

Life Project: integration of Epidemiological Surveillance and Mental Health sector against suicide attempts in Fraiburgo, Santa Catarina, Brazil, 2014-2017

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Abstract

Objective: to describe the experience of implanting the Life Project in the period 2014-2017 in Fraiburgo, Santa Catarina, Brazil. **Methods:** the project was developed in an integrated way between the Epidemiological Surveillance services and the Psychosocial Care Center I, to approach suicide attempt cases; through meetings with the Health, Education and Social Work services, suicide attempt referral and follow-up workflows and respective responsibilities were defined; training was provided on filling out the case investigation form; data from Notification of Injury Information System (SINAN) were used. **Results:** the epidemiological profiles of the 108 cases were obtained and possible motives were identified, these being mainly conjugal and familial conflicts (85%) and financial difficulties (7%); intervention proposals included mental health groups, support from local health teams oriented by specialist physicians, sociability spaces and campaigns. **Conclusion:** the Life Project provided improved surveillance and care for individuals at risk of suicide.

Keywords: Attempted Suicide; Workflow; Health Care; Epidemiological Surveillance; Mental Health.

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Introduction

The World Health Organization (WHO),¹ in its 2014 suicide prevention report, recognizes suicide as a priority on the global health agenda and encourages member countries to develop and strengthen their prevention strategies using a multisectoral approach. Such events can be avoided in a timely manner, based on evidence and using low cost interventions. According to data presented in the same WHO report, about 75% of suicides occur in low- and middle-income countries and currently only 28 countries have strategic prevention plans.

According to the suicide mortality report of the Americas,² which contains data for the years 2005-2009, Brazil was in eighth place in the number of suicides among the countries of the Americas, and in fourth place in the number of suicides in Latin America.

The project aims to ensure care for individuals who have attempted suicide and to strengthen the integration between the Epidemiological Surveillance and Mental Health services, by means of Psychosocial Care Center I (CAPS I).

Between 2011 and 2015, 55,649 deaths by suicide in Brazil were identified, corresponding to a rate of 5.5/100,000 inhabitants – varying between 5.3 in 2011 and 5.7 in 2015.³ With regard to suicide attempts, no precise data exists worldwide: the majority of countries do not have monitoring systems and, furthermore, these events are known to be the object of social stigma. Suicide attempts can bring numerous sequels, either for the person attempting suicide or for their family.⁴

As regards the Brazilian Mental Health Policy, monitoring, care provision and prevention actions can be seen to be fragile. Making this panorama worse, the Brazilian Action Plan on Mental Health⁵ states that health systems have not yet responded adequately to mental disorders, generating a large gap between the need for treatment and its availability. In low-income countries, between 76% and 85% of people with severe mental disorders are not treated. The problem becomes even more complex owing to the poor quality of care offered to people with mental suffering.

Faced with the need to organize a care network for victims of self-provoked violence and to develop strategies for preventing the risk of suicide, the municipality of Fraiburgo, in Santa Catarina State, has deployed the Life Project. This project aims to ensure care for individuals who have attempted suicide and to strengthen the integration between the Epidemiological Surveillance and Mental Health services, by means of Psychosocial Care Center I (CAPS I).

The objective of this study was to describe the experience of implanting the Life Project in the period 2014-2017 in Fraiburgo, Santa Catarina, Brazil.

Methods

This is an experience report to describe the experience of implanting the Life Project in Fraiburgo-SC in the period 2014-2017. The municipality is located in the midwest region of Santa Catarina State, has a geographical area of 547,854km² and a population of 34,553 inhabitants according to the 2010 Census.⁶ Fraiburgo's economy is mainly based on apple growing, accounting for 60% of apple production in Santa Catarina and 40% of national production.

The process of preparing the Life Project began in 2013, when discussions were held for regional organization of the Psychosocial Care Network (RAPS) and drafting Fraiburgo's Mental Health protocol.

Intersectoral meetings were held to discuss the theme of suicide and how Ministerial Ordinance MS/GM No. 1,876, 14 August 2016⁷ would be implemented. The Ordinance establishes the national guidelines for suicide prevention.

The integration between Epidemiological Surveillance and PCC I enabled the development of a work flow (Figure 1).

