

Primary care information system: potential for health promotion

Sistema de informação da atenção básica: potencialidades para a promoção da saúde

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Abstract

Objective: To discuss the use of the Primary Care Information System from the perspective of health promotion.
Methods: A quantitative descriptive study conducted in Family Health Units of 21 municipalities of Florianópolis. Data collection was conducted between October of 2011 and July of 2012, through interviews with health professionals, featuring the use of the Primary Care Information System.
Results: All municipalities surveyed use this information system; nineteen (90.5%) used flow sheets; while eight municipalities (38.1%) used all of the reports.
Conclusion: The data generated by this system enables the planning of health promotion actions by the teams. There needs to be discussion of the data in the meetings and reorganization of primary care activities.

Resumo

Objetivo: Discutir a utilização do Sistema de informação da Atenção Básica na perspectiva da promoção da saúde.
Métodos: Estudo descritivo quantitativo realizado em Unidades de Saúde da Família de 21 municípios da Grande Florianópolis. A coleta de dados ocorreu entre outubro de 2011 e julho de 2012, através de entrevista com profissionais da saúde, caracterizando o uso do Sistema de Informação da Atenção Básica.
Resultados: Todos os municípios pesquisados utilizam este Sistema de informação; dezenove (90,5%) utilizam as Fichas; enquanto oito municípios (38,1%) realizam todos os relatórios.
Conclusão: Os dados gerados por este sistema possibilitam o planejamento das ações de promoção da saúde pelas equipes. É necessário que haja discussões dos dados nas reuniões e reorganização das atividades na Atenção Básica.

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Introduction

The Brazilian Unified Health System has, as its principles, universal access, comprehensive care, popular participation, and equity. The purpose of this system is to disconnect from the model of care characterized by a concentration on medical work in the hospital and focused on treatment of diseases. The system was constructed based on the health system as a right, understanding it as a result of the living conditions of the population. For this, we propose a system guided by health promotion, prevention and treatment of diseases in different levels of care.⁽¹⁾

In order to improve primary care, the new National Care Policy was approved, which establishes the revision of guidelines and standards for its organization, expansion and consolidation.⁽²⁾

The Family Health Program, created in 1994, and modified for the Family Health Strategy, arises as an opportunity to change the biomedical paradigm focused on pathology. Family health is guided by the principles of the Unified Health System as a way to seek consolidation of primary care and approximation of the population to healthcare services. It aims to structure the public health system, proposing to change the care model as a strategy of prioritizing prevention and health promotion, without necessarily abandoning the care service.⁽³⁾

Health promotion is the process of empowering individuals and communities to act to improve their quality of life and health, including greater participation in the control of this process. Health promotion is not solely the responsibility of the health sector, and it goes beyond a healthy lifestyle, in the direction of global well-being. It also refers to a combination of actions that include the development of personal skills, reorientation of the health system, reinforcement of community action, healthy public policies and creation of supportive environments.⁽⁴⁾

Health promotion seeks to stimulate personal and social development by providing information, health education that can contribute to the improvement of life skills. From this, there is an

increase in options available to people to exercise more control over their health and environment, with favorable choices for existence. Empowering people to learn, throughout life, and prepare them for all the steps, such as how to cope with chronic disease or preparing them for external causes that affect health.⁽⁵⁾

Given the accentuated expansion of the Family Health Strategy and the discussion of issues related to the amount of data collected by the teams, the creation of an information system that considered the complexity of the organization of primary care was required,⁽⁶⁾ as the manually collected and archived material is shown to be insufficient for the use of data collected by the professionals. This system developed by the Ministry of Health was named the Primary Care Information System.

It is believed that the lack of recognition of the importance of this system to subsidize the decision-making process has prevented the proper recognition by managers and health workers. However a greater involvement of these actors in the consolidation of the system would facilitate and qualify the planning activities in population health.⁽⁷⁾

Changes in international paradigms of public health, exposed in various health promotion conferences, seek to have more equity to care areas, minimizing inequality; working on promotion policies at local levels. It is known that the greater the range of information available in the system, the easier, more complete and safe become the planning and development of strategies for health promotion. For the usefulness of the Primary Care Information System to be expanded and to streamline decision-making relating to promotion, the development of healthy public policies is suggested, so that they comply with the goals proposed within a viable planning, in accordance with the need for intervention of each community, respecting particular cultural, socio-economic peculiarities, beliefs, habits and customs.⁽⁸⁾

This study aimed to discuss the use of the Primary Care Information System from the perspective of health promotion.

