Situational Diagnosis in Brazilian Triple Side Border Primary Health Care Scenario

Ozires Kelvin Guimaraes Vieira[1]; Vitor Fernando Elias[1]; Caio Mora Rodrigues[1]; Negli Valter Sganzerla Junior[1]; Flavio Abrhao Delgado Farhat[1]; Juliana Cristina Braga de Lima[1]; Mateus Ferrari Roldão[1]; Joao Roberto da Conceicao Junior[2]; Lucas Fernando Rodrigues[2]; Cezar Rangel Pestana[1]*

[1]*Federal University of Latin America Integration, Foz do Iguassu, Brazil.*

[2]*Health Basic Unit, Curitibano district, Foz do Iguassu, Brazil.*

*Corresponding Author(s): Cezar Rangel Pestana

Federal University of Latin America Integration, Foz do Iguassu, Brazil.

Email: cezar.pestana@unila.edu.br

Abstract

Situational Diagnosis emerges as an important tool for primary care services in health basic units by data analysis collected from Health Family Team territories. The main aim of the study is to report the situational diagnosis in a health basic unit for local health care planning strategies. An observational study based on consolidated reports containing institutional, demographic and epidemiological profiles was performed using data collected from National Health System on-line platform for the identification of vulnerable areas in the territory covered by Family Health Teams. The diagnosis profiles revealed a high consumption of non-potable water, clusters of recyclable materials inappropriately stored in households as well as an open sewer flowing into a water stream which directly impacts on health population and the environment. Thus, data inconsistency and small number of Health Community Agents compromised the quality of health care information for proper intervention. Primary health care diagnosis emphasized the importance of universal access to the public health service at community level.

Introduction

Primary health care is particularly important to universal access to community-based health services in vulnerable socioeconomic areas [1]. Situational Strategic Planning was conceived in the 1980s by Chilean economist Carlos Matus as a relevant tool applied to local health service organization in Health Basic Units [2]. Data information from community-base territories provide support to health planning in evaluating local health system and addressing demographic and epidemiological priorities for interventions [3].

The situational diagnosis is based on health conditions analyzed by the following profiles (i) institutional provides basic information about health unit and services; (ii) territorial shows environmental characteristics and local infrastructure; (iii) demographic demonstrates age and sex distribution of users; (iv) socioeconomic details education and financial conditions; and (v) epidemiological demonstrates prevalent diseases among users.

These analysis enable the identification of health demands and intervention strategies developed by Family Health Teams community-centered primary care organizations composed by interdisciplinary health professionals at least one physician and

full time nurse, nurse assistant and health community agents [4].

In this context, situational strategic planning is organized according to local context and may contribute to better identification of community vulnerable population and consequently improve the health assistance in these territories [5]. Health information systems integrate data collection, processing and analysis of data for improving health services in primary care [6]. On the other hand, data inconsistency has serious consequences on adequate situational strategic planning in order to solve the main problems in health basic units [7].

Methods

This observational study performed a situational diagnosis analysis at a basic health during from August to December 2022. Data were collected by medical students from consolidated reports from National Health System (SUS) online platform which provides basic information about health basic unit services offered at local level considering institutional, territorial, demographic and epidemiological profiles. Study population was composed of approximately 9 thousand inhabitants distributed in 1600 inhabitants/km² density population covered by Family Health Teams. Subsequently, interventions was proposed in order to contribute to local health service organization.

Results

Institutional profile analysis indicated the health basic unit is situated in urban North District organized according to Family Health Strategy policy with physicians specialized in Family and Community Medicine distributed in 3 family health teams plus composed of 3 nurses, 7 assistant nursing and 8 community health agents. The territory shows areas of environmental risk with the high presence of uncollected garbage as well as accumulation of recyclable material favoring the accumulation of stagnant water and venomous animals. The existence of two open sewage points was also observed with waste emission into a water stream. Despite data inconsistencies regarding registered residences reported in SUS platform, 255 are houses, 10 are apartments, 2 rooms and 87 were not informed. A number of 194 are owned properties, 14 financed, 68 rented, 8 transferred and 70 not informed. Data registration has reflected three areas covered by the Health Family Teams. The main concern was found in water supply data showing an alarming number of houses without drinking water treatment as a potential condition to further epidemiological problems related to the region (Figure 1).

