ABSTRACT NUMBER **025-0376**

Why doesn´t it work so well? Analysis of a healthcare program in a Municipal Health Department

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POMS 23rd

Annual Conference

Chicago, Illinois, U.S.A.

April 20 to April 23, 2011

Abstract

The Brazilian Health System's priorities are not always successful. Porto Feliz, a municipality of less than 100 thousand inhabitants enhanced programs regarding diabetes and hypertension for senior citizens. Indicators show that utilization of the program's structure is lower than expected. Process analysis showed there is room for improvement.

Keywords – Patient and process flow improvement; Behavioral operations in healthcare delivery systems; Operations strategy in the healthcare sector; Quality and safety improvement in healthcare

Introduction

Brazilian Public Health System ("Sistema Público de Saúde Brasileiro" – SUS), established by the Constitution of 1988, which prescribes that "*health is a universal right and a duty of the State*," was configured as a regionalized, hierarchical network with a single point of command at each government level because its federative entities (Union, states and municipalities) are autonomous, with exclusive purviews and legislative capacity. Social policy implementation under a federative system requires, on the one hand, prescribing the duties of the various levels of government for each policy area. On the other hand, adopting inter-level articulation instruments to induce cooperation and complementary action (Brazil, 2003). Therefore, inter-manager agreements occur on actions, services provided, service organization and other relationships within the public health system. As a consequence, Federative nations are required to build unity under diversity or, in other words, balance autonomy, interdependence and mutual control across various government levels (Abrucio, 2001). The SUS operates on two main fronts: the Family Health Program ("Programa Saúde da Família") and Basic Health Units ("Unidades Básicas de Saúde"), which provide primary health care in 5,295 municipalities; and a network of clinics and hospitals,

either public or hired by SUS, to provide secondary and tertiary care (Almeida-Filho, 2011). Both fronts acknowledge municipalities as the main parties responsible for the health of their residents (Brazil, 2006).

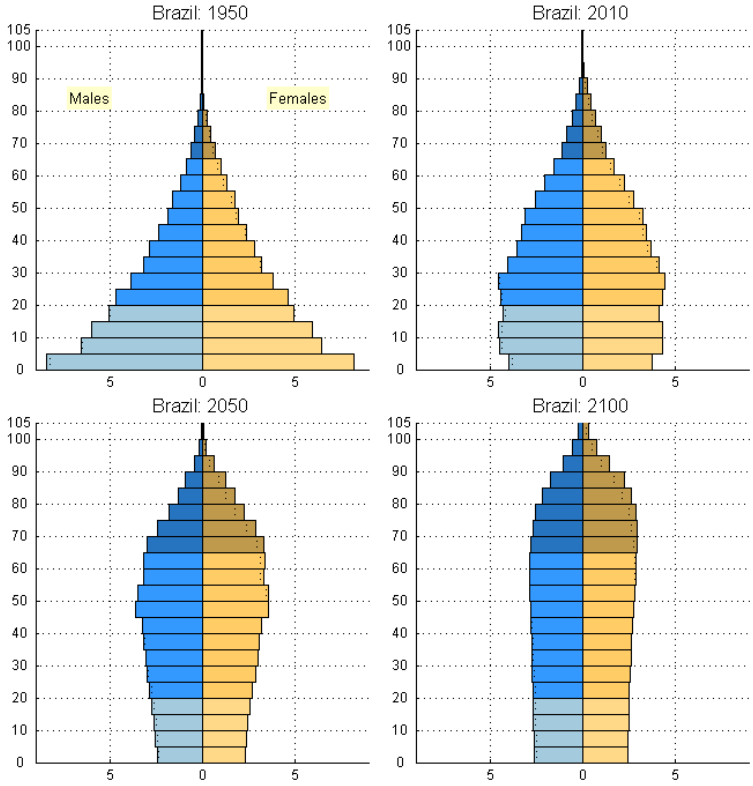
Beginning with 2006 Pact for Health ("Pacto pela Saúde"), municipal managers are supposed to agree to fully take charge of the actions and services provided in their territories. Municipalities have specific health-management units. Municipal managers must invest their own funds, in addition to those provided by the Union and the states. Municipalities formulate their own health policies and are also partners in the application of national and state policies. They coordinate and plan SUS on the municipal level, in line with federal standards and state-level planning. They may form partnerships with other municipalities to ensure full care for the population, covering complex procedures that they are not equipped to provide.

