the field

Among the goals of the 2030 Agenda for Sustainable Development is promoting the culture of peace and nonviolence to reduce associated mortality, a theme directly related to reducing morbimortality from external causes in adolescents and young people. In order to achieve this goal, nursing assistance is essential in all stages of care⁽³⁴⁾. Given the complex context, nursing

assumes an essential role in the effectiveness of the LC through evidence-based health care and comprehensive and humanized attendance to adolescent and young clients.

The actions based on the integrality of care provide the reorientation of health planning for adolescents and young people, leading to health promotion with general measures and protection with specific provisions for the prevention of health problems and clinical care. With the LC, the professional can strengthen the bond and contribute to expose the apprehensions. Based on this, adolescents and young people receive social support from a health professional to mitigate the negative effects of stress on the body, stimulating the ability to deal with difficult situations.

In this line of thought, LC contributes to Primary Care professionals, especially nurses who work with adolescents and young people, to have the notion that these individuals develop themselves through a mediation relationship with the social environment, elaborate their beliefs about health and disease, and in health services, establish relationships of bonding and sheltering generated between them and the workers. These professionals should be responsible for meeting the needs of this group.

Rethinking the nursing work with adolescents and young people is also fundamental, considering that this populace needs multidisciplinary health attention and comprehensive health care. We are sure that this structure of the line of care will contribute to the development of future research, whose subjects of study are the support and care networks for the prevention and attention of morbimortality from external causes in adolescents and young people.

FINAL CONSIDERATIONS

This study aimed to contribute to the proposition of a conceptual, educative, assistance, and operative matrix for the implementation of a line of care for the prevention and attention of morbimortality from external causes and the promotion of health and life of adolescents and young people as a fundamental human right for current and future generations.

From this perspective, it is believed that nursing should be sensitized to this issue and develop a systemic approach to care and attention to the health needs of adolescents and young people. The prevention and attention of morbimortality from external causes depend on building intersectoral lines of care that contribute to the modification of the vulnerability of this population, influencing its healthy development.

The lines of care are an intervention strategy consolidated as an essential tool for micro-management of the work in health. The study described the development and modeling of a line of care for the prevention and attention of morbimortality from external causes in adolescents and young people in the context of municipal management of the Unified Health System. It proposed a structural arrangement of the line of care in four matrices generating assistance activities and acts that set the principle of integrality in health services and user-centered work processes. Therefore, it is expected to contribute to the advancement of actions in the health field since adolescents and young people require more attention from the government and society since most external causes of morbimortality summarize avoidable events through actions to promote health and protect life.

FUNDING

This study was funded by the Research Support Foundation of the State of Rio Grande do Sul (FAPERGS), the Ministry of Health,

the National Council for Scientific and Technological Development (CNPq), and the Rio Grande do Sul State Health Department (SESRS) N°. 03/2017 through the Research Program for Brazilian Unified Health System - SUS (PPSUS).