Figure 1: Percentage of health basic unity population distribution according to water supply access based on territorial profile analysis.

Statistics and Geography Brazilian Institute (IBGE) census estimated a local territory with approximately 9,000 inhabitants and with 1,600/km² population density [8]. According to National Primary Care Policy (PNAB, 2011), the number among 2000 to 3500 is recommended for each Family Health Team [9]. As noted, the discrepancy between the registered data leads to a significantly larger coverage per community health agents. Private health care insurance was declared by 33% of users with and 66% exclusive SUS users showing the expected dependence on public health care in Brazil. Registered population is composed of 52% female and 48% male which allows to notice a lower male audience in health system. The age stratification presented a decrease in the birth rate with narrowing of pyramid base and adult predominance as shown in **Figure 2**.
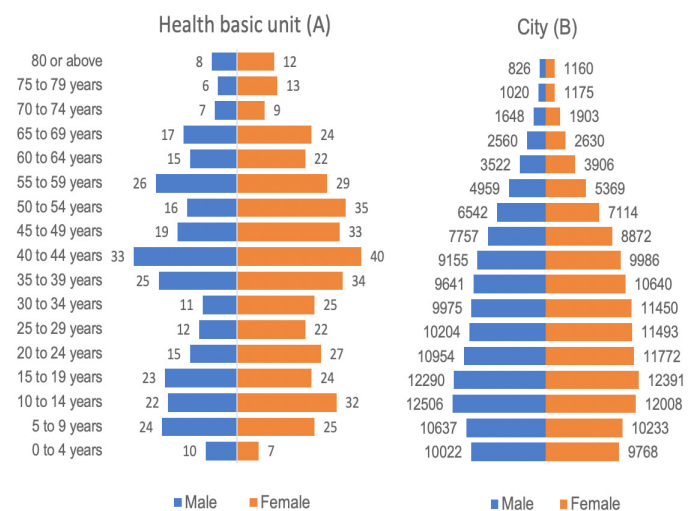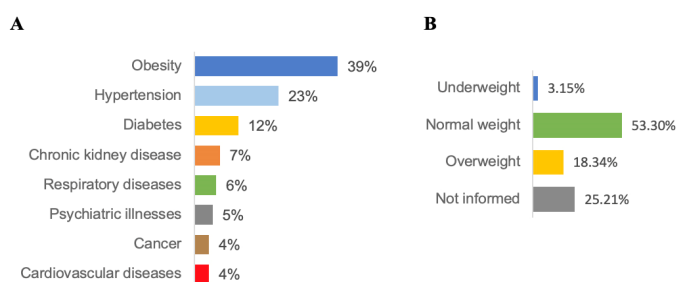

Figure 2: Age stratification in the health basic unit (A) compared to age stratification in the city (B) based on demographic profile analysis.

According to age and gender groups reported in SUS platform registration, it is worth promoting actions to specific health promotion population care considering epidemiological and socioeconomic context. In fact, population under 5 years of age demands strategies for immunizations and monitoring of first childhood phase whereas female population aged between 25 and 64 years is eligible for screening for cervical and breast cancer represented approximately 34% of the registered population. Yet, female population with 50 to 69 years old were equivalent to 15.75% of registered population whose SUS recommendation is to undergo breast cancer screening mammography every 2 years for early disease identification.

Primary health care for adult population over 20 years includes the prevention of non-communicable chronic diseases risk factors related to life style. Finally, the population composed of adolescents by the aged 10 to 19 years old represented to approximately 15% of the total population which emphasizes education programs regarding early pregnancy, sexual transmissible infectious and prevention of alcohol and smoking abuse.