The Pact innovated management processes and instruments in an attempt to add efficiency and quality to health-related actions and services, based on the lessons learned in 23 years of SUS and to face the epidemiological and demographic transitions Brazil has been experiencing. One of the dimensions of the Pact for Health is the Pact for Life ("Pacto pela Vida"), which has senior citizens' health care as one of its priority targets. Municipal health managers must implement actions leading to the construction of comprehensive senior health within their territories.

In parallel with this change in disease loads, Brazil underwent rapid demographic changes that produced an age pyramid where adults and seniors have greater relative weight (Schmidt, 2011). According to Brazilian Geography and Statistics Institute ("Instituto Brasileiro de Geografia e Estatística" – IBGE, 2008), Brazil is now home to approximately 20 million people who are 60 and older (10% of national population). According to statistical projections from the World Health Organization – WHO, from 1950 to 2025, the Brazilian seniors group will have increased fifteenfold, while the total

population will quintuple. Brazil will then have world's sixth largest senior population, reaching 32 million citizens 60 years and older by 2025.

Figure 1 – Brazilian population by age and gender (absolute figures)

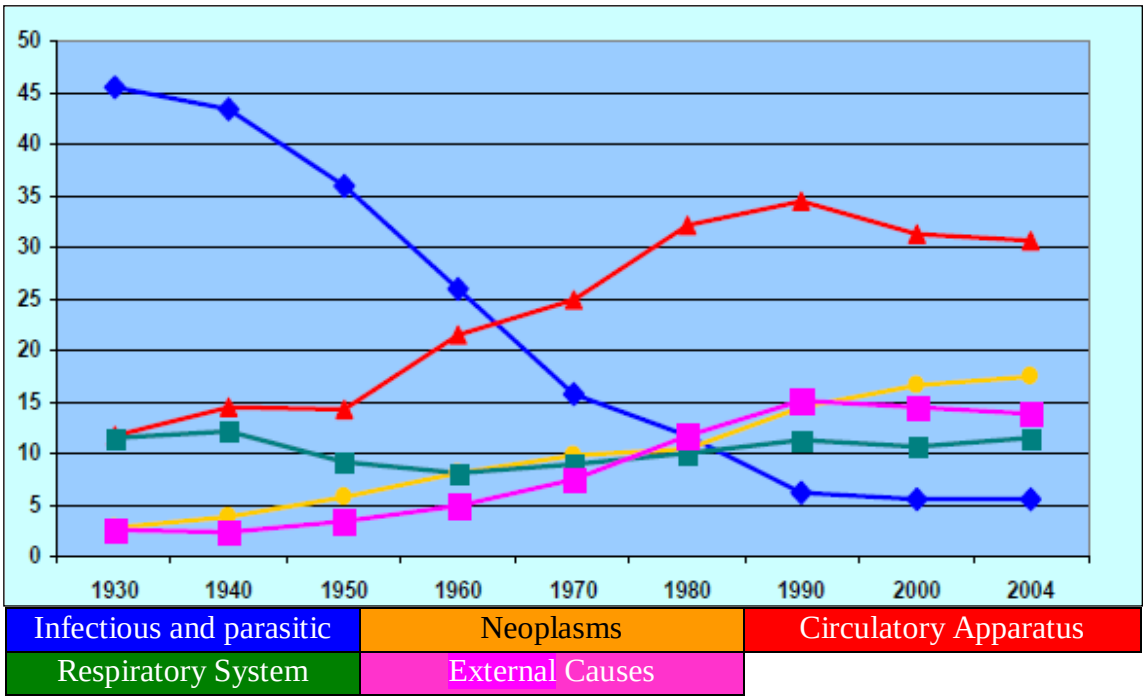


Source: United Nations, Department of Economic and Social Affairs, Population Division (2011): World Population Prospects: The 2010 Revision. New York.