REFERENCES

1. Carvalho RC, Costa MCO, Almeida MF, Rebouças MC. Evolução da mortalidade por causas violentas em crianças e adolescentes, Feira de Santana, Brasil. *Rev Baiana Saúde Pública*. 2005;29(1):80-90. <https://doi.org/10.22278/2318-2660.2005.v29.n1.a1216>
2. Cassiani SHB, Lira Neto JCG. Nursing perspectives and the Nursing Now campaign. *Rev Bras Enferm*. 2018;71(5):2351-52. <https://doi.org/10.1590/0034-7167.2018710501>
3. Neri M. O Nursing Now desembarca no Brasil para evidenciar a força e a capacidade da enfermagem. *Enferm Foco*. 2019;10(1). <https://doi.org/10.21675/2357-707X.2019.v10.n1.2322>
4. Gross V, Algayer LP, Souza NS, Jantsch LB. Fatores associados ao atendimento de crianças e adolescentes por causas externas em serviço de emergência. *Texto Contexto Enferm*. 2021;30:e20200337. <https://doi.org/10.1590/1980-265X-TCE-2020-0337>
5. World Health Organization. Global health estimates 2016: disease burden by cause, age, sex, by country and by region, 2000-2016 [Internet]. Geneva: World Health Organization, 2018. [cited 2020 Apr 27]. Available from: https://www.who.int/healthinfo/global_burden_disease/estimates/en/index1.html
6. Corassa RB, Falci DM, Gontijo CF, Machado GVC, Alves PAB. Evolução da mortalidade por causas externas em Diamantina (MG), 2001 a 2012. *Cad Saúde Colet*. 2017;25(3):302-14. <https://doi.org/10.1590/1414-462x201700030258>
7. Gadea CA, Gadea MSC, Dick H, Ferreira JS, Rosa FS. Itinerários juvenis em situação de vulnerabilidade social: sobre a realidade juvenil, a violência intersubjetiva e as políticas para jovens em Porto Alegre – RS. *Rev Juv Pol Públ*. 2017;1(2):47-71. <https://doi.org/10.22477/rjpp.v1i2.33>
8. Campos MR, Doellinger VRV, Mendes LVP, Costa MFS, Pimentel TG, Schramm JMA. Diferenciais de morbimortalidade por causas externas: resultados do estudo Carga Global de Doenças no Brasil, 2008. *Cad Saúde Pública*. 31(1):121-36. <https://doi.org/10.1590/0102-311X00191113>
9. Han L, You D, Gao X, Duan S, Hu G, et al. Unintentional injuries and violence among adolescents aged 12–15 years in 68 low-income and middle-income countries: a secondary analysis of data from the Global School-Based Student Health Survey. *Lancet Child Adolesc Health*. 2019;3(9):616-26. [https://doi.org/10.1016/S2352-4642\(19\)30195-6](https://doi.org/10.1016/S2352-4642(19)30195-6)
10. Kopttike A, Bassani F. Mapa da segurança pública e direitos humanos de Porto Alegre. 2014 [Internet]. Porto Alegre: Bestiário [cited 2020 Apr 27]. Available from: http://proweb.procompa.com.br/pmpa/prefpoa/observatorio/usu_doc/mapa_da_seg_uranca.pdf
11. Azzopard PS. Progress in adolescent health and wellbeing: tracking 12 headline indicators for 195 countries and territories, 1990–2016. *Lancet*. 2019;393(10176):1101-18. [https://doi.org/10.1016/S0140-6736\(18\)32427-9](https://doi.org/10.1016/S0140-6736(18)32427-9)
12. Ministério da Saúde (BR). Portaria de Consolidação n. 3, de 28 de setembro de 2017. Consolidação das normas sobre as redes do Sistema Único de Saúde (SUS). 2017 [Internet]. Brasília: Ministério da Saúde [cited 2020 Apr 27]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2017/prc0003_03_10_2017.html
13. Silva NEK, Sancho LG, Figueiredo WS. Entre fluxos e projetos terapêuticos: revisitando as noções de linha do cuidado em saúde e itinerários terapêuticos. *Ciênc Saúde Coletiva*. 2016;21(3):843-52. <https://doi.org/10.1590/1413-81232015213.08572015>
14. Rocha CMF, Cassiani SHB. As redes de enfermagem: estratégias para o fortalecimento da pesquisa e da extensão. *Rev Gaúcha Enferm*. 2015;36(2):10-11. <https://doi.org/10.1590/1983-1447.2015.02.5642>
15. Lagrotta MT. Redes de atenção a saúde, territorialização e implementação de linhas de cuidado[Blog]. 2010.
16. Organização Mundial da Saúde. Estratégia global para a saúde das mulheres, das crianças e dos adolescentes (2016-2030): sobreviver, prosperar, transformar. Secretário-Geral das Nações Unidas. 2016.
17. Mendes EV. As redes de atenção à saúde. Brasília: Organização Pan-Americana da Saúde, 2º ed. [Internet]. 2011 [cited 2020 Apr 27]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/redes_de_atencao_saude.pdf
18. Marques MR. Prevenção e atenção às morbimortalidades por causas externas em adolescentes e jovens na cidade de Porto Alegre/RS: uma proposta de linha de cuidado[Dissertação]. Universidade do Vale do Rio dos Sinos, Programa de Pós-Graduação em Enfermagem, 2017.
19. Pisa A. Relatório Indicadores de Saúde de Adolescentes e Jovens de POA. 2019.
20. Franco CM, Franco TB. Linhas do cuidado integral: uma proposta de organização da rede de saúde. In: Secretaria do Estado de Saúde do RS[Internet]. 2017 [cited 2020 Apr 24]; Available from: http://www.saude.rs.gov.br/upload/1337000728_Linha%20cuidado%20integral%20conceito%20como%20fazer.pdf
21. Ministério da Saúde (BR). Lei n. 8.080, de 19 de setembro de 1990. Lei Orgânica da Saúde. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. [Internet]. Brasília: MS; 1990 [cited 2020 Apr 24]. Available from: https://conselho.saude.gov.br/legislacao/lei8080_190990.htm