Educational and economic situation revealed low family income and scholar degree. Among the collected data, 13% of the population has completed graduation with a professional specialization. However, the percentage of almost 50% has not declared the education level which unables to estimate the education access in the coverage territory. Population over 60 years of age represented approximately 19.5% of the population. For this group, a close follow-up for mental disorders such as depression and anxiety are very common conditions among

elderly **(Table 1)**.

Description	Quantity
College degree	13.04%
Highschool	16.91%
Elementary school	16.05%
Kindergarten	1.58%
Nursery	1.58%
Illiterate	1.72%
Other	0.57%
Not informed	48.57%

Epidemiological profile is an essential tool for the elaboration of effective preventive actions and health promotion. The epidemic panorama encourages a consistent diagnosis about health condition in a particular territory. Thus, it allows to adjust actions and services strategies for prevention and health promotion in a situation dependent manner. Figure 3A shows a higher incidence of chronic kidney diseases compared to the average for the Southern Region of Brazil (4.32% vs 2.1%). A significant number of diabetes (5,73%), hypertension (10.6%), respiratory diseases (3,01%) including asthma and emphysema and cancer patients (1.86%, 13 people) considerably higher than reported in Health National Surveys. Obesity is also a current concern in public health systems as a multi-condition risk factor for cardiovascular diseases. In these health basic unit, 22 individuals (3.15%) were considered underweight, 372 (53.30%) at normal weight, 128 (18.34%) overweight and 176 (18.34%) not informed.
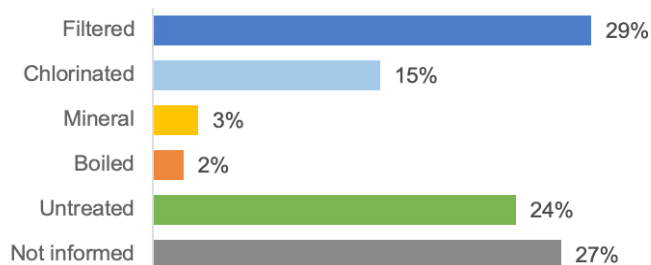
Figure 3: Distribution of most prevalent non-communicable chronic diseases and obesity in the health basic unit based on epidemiological profile.

Discussion

The data inconsistency exposed the lack of knowledge about the importance of health information by health professionals and population. Small number of health community agents in this unit hinders the data actualization for building solid strategies based on population health condition in the territory [10]. Elaboration of primary care action who do not reflect reality leads to unnecessary resource expenditure and make service organization more difficult to meet the users demands with not proper approach for risk factors [11].

Strategies to mitigate the problem of data inconsistency seek to bring new registrations to the unit, updating preexisting files and empower population for participation in the service in order to identify themselves as co-responsible for the organization of the service [12]. In fact, organizational principle of the

SUS supports social participation by users as a co-responsible part of strategies for health services. From this perspective, users should be often included in health-disease by better recommendation to register update data making it a more dynamic process to increase in the number of registrations and quality of available data for a more realistic analysis of population [13].