Comparisons between IBGE projections for 2004 and the 2008 revision show how fast the demographic transition has been in Brazil, indicating a demographic standard similar to a developed nation's, despite the persistent inequality among various social strata (Brito, 2010).

An increase in the number of senior citizens usually comes hand in hand with long-term health issues that place a burden on both the individual and society.

Figure 2 – Evolution of Proportional Mortality (%) from 1930 to 2004



Source: Batistella, 2007

Conditions arising from chronic non-transmittable diseases have been the main causes of death among the senior population, following a worldwide trend. Therefore, chronic non-communicable diseases (CNCDs) have become a health priority in Brazil – 72% of deaths in 2007 were attributed to them (cardiovascular diseases, chronic respiratory diseases, diabetes, cancer, kidney diseases and other). This distribution is in sharp contrast with 1930, when infectious diseases were responsible for 46% of deaths in Brazilian state capitals. The change took place within a context of economic and social development, marked by social advances and solution of the main public health problems existing at that time.

Although they differ widely, chronic diseases have many risk factors in common. Some of these factors are preventable: high cholesterol, high blood pressure, obesity, tobacco and alcohol consumption. The risk of developing a chronic disease can be reduced by

dietary changes and by taking up daily exercises, maintaining normal weight and eliminating tobacco consumption.

The therapeutic arsenal against chronic diseases such as high blood pressure and *diabetes melittus* is frequently reinforced. However, despite all of the investment made in the area, those who treat these conditions still stumble upon an ancient problem, the failure of patients to comply with treatment (whether medications-based or not). Compliance with treatment is crucial to the success of the therapy put in place by MDs and other health-care providers (Gusmão, 2009). WHO defines compliance with chronic treatment as the extent to which a person's behavior (represented by medication utilization, dietary compliance, lifestyle changes) corresponds to the recommendations. (WHO, 2003; MS 2005)

According to the WHO, main factors influencing compliance with treatment include: health-care system and caretakers, disease, treatment and patient-related factors (WHO, 2003). Patient-related factors that interfere with the compliance process may be related to bio-social characteristics, such as age, gender, race, education, socio-economic level, occupation, marital status, religion, health-related beliefs, life habits and cultural aspects (Gusmão et al, 2009). Therefore, the frequent notion that patients are the only ones responsible for compliance with their treatment is misguided and often reflects lack of awareness of how other factors affect people's behavior and their ability to comply with treatment (OMS, 2003).

Brazilian Ministry of Health has launched several strategies and actions to reduce the burden of cardiovascular diseases on Brazilian population. The National High Blood Pressure and *Diabetes Mellitus* Care Program ("Programa Nacional de Atenção a Hipertensão Arterial e *Diabetes Mellitus*") is one such. This program comprehends a range of actions involving health promotion, prevention, diagnosis and treatment with high blood pressure. Its goal is to reduce the number of admissions, emergency care

utilization, increased expenditures related to treating complications, early retirements and cardiovascular mortality, and consequently improve life standards of the patients. The year 2003 was the beginning of the implementation of SIS-HIPERDIA, a computerized disease management system conceived to list and track patients with high blood pressure and/or *diabetes mellitus* followed by SUS's Basic Care system, generating information for local managers at the municipal and state health bureaus and Ministry of Health. In addition to listing patients, this System allows tracking and ensuring provision of the prescribed medications, as well as, on the medium run, defining the population's epidemiological profile and consequently implementing public health strategies. In addition, the Medication at Home Project ("Projeto Remédio em Casa") was created as a pharmaceutical support and dispensing tool for both Pressure and Diabetes Program.