Methods

A descriptive research study was conducted in the Family Health Units of 21 counties that comprise the region of greater Florianópolis, except for the capital. The study sample was composed of 21 professionals responsible for the records of the Primary Care Information System of the counties, considering as an inclusion criterion the indication of the health managers and being linked to the Municipal Health Department. Professionals that were unacquainted with the information system were excluded.

The research instrument was a validated and adapted script administered in the form of an interview,⁽⁹⁾ in the period of October of 2011 to July of 2012. This script was composed of three components: characterization of the institution; completion of the information system of the respective records and reports; and identification of the health education group activities.

For data analysis, descriptive statistics were used by means of absolute and relative frequencies. Collected data were presented in the form of tables and discussed from the theoretical framework of the Ottawa Charter⁽⁴⁾ about health promotion.

The development of the study met national and international standards of ethics in research involving human subjects.

Results

The state of Santa Catarina has 6,248,436 inhabitants and 295 municipalities. The 21 counties of the metropolitan area of Florianópolis, included in this study, have a total population of 590,993 inhabitants, which corresponds to 9.46% of the state population, and consists of 146 Family Health Teams, as shown in table 1.

All of the municipalities surveyed have at least one Family Health team; São José has the largest population (3.4%) and the largest number of teams (n.37; 25.3%), while the counties of Rancho Queimado, São Bonifácio and Anitápolis are composed of smaller populations.

Table 1. Distribution of the total population and the family health teams

Municipalities	Inhabitants n	Teams n(%)
Águas Mornas	5,548	2(1.4)
Alfredo Wagner	9,410	3(2.0)
Angelina	5,250	2(1.4)
Anitápolis	3,214	1(0.7)
Antônio Carlos	7,458	3(2.0)
Biguaçu	58,206	17(11.6)
Canelinha	10,603	4(2.7)
Garopaba	18,138	6(4.1)
Governador Celso Ramos	12,999	5(3.5)
Leoberto Leal	3,365	2(1.4)
Major Gercino	3,279	1(0.7)
Nova Trento	12,190	4(2.7)
Palhoça	137,334	26(17.8)
Paulo Lopes	6,692	3(2.0)
Rancho Queimado	2,748	1(0.7)
Santo Amaro	19,823	7(4.8)
São Bonifácio	3,008	1(0.7)
São João Batista	26,260	8(5.5)
São José	209,804	37(25.3)
São Pedro Alcântara	4,704	2(1.4)
Tijucas	30,960	11(7.6)
Total	590,993	146(100)

Source: Brazilian Geographic and Statistical Institute-IBGE, 2010; National Register of Health Facilities, 2012.

In table 2, it can be observed that all municipalities use the Primary Care Information System, of which 19 (90.5%) use all the forms (A, B, C and D). Regarding the reports that can be generated from this information system, only eight municipalities (38.1%) perform all reports (SSA2, SSA4, PMA2, PMA4), while 12 (57.1%), only do the PMA2 - which is the only one used in 100% of the municipalities.

Table 3 shows that the majority (n 12; 57.1%) of the investigated municipalities do not perform health education activities in groups and, among those who

Table 2. Forms and reports of the Primary Care Information System used in the municipalities

Forms and records	Municipalities	n(%)
Forms A/B/C and D	Águas Mornas, Alfredo Wagner, Angelina, Anitápolis, Antônio Carlos, Biguaçu, Canelinha, Garopaba, Governador Celso Ramos, Leoberto Leal, Major Gercino, Palhoça, Rancho Queimado, Santo Amaro da Imperatriz, São Bonifácio, São João Batista, São José, São Pedro de Alcântara and Tijucas	19(90.5)
No forms A/B/C and D	Nova Trento and Paulo Lopes	2(9.5)
SSA2, SSA4, PMA2, PMA4	Alfredo Wagner, Antônio Carlos, Biguaçu, Governador Celso Ramos, Leoberto Leal, Major Gercino, Palhoça and São José	8(38.1)
SSA2, PMA2	Garopaba	1(4.8)
Only PMA2	Águas Mornas, Angelina, Anitápolis, Canelinha, Nova Trento, Paulo Lopes, Rancho Queimado, Santo Amaro da Imperatriz, São Bonifácio, São João Batista, São Pedro Alcântara and Tijucas	12(57.1)

Source: Data collection in the 21 municipalities of region of greater Florianópolis, 2012.

do (n.9; 42.9%), eight (38.1%) direct these activities for groups of hypertensive and diabetic patients. Participants receive guidance about the disease, the medications, and the monitoring by the Family Health Team. Activities are also conducted with groups of seniors, smokers, walkers, painting and patchwork, as well as school health groups, which are linked to the School Health Program of the federal government. In this study, it was identified that the nurse is invited by the School Board to develop health education activities according to the needs of students.