22. Ministério da Saúde (BR). Secretaria de Vigilância em saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Área Técnica de Saúde de Adolescente e Jovem. Caderneta da Saúde do Adolescente [Internet]. Brasília: Ministério da Saúde; 2012 [cited 2020 Apr 27]. Available from: https://bvsmms.saude.gov.br/bvs/publicacoes/caderneta_saude_adolescente_masculina.pdf
 23. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Diretrizes nacionais para a atenção integral à saúde de adolescentes e jovens na promoção, proteção e recuperação da saúde. Brasília: MS; 2010.
 24. Merhy EE, Franco TB. Por uma composição técnica do trabalho centrada nas tecnologias leves e no campo relacional. *Saude Debate* 2003;27(65):316-23.
 25. Cecílio LCO, Merhy EE. A integralidade do cuidado como eixo da gestão hospitalar. In: Pinheiro R, Mattos RA. Construção da integralidade: cotidiano, saberes e práticas em saúde. Rio de Janeiro: IMS Abrasco; 2003.
 26. Franco TB, Magalhães-Junior JM. Integralidade na assistência à saúde: a organização das linhas do cuidado. In: Merhy EE. O trabalho em saúde: olhando e experienciando o SUS no cotidiano. 3ª ed. São Paulo: Hucitec; 2006.
 27. Vaz EMC, Collet N, Cursino EG, Forte FDS, Magalhães RKBP, Reichert APS. Coordenação do cuidado na Atenção à Saúde à (ao) criança/adolescente em condição crônica. *Rev Bras Enferm*; 2018;71(suppl 6):2768-75. <https://doi.org/10.1590/0034-7167-2017-0787>
 28. Carrizo ER, Andrade THN. Processos de trabalho na política de saúde pública: o caso da implementação das Linhas de Cuidado pela Unidade de Saúde Escola da UFSCar. *Argumentum*. 2012;4(2):161-73. <https://doi.org/10.18315/argumentum.v4i2.1668>
 29. Silveira A, Neves ET. The social network of adolescents who need special health care. *Rev Bras Enferm*. 2019;72(2):442-9. <https://doi.org/10.1590/0034-7167-2018-0543>
 30. Dubow C. Linha de cuidado como dispositivo para a integralidade da atenção a usuários acometidos por agravos neoplásicos de cabeça e pescoço. *Saúde Debate*. 2014;38(100):94-103. <https://doi.org/10.5935/0103-104.20140015>
 31. Campos DB, Bezerra IC, Jorge MSB. Tecnologias do cuidado em saúde mental: práticas e processos da Atenção Primária. *Rev Bras Enferm*. 2018;71(Suppl 5):2101-08. <https://doi.org/10.1590/0034-7167-2017-0478>
 32. Ministério da Saúde (BR). Portaria n. 737 de 16 de maio de 2001. Estabelece a Política Nacional de Redução da Morbimortalidade por Acidentes e Violências [Internet]. Diário Oficial da União. 18 de maio de 2001 [cited 24 Apr 2020]; seção 1e. Available from: <https://bvsmms.saude.gov.br/bvs/publicacoes/acidentes.pdf>
 33. Observatório de Favelas. Programa de Redução da Violência Letal - PRVL [Internet]. Rio de Janeiro. 2017 [cited 29 Apr 2020]. Available from: <http://prvl.org.br/>
 34. Organização das Nações Unidas (ONU). Objetivos de desenvolvimento sustentável: transformando Nosso Mundo, a Agenda 2030 para o Desenvolvimento Sustentável [Internet]. Nações Unidas; 2015. [cited 2020 Apr 27]. Available from: <https://naacoesunidas.org/wp-content/uploads/2015/10/agenda2030-pt-br.pdf>
-