The referral and follow-up workflows for meeting demand were established, as shown in this example: Epidemiological Surveillance receives a notification of exogenous intoxication and immediately informs PCCI, via e-mail, to visit and monitor the case identified and to provide the necessary guidance to family members; using information such as this it then maps suicide attempts and deaths. The events are recorded on the SINAN system and on a Notification Control data spreadsheet using Microsoft Excel. The Notification Control spreadsheet comprises the following data: period of occurrence; personal data; address;

education level; occupation; type of attempt; reason; associated mental disorder; recurrence; if receiving treatment and follow-up by service in the catchment area; risk and protective factors.

Input to the spreadsheet is available to and the responsibility of professionals working at the Epidemiological Surveillance service and also at CAPS I. The control provided by the spreadsheet served to define the profile of the population who attempted suicide regardless of age range, as well as for designing suicide prevention actions in the catchment area. After the Life Project was presented to the actors involved, its deployment began in April 2014. The following actions were undertaken:

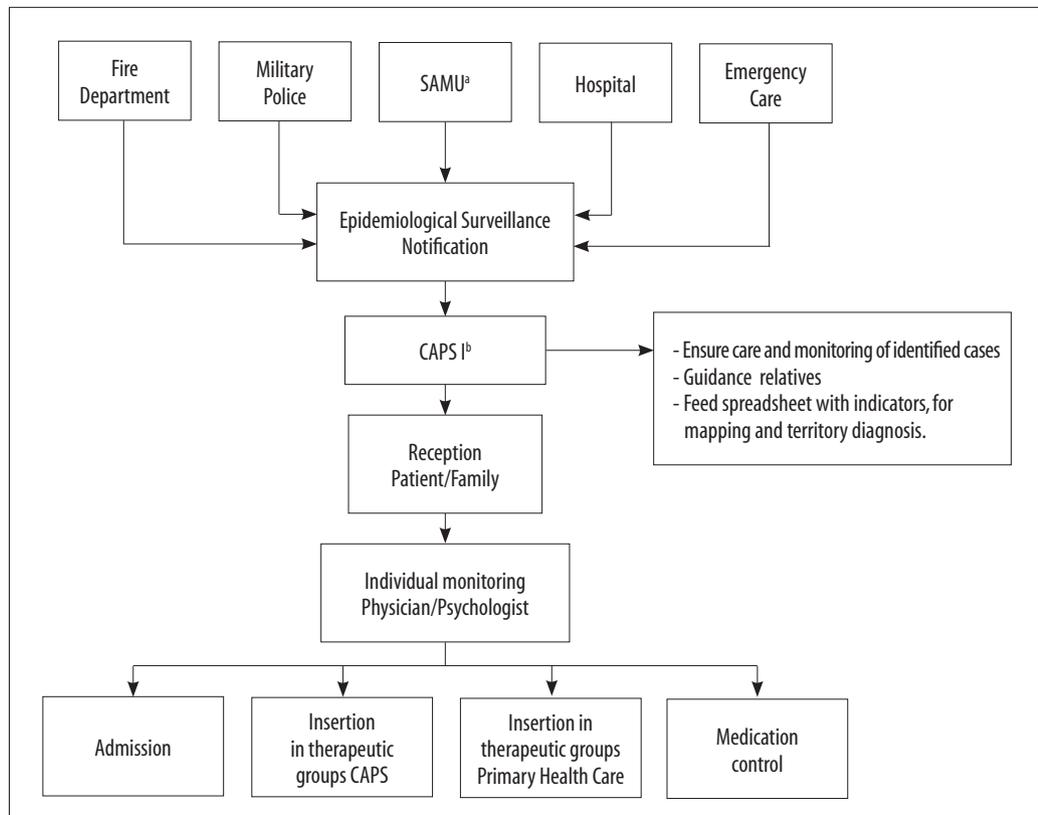
- training of health professionals to identify risk situations and fill out correctly the exogenous intoxication notification form;
- provision of humanized care to people who have attempted suicide, either with individual

accompaniment inclusion in the PCC I and/or Primary Health Care therapeutic group;

- care for family members of people who have attempted suicide and who have died from suicide, through guidance in individual care;
- carrying out actions aimed at health promotion and valuing life; and
- monitoring of cases of death by suicide and cases of attempted suicide, in order to maintain the diagnosis of the catchment area.

SINAN and control spreadsheet data for the period April 2014 to March 2017 were used to describe suicide attempt notifications.

Because this is a health surveillance experience report, the project was approved by the Municipal Health Department of Fraiburgo, respecting the ethical principles contained in National Health Council (CNS) Resolutions No. 466 of 12 December 2012, and No. 510, of 7 April 2016.