Table 3. Health education activities developed in group

Health education groups	Municipalities	n(%)
Hypertensives and diabetics	Águas Mornas, Angelina, Antonio Carlos, Biguaçu, Governador Celso Ramos, Rancho Queimado, Santo Amaro e São Bonifácio	08(38.1)
Seniors	Angelina e Antonio Carlos	02(9.5)
Smokers	Antonio Carlos	01(4.7)
Walking, painting and patchwork	Biguaçu	01(4.7)
School health	Águas Mornas e Alfredo Wagner	02(9.5)
No groups	Anitápolis, Canelinha, Garopaba, Leoberto Leal, Major Gercino, Nova Trento, Palhoça, Paulo Lopes, São João Batista, São José, São Pedro de Alcântara e Tijucas	12(57.1)

Source: Data collection in the 21 municipalities of the region of greater Florianópolis, 2012.

Discussion

The study was limited to discuss the use of the Primary Care Information System in a quantitative approach. Therefore, it is necessary to expand the understanding of the use of this system, from different methodological foci and new sample groups.

The information produced on the implementation of the Primary Care Information System can contribute to the characterization and reorganization of the health services offered to the population of the municipalities of greater Florianópolis, according to the health needs. This system has the potential to contribute to the improvement of quality of life and to diminish inequities in the population, depending on the effort of many actors to develop health promotion practices.

The Primary Care Information System produces reports that help the teams themselves that, linked to municipal managers, monitor the work and assess its quality. In this study, one can see that the Family Health teams use this system, whose data can be

used for the analysis of social reality, planning and organization of health promotion activities.

However, it is emphasized that for the actions to be solidified, the data need to be consolidated, related, analyzed and discussed in the local and municipal environment. Thus, the Primary Care Information System provides subsidies to evaluate the developed activities, permits adoption of appropriate behaviors, and even raises difficulties of the teams, it is characterized as a guiding instrument of team work that should be used to achieve the proposed objectives and agreed goals.⁽¹⁰⁾

For the development of health promotion strategies to occur, professionals need the understanding of this issue, since, in the majority of cases, they confuse the concept of health promotion with that of disease prevention.⁽¹⁰⁾ We emphasize the importance of health promotion strategies to overcome the health determinants that affect the process of living and becoming ill. The health promotion activities such as educational activities can be directed to certain groups, such as those with chronic diseases, the elderly, adolescents and children. The adoption of healthy lifestyles capable of providing longevity of individuals, through the educational approach, should be reinforced, but, as observed in this study, it often occurs in a preventive manner with a methodological approach of unidirectional transmission of knowledge, whose the focus is not on health promotion.⁽¹¹⁾

The data records in the Health Information Systems generally fulfill an obligatory bureaucratic function, although these data demonstrate the need for educational actions of promotion aimed at reducing the health inequities. Health teams, in their daily practice, should adopt health-promoting actions at the local and municipal levels, as the social and health reality involves multiple factors and are important processes to work with the individual, family and community.⁽¹²⁾ These factors are related to many global health problems, including the economic crisis, climate change and a wide range of health threats. There are new challenges and opportunities to redesign, reposition and renew efforts to strengthen health promotion and its role in reorientation of health services.⁽¹³⁾

It is noteworthy also that the majority of health promotion activities, when performed by Family Health Teams, have little to do with the statistics produced by the system. These activities serve more to charge the productivity of the professionals, than to be an instrument that contributes to the development of health promotion actions. On the other hand, the Health Information Systems provide knowledge of health status, sociocultural and economic situation, but still require subjective data, such as lifestyles, risk situations, unemployment, income and others that are important elements that can contribute to the organization of health promotion actions.