For the Ministry of Health in the last decades, the Family Health Program has been the main strategy to provide a framework for basic care on the part of local health care systems. It is supposed to provide ideal conditions for Chronic Disease treatment via the multidisciplinary teams needed for such care and because it creates clearly defined geographic areas that allow a better interface with the community. This community-oriented care strategy prioritizes preventive, promotional, educational, and rehabilitation actions, but also encourages community organization and participation. The work is done by multi-professional teams (medical doctors, nurses, orderlies and community agents) responsible for family service and care within a given geographic area.

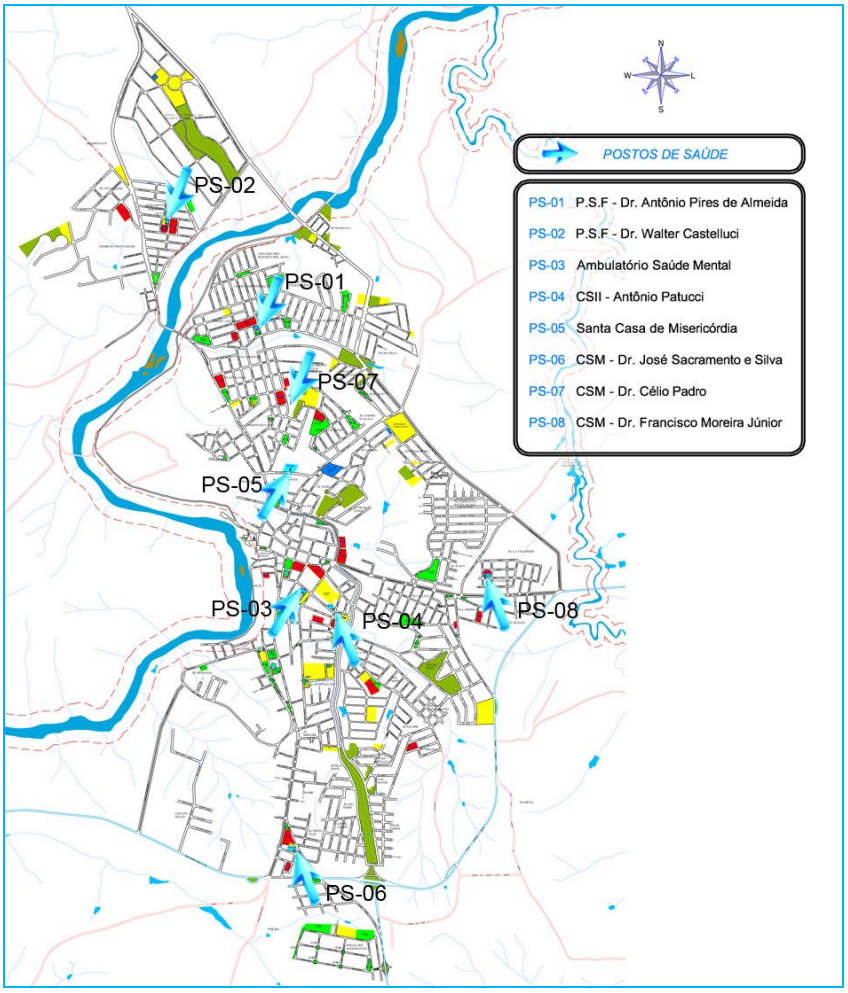
Care is delivered to the population at the so-called Basic Family Health Units ("Unidades Básicas de Saúde da Família"). These units are health care stations providing continuous basic-specialties care. The model's main feature lies in the regular house calls from community health agents ("agentes comunitários de saúde" – ACS), and, when needed, MDs and nurses. The community health agent was created as a

regular health profession in 1999 by Decree No. 3.189, which acknowledges the work of ACSs as being of “relevant public utility”. In January 2002, the Ministry of Health submitted to the President a Draft Bill creating the ACS profession, in the public servants carreer. Bill No. 6.035/2002 is, still in the beginning of 2012, under fast-track appreciation in Congress.