- SAMU: Mobile Urgent Care Service.
- CAPS I: Psychosocial Care Center I.

Figure 1 – Flow diagram of care for individuals who have attempted suicide in the municipality of Fraiburgo, Santa Catarina

Results

The experience of the Life Project has enabled dialog between municipal services on their role in the face of issues related to suicide. The scale and continuity of care provided to persons attempting suicide has been increased. Prior to the advent of the project at times this care was limited to one-off visits made by the urgency and emergency service.

The definition of actions allowed the Life Project to approach different segments, with specific strategies aimed at each of them: i) professionals through training; (ii) people attempting suicide through increased and continuous care; (iii) family members by offering guidance; and (iv) the general population through campaigns and actions in the catchment area.

Notification of cases of attempted suicide is compulsory. With the implementation of the project, the municipality of Fraiburgo stopped merely notifying cases and began to analyze the data notified coming from the care provided.

Taking the records held on the electronic spreadsheet for the period April 2014 to March 2017, 108 cases of suicide attempts were identified. Four individuals attempted suicide again, corresponding to recurrence of 3.7%. In the period observed there was a gradual reduction in the number of suicide attempts: 40 in 2014, 35 in 2015 and 24 in 2016 (-40%). From January to March 2017, nine suicide attempts were recorded.

As to the profile of cases registered in the period, most notifications were made by health services: 88.9% of the cases were notified by Fraiburgo Hospital and 8.3% by the Mobile Urgent Care Service (SAMU); the remaining 2.8% were notified by the Military Police (Table 1).

Women accounted for 68.5% of suicide attempt notifications and the majority were young adults with average age of 39 years. The most used method was ingestion of medication (83.7%), followed by ingestion

of pesticides (9.5%), ingestion of cleaning products (5.5%) and jumping from high places (1.3%). Men corresponded to 31.5% of notifications and were mostly adults aged 40 to 50 years old. The methods most often used by men were hanging (47.2%), ingestion of medication (41.1%) and use of weapons other than firearms (11.7%) (Table 2).

The months with the largest number of occurrences of suicide attempts between April 2014 and March 2017 were October (24%), August (21%) and March (11%).

Of the suicide attempts recorded, 4.6% of cases had mental disorders associated with schizophrenia (20%), chemical dependency (60%) and bipolar disorder (20%).

During care provided to persons who attempted suicide and their families, marital conflicts (75%), family conflicts (10%) and financial difficulties (7%) were identified.

Care provision was guaranteed for 80% of family members, although 20% did not use the service, despite active tracing. The guidance provided to families during the monitoring of the patient allowed a more rapid response to the treatment proposed. This form of care did not exist before the Life Project was implanted.

Thanks to the Life Project, the epidemiological profile survey and catchment area diagnosis allowed the development of strategic actions for suicide prevention and health promotion:

- formation of mental health groups in all the Family Health Strategy (FHS) teams;
- twice monthly joint orientation between the FHS, CAPS I and Family Health Support Center (NASF) teams;
- establishment and maintenance of socialization spaces involving healthy eating, physical activity and chronic pain groups; and
- interventions in the catchment area, through campaigns valuing life, conversation circles, folders, newsletters, discussions in existing groups in the catchment area.

Table 1 – Origin of notifications of suicide attempts (N=108) in Fraiburgo, Santa Catarina, April 2014 - March 2017

Origin of Notifications	Total	%
Hospital	96	88.9
SAMU ^a	9	8.3
Military Police	3	2.8

a) SAMU: Mobile Urgent Care Service.

Table 2 – Profile of people attempting suicide (N=108) in Fraiburgo, Santa Catarina, April 2014 - March 2017

Variables	N	%
Sex		
Female	74	68.5
Male	34	31.5
Age group (in years)		
10-12	1	0.9
13-19	7	6.5
20-29	19	17.6
30-39	43	39.8
40-49	25	23.1
50-59	7	6.5
≥60	6	5.6
Area of Residence		
Urban	96	88.9
Rural	12	11.1

Discussion

The experience in implanting the Life Project resulted in increased care for those individuals that presented risk behavior and guidance to their families, in contrast to the limited emergency care predominant in the period prior to the implementation of the Life Project.