Health Information Systems offer data of the situational analysis so that health planning occurs according to the reality and needs of each community, decentralized and regionalized, aimed at the production of quality of life. We highlight the organization of actions of the teams, with a focus on community participation, social control, and educational and health promotion activities.⁽¹⁴⁾

In Catalonia (Spain) the health information networks are integrated, there is an electronic medical record that shares clinical information that is accessible from any health system, either primary care or the hospital.⁽¹⁴⁾ The development of an information system is an essential tool for improving primary care in Spain.⁽¹⁵⁾

In the Primary Care Information System, there are forms used (A, B, C and D) and reports (SSA2, SSA4, PMA2 and PMA4) that, once completed, allow the organization and maintenance of data collected by the Family Health team professionals about the care and procedures provided, as well as in relationship to the enrolled population. These recording instruments are used in municipalities investigated, according to table 2.

It is noteworthy that the completion of the forms of this system is one of many difficulties encountered by the staff in the working model of the Family Health Strategy of 31 municipalities of the state of Rio Grande do Sul, according to research about the need for education and training of professionals.⁽⁷⁾

Form A is completed by the Community Health Agent in the home visits for the registration of the families. It enables awareness of the total number of people followed by the team, their age, sex, education level, occupation and the referred diseases. In addition, the housing conditions are recorded: type of house, garbage destination, mode of treatment and supply of water at home, and fecal and urinary destination.⁽¹⁶⁾ The use of this record was also demonstrated in this study, when 90.5% of the municipalities demonstrated its implementation, as shown in table 2.

Form B is for monitoring of priority groups: pregnant women; hypertensives; diabetics; patients with tuberculosis and leprosy. The users belonging to such groups must have systematic monitoring by the Family Health Team and are visited monthly. Form B-GES (Pregnant) permits knowledge of the pregnant women in each coverage area, the application of tetanus vaccine, nutritional status, prenatal consultations and exposure to risk factors. It is the Community Health Agent, through the form B-HAS (Hypertension), who informs the team about hypertensive patients that follow the recommended diet, the use of medication, and the practice of physical exercise. Such information allows for the identification, for example, about the adherence to medication and non-medication therapy. The form B-DIA (Diabetes) includes the same data of form B-HAS, added to the patient information on the use of oral hypoglycemic agents and insulin.⁽¹⁶⁾

The monitoring of patients with tuberculosis occurs through form B-TB (Tuberculosis), with the objective of verifying the use of medication, sputum collection, and the contacts. This information also constitutes the monitoring record of users who have leprosy (Form B-HAN), adding data on self-care performance for the prevention of disabilities.⁽¹⁶⁾

A study on the use of forms of the Primary Care Information System by professionals revealed that, even for the higher incidence diseases (hypertension and diabetes) or priority monitoring conditions (pregnant women), many times form B (B-HAS; B-DIA; B-GES) was not used by the team⁽¹⁶⁾ It is highlighted in this study that only two municipali-

ties (9.5%) studied did not use Form B in the work process of the Family Health teams, as noted in table 2.

Form C (Child Card) permits one to identify the profile of children registered in each area, to identify birth weight, height, head circumference, 5' Apgar, and type of delivery. The measurement of anthropometric data (weight and height) monthly enables the team to monitor child development and adopt relevant measures, if needed.⁽¹⁶⁾

In form D, the daily record of activities is performed, procedures and notifications developed by professionals. With the completion of this form the team collects productivity data, types of consultations, medical referrals, procedures performed and notifiable diseases.⁽¹⁶⁾

An analysis of scientific literature about the Primary Care Information System and its use by the Family Health team pointed out that the difficulties related to the system are in the interpretation, content and number of files, in addition to difficulties related to professional qualification and practice in the use of data to guide actions.⁽¹⁷⁾

Accordingly, we call attention to the system as the source of the record and data storage, since the main concern of the teams is on completing the daily work forms and not on the analysis of the information that it is able to produce for the realization of the local programming. Therefore, limited to the record, this information system is not used as a basic management tool for planning and evaluation of the promotion, prevention and health rehabilitation activities and the transformation of the local situation,⁽⁸⁾ a reality that needs to be discussed with the objective of improving the health of the population.

In relationship to the PMA2 report, it is completed monthly by a higher level professional, in general nurses, who collect the form D from the entire team; this instrument consolidates productivity activities and procedures performed by area, forwards a copy to the Municipal Health Department, and retains one copy in the unit, for discussion at the monthly staff meeting, as shown in table 2.