Primary Health Care is the first level of access to the public health services. This work presented a situational strategic diagnosis in a basic health unit considering institutional, demographic and epidemiological profiles regarding health services at Brazilian triple side border. This observed scenario allowed us to visualize the role of health family teams in the territories. Overall, the health basic units offer most of recommended services including medium to high-risk coverage areas enabling health access to more vulnerable population.
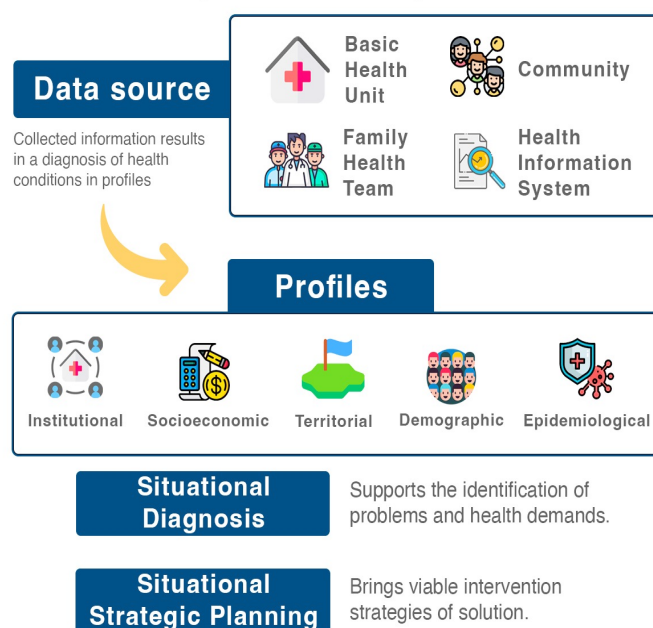
Figure 4: Summary of Situational Diagnosis in Brazilian Health Basic Units at Primary Healthcare.

Conclusion

The main concern is related to data inconsistency provided by e-SUS online platform which limited more reliable Situational Strategic Planning. A critical construction of situational diagnosis based on exploratory territory profile outlined the need for popular health education possibly during waiting time for patient care, the importance of data update and an opportunity to approximate academy institutions and health systems in order to develop strategies to improve health promotion in basic health units.

port in collecting data.

References

1. McMaughan DJ, Oloruntoba O and Smith ML. Socioeconomic Status and Access to Healthcare: Interrelated Drivers for Healthy Aging. Front Pub Health. 2020; 8: 231.

2. Paucar-Caceres A, dos Santos PR, Wright G, Belderrain MCN. Soft situational strategic planning (SSSP): A method and case study of its application in a Brazilian municipality. J Oper Res Soc. 2020; 71: 363-380.

3. Sacks E, Swanson RC, Schensul JJ, Gleave A, Shelley KD, et al. Community involvement in health systems strengthening to improve global health outcomes: a review of guidelines and potential roles. Int Q Community Health Educ. 2017; 37:139-149.

4. Iosti P. Territorialization of care and proximities in a community-based primary care system: What are the results on access to care and resident satisfaction? A case study from São Paulo. Health & Place. 2020; 66: 102451.

5. Matus C. Politics, Planning and Government: Institute for Applied Economic Research, 1993.

6. Yazdi-Feyzabadi V, Emami M, Mehrolhassani MH. Health information system in primary health care: the challenges and barriers from local providers' perspective of an area in Iran. Int J Prev Med. 2015; 6: 57.

7. Chen H, Hailey D, Wang N, Yu P. A review of data quality assessment methods for public health information systems. Int J Environm Res Pub Health. 2014; 11: 5170-5207.

8. Instituto Brasileiro de Geografia: Demographic Census, 2010.

9. Brazil. Ministry of Health. National Primary Care Policy, 2017.

10. Freire DEWG, Freire AR, Lucena EHG, Cavalcanti YW. PNAB 2017 and the number of community health agents in primary care in Brazil. Rev Saude Publica. 2021; 55: 85.

11. Sans-Corrales M, Pujol-Ribera E, Gené-Badia J, Pasarín-Rua MI, Iglesias-Pérez B, et al. Family medicine attributes related to satisfaction, health and costs, Family Practice. 2006; 23: 308-316.

12. Lagarde M, Palmer N. The impact of health financing strategies on access to health services in low and middle income countries. Cochrane Database Syst Rev. 2018; 11: CD006092.

13. Haldane V, Chuah FLH, Srivastava A, Singh SR, Koh GCH, et al. Community participation in health services development, implementation, and evaluation: A systematic review of empowerment, health, community, and process outcomes. PLoS One. 2019; 14: e0216112.