In Brazil, the mental health care model prior to Law No. 10,216, dated 6 April 2001 was centered on hospitalizations in psychiatric hospitals. Following the new law, it was redirected to community mental health services in order to promote the guarantee of the rights of persons with mental disorders.⁸ A Psychosocial Care Network (RAPS) was soon established, with the goal of expanding access to psychosocial care, articulating actions between services and intersectoral actions, regulating and organizing care demands and workflows. RAPS proposes qualified care through welcoming and continuous monitoring of persons with psychological distress.⁹

The design of the Life Project care workflow is in keeping with this new configuration of Mental Health Policy, because it ensures the care for people who present risk behavior in the catchment area.

Although SUS does not have standard procedures and workflow to guide health workers' activities in the face of suicide attempts, the doctrinal and organizational

principles of the system allow municipalities to determine and define their own workflows and routines best suited to local reality.¹⁰

According to the Brazilian Agenda of Strategic Actions for Suicide Surveillance and Prevention and Health Promotion,¹¹ suicide attempts should be notified compulsorily and immediately by health establishments, enabling this information to be used both to bring the care network into action and also to follow up on cases. The Life Project represents a way of ensuring that humanized care is provided and also a way of developing strategies for intervention and monitoring.

Implanting the Life Project also led to the creation of the Notification Control spreadsheet, which, apart from recording the data input to the SINAN system, also enables identification of the reasons why suicide was attempted or committed. The deployment of the project has made possible the Suicide Prevention strategies in the catchment area.

In recent years, a reduction in suicide attempts in Brazil and in Santa Catarina State has been seen, according to SINAN data and data obtained through the Life Project. A specific study is needed to identify the factors involved in this reduction. In contrast, the results of the Map of Violence 2014¹² showed an increase in mortality from suicide in the Brazilian population aged 15 to 29 years of 5.1 per 100,000 inhabitants in 2001 to 5.6 in 2014. As the Life Project provided humanized

care to people at risk of suicide attempts and their families, it was possible to obtain data to identify the epidemiological profile of this population.

The data collected corroborate the findings of a study conducted in the state of Mato Grosso in the period from 2008 to 2013,¹³ which demonstrates the predominance of suicide attempts among the female gender and younger women, the vast majority through medication overdose. Results of a study carried out in Barbacena, state of Minas Gerais, in the period from 1997 to 2012,¹⁴ are consistent with those presented here: nonfatal suicide attempts predominated among women who poisoned themselves with medication.

With regard to the months with higher incidence of suicide attempts, there was a slight increase in October, August, March and May. Similar results were found in Mato Grosso state (2008-2013),¹³ although the reasons for an increase in these specific months are not given.

Before the Life Project was implanted, notifications were simply statistics, forwarded to the State Health Department and the Ministry of Health. The role played by municipalities was merely that of notifying cases and they neither analyzed the reported data nor provided healthcare to these people.

The implementation of the project organized the flow of care for patients attempting suicide and to their families, guaranteeing humanized care for these people. The Epidemiological Surveillance service took on the responsibility of informing Psychosocial Care Center I (CAPS I) as to the notifications it received; whilst CAPS I was responsible for providing care, monitoring, mentoring and mapping the cases identified.

It was possible to identify recurrence of cases of attempted suicide. Recurrent cases began to receive specialized care in the municipality as they were

diagnosed as having severe mental disorder. According to the Ministry of Health, studies¹⁵ indicate that persons with serious mental disorders have a higher risk of suicide, and that health professionals should therefore be more attentive to these cases. According to Botega,¹⁶ the mental disorders most commonly associated with suicides are depression, bipolar disorder and addiction to psychoactive substances.

During the development of the Life Project, underreporting was a limitation. Although it has been compulsory since 2011, notification of attempted suicide depends on the commitment of health professionals to providing complete data. As Fraiburgo is a small municipality and little time has elapsed since the deployment of the project, it is not yet possible to measure its impact on assistance to cases of attempted suicide. A greater follow-up period would be necessary for this.

Public health must invest in actions articulating health surveillance with health care. Statistics are not sufficient by themselves, rather careful analysis is recommended in order to convert data into transforming practices and effective results with regard to health promotion, prevention and treatment, as is the case of the Life Project experience.

Authors' contributions

Rohling BSV, Liebl G and Ciesca D contributed in the conception and design of the study, data analysis and interpretation, writing the first version and critical review of the manuscript. All authors approved the final version for publication and declared themselves to be responsible for all aspects of the study, ensuring its accuracy and integrity.

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