Among the productivity activities provided in the PMA2 report are the medical appointments,

the type of medical and nursing care, laboratory exams, medical referrals and home care. In relationship to the procedures, the total of these that is performed by the health team (sanitary inspection visit, individual care by higher level professional, dressings, sutures, inhalations, injections, removal of stitches, oral rehydration therapy, attending health education groups and meetings), except medical consultations.⁽¹⁶⁾

The PMA4 report that, according to this study, is performed in only eight (38.1%) municipalities (Table 2), is intended for the monthly consolidation of the PMA2 report data, aggregating the information concerning to the production of services and the occurrence of diseases and/or situations considered as markers, by the municipality.⁽¹⁶⁾

With regard to the SSA2 report, conducted by nine (42.8%) of the municipalities of this research, according to Table 2, it consolidates information about the health status of families monitored in each area. The data for its completion are derived from Forms A, B, C and D and refer to micro-areas of a given area. There is also the SSA4 Report, used in eight (38.1%) municipalities with the objective of consolidating the data on the areas of the same municipality, by model of care (PACS or PSF) and zone (urban or rural).⁽¹⁶⁾

Authors recognize that the Health Information System has flaws inherent in both the software and in how to operationalize it, but point out that it is critical to point to the possibilities for its use. Reports and productivity tables, generated by the system, provide results for the development of population-based diagnosis, which should be used in the organization of Family Health, in the actions of each professional in the context of teamwork and service management. However, research conducted by the authors pointed out that the team chooses other instruments than those produced by this information system to guide the planning of its actions.⁽¹⁸⁾ Many of the records in the system contain repetitive questions that distort the collected data and, consequently, the teams tend to analyze only the data related to certain diseases, basic sanitation and hygiene practices.⁽¹⁹⁾

Despite the difficulties described regarding the Health Information System, it should be a fundamental database in Primary Health Care.⁽¹⁸⁾

The Family Health Strategy has as its central role an educational practice aimed at health promotion. The use of the Primary Care Information System as an instrument of work of the teams has significant data that enable the targeting of the work process and health education activities. However, more than half of the investigated municipalities did not perform health education activities in groups.

The educational groups aim to promote opportunities for interaction and learning, which represents an advance in relationship to the classical perspective of the teams in taking groups as spaces for passing of information and prescribing measures for healthy living. They can be understood as powerful collective care environments, which favor group discussions and a change in practice: from the perspective of only informing and reproducing to the perspective of producing integrated care.⁽¹²⁾

The conception that the health professional has of promoting health, influences his/her practice and is impacted through his/her actions to meet the broader concept of health promotion as quality of life, directing the work of nurses in order to develop an enhanced vision of the socioeconomic and cultural context of the population, but also to know, understand and consider the social determinants of health as indicators that expand or reduce the vulnerabilities of population groups.⁽²⁰⁾

One study⁽²¹⁾ revealed health promotion contemplated in groups of individuals with arterial hypertension overcoming the healing vision focused on medicalization and they perceived advances in the understanding of these users, about their health-disease process, who opted for new possibilities of being healthy, such as leisure options, healthy eating and physical activity opportunities that contributed to their quality of life.

It showed the incorporation of health promotion actions far from the concrete practice of the professionals, which is based on an individual and curative biomedical model. It is important that health professionals understand that promotion involves various intervention strategies, operating

from the clinic to the context of social and political determinants of the health-disease process that can stimulate the empowerment of multiple social actors.⁽²¹⁾ In addition, health professionals need to reflect on the increasing technical complexity needed to plan, implement and evaluate health promotion activities. Professionals must have skills to interpret and synthesize data and health information and to operate in complex organizational structures.⁽²²⁾

Conclusion

The use of the Primary Care Information System should move beyond the prevention of disease to health promotion. From this perspective, form A, which includes the living conditions and health of individuals and families, enables a diagnosis and organizing of health practices, depending on the view of the professional. It also points to the use of form D, as a potential for the development of health promotion activities, however, for this to happen, professionals need to understand the concept of promotion. The realization of the reports in the municipalities participating in this study enables us to infer that the consolidated data are not used by all municipalities to plan health promotion practices in their territories.

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Collaborations

Heidemann ITSB states that she contributed to the design of the research, analysis and interpretation of data, critical review of the article and approval of the version to be published. Costa MFBNA cooperated with the collection, analysis and interpretation of data, writing and critical review of the article.

Hermida PMV; Marçal CCB and Cypriano CC state they collaborated with the analysis and interpretation of data, writing and critical review of the article.

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