Community health agents are the workers responsible for disease-prevention and health-promoting activities within communities, under the coordination of an MD or health manager. They must reside in the community and undergo training to better understand the causes of diseases and prevention techniques, thereby providing a link between the population and the health system. The Family Health teams are the first point of contact with the local health system. They are expected to coordinate care, and try to provide an entranceway for the diagnostics, specialty care and inpatient services. Health services and health-promotion actions take place at health facilities, at patients’ homes, and in the community (Paim et al, 2011).

The Municipality of Porto Feliz (SP) and the DAQUAHAS & DM Project

Figure 3 – Map of the Municipality of Porto Feliz, SP



Porto Feliz is a municipality located in the state of São Paulo, with 556.56 square kilometers and 49,225 inhabitants. According to the 2010 Management Report, Porto Feliz Municipal Health Network consists of a Health Bureau that includes Administrative and Technical Coordination, an Evaluation and Control Unit, Audit, Social Services, Transportation, Dental Care Coordination, Inventories Coordination, and a community Board. The health units are: 02 Basic Health Units; 06 Family Health Program Units; 04 specialty ambulatories; 01 Municipal Pharmacy; Sanitary and Epidemiological Surveillance.

The municipality of Porto Feliz implemented the Family Health Strategy ("Estratégia Saúde da Família" – ESF) in 1999, initially with two PSF ("Programa Saúde Da

Família") teams. Over time, the program has been growing, and became more comprehensive in 2004. By 2011, the municipality had ten full Family Health Teams. The teams were distributed across seven Basic Family Health Units in the outskirts of the city.

According to data obtained in March 2011 from SIAB ("Basic Care Information System", Sistema de Informação da Atenção Básica – www.siab.datasus.gov.br), Porto Feliz had 10,008 families enrolled with the ESF, totaling 35,031 individuals and covering 73.04 % of the local population.

According to Municipal Health Bureau ("Secretaria Municipal da Saúde" – SMS) data, only 54.56 % of hypertension and 58.56 % of diabetes patients, identified by community health agents, were enrolled in HIPERDIA. Only 8.08 % were supported by the Medication at Home Project. One of the goals set for 2010 was to monitor 80 % of hypertension and diabetes patients listed at the ESF/EACS. The goal was to be attained using the Systemic High Blood Pressure and *Diabetes Melittus* Detection, Care and Quality Project ("Projeto de Detecção, Atenção e Qualidade da Assistência à Hipertensão Arterial Sistêmica e *Diabetes Melittus*") to be implemented by all of the municipality's family health units. According to the 2010 Management Report provided by the SMS, this goal has not been reached so far.

Figure 4 – Evolution of Hypertension and Diabetes patients in Porto Feliz, SP.

INDICATOR	2005	2006	2007	2008	2009	2010
Total Hypertensives in the municipality **	**4,678**	**5,210**	**5,398**	**5,369**	**5,909**	**6,155**
Listed Hypertensives as share of the population (%) **	**9.37%**	**10.24%**	**10.41%**	**11.66%**	**12.37%**	**12.83%**
Total listed Diabetics **	**1,438**	**1,501**	**1,586**	**1,611**	**1,719**	**1,907**
Listed Diabetics as share of the population (%) **	**2.88%**	**2.95%**	**3.06%**	**3.50%**	**3.60%**	**3.97%**
Family Health coverage (%)	28.8	33.03	34.72	50.46	61.02	72.95

** – PROJECTED TOTAL BASED ON THE POPULATION ENROLLED WITH SIAB
Source: Porto Feliz Municipal Health Bureau, São Paulo. 2010 Management Report.

Purpose

The purpose of this paper is to analyze the management of a critical process in health care provision..

Method

This paper examines the process used by the Family Health Strategy to study actions and services the Porto Feliz municipal health bureau offers to patients with systemic hypertension and *diabetes mellitus.*

For the purposes of this paper, "process" means a group of inter-related working activities characterized by requiring certain inputs and tasks, implying added value towards a certain outcome. The outcome depends on processes, which, in turn, depend on the outside environment and on the structure available (Fleming, 1981).

The research was a qualitative exploratory survey. The survey was conducted by means of interviews with a sample of all actors involved in the issue of low adhesion. We interviewed 44 community health agents, 3 orderlies, 7 nurses, 4 medical doctors and 44 hypertension and/or *diabetes mellitus* patients from Porto Feliz.

The survey involved two stages:

1) Three different questionnaires were prepared to interview (i) community health agents (ACS), (ii) MDs, nurses and orderlies, and (iii) hypertension and diabetes patients. The questions were developed based on the Municipal Health Bureau's prior assumptions as to reason for the low degree of adherence to the chronic diseases care program.

The sample was not randomized, because interviewed professionals were selected according to their availability at PSF units. The patient population also was determined according to the availability of Hypertension and Diabetes patients, chosen among the non compliant ones, according to the ACSs information.

2) The second stage of the survey involved municipal health bureau's top managers. They were asked to answer the questionnaire "Assessment of Chronic care – ACIC" (Bonomi et al, 2002), which is part of one of the Robert Wood Johnson Foundation's programs (ICIC - Improving Chronic Care). It is based on the Chronic Care Model developed by Edgar Wagner (1998), and is intended to evaluate health-care operations management.

The questionnaire is divided into three sections. The first section is concerned with an evaluation of the Health System's organization; the second one concerns community outreach. The third section is sub-divided into four parts (self-care support, clinical decision support, delivery system design and clinical information system). Finally, it includes an evaluation of how the care model's components integrate with chronic conditions.

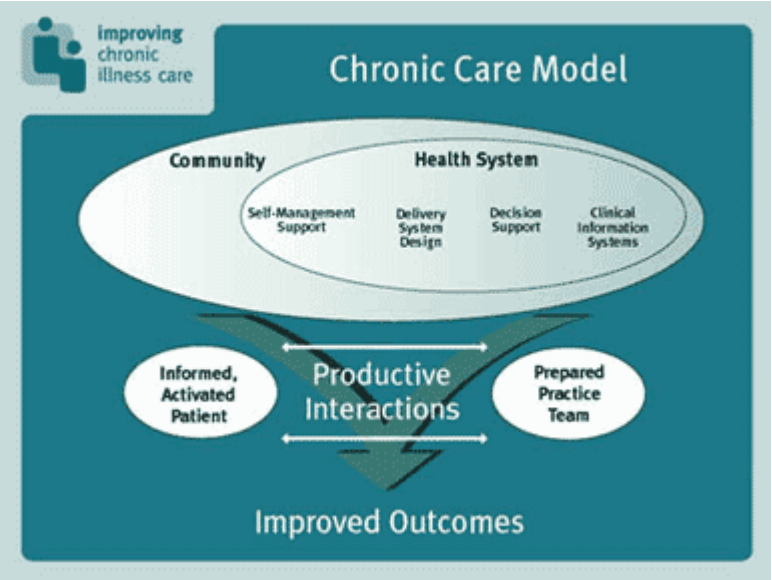
Each component is rated on a 0-11 scale, where 0 represents an extremely negative view and 11 represent an extremely positive view. In each part, the components are scored. For results between 0 and 2, the care system is rated as "limited support for chronic care"; between 3 and 5 as "basic support for chronic care", between 6 and 8 as "reasonably good support for chronic care", and between 9 and 11 as "fully developed chronic care".

The Chronic Care Model draws attention to the changes and adaptations health systems require to provide proper care to the chronically ill. The model includes six focal points for care improvement:

Health System Organization: the degree to which the system is organized to improve care to the chronically ill; **Community Resources**: the degree to which the system is able to build alliances alliances and partnerships to improve coverage and expand health-care services; **Self-Management Support**: the chronically ill and their families lay a leading role and are the main parties responsible for their health; **Delivery System**

Design: the degree to which flows, functions and tasks have been established to make sure that the patient receives care; to which all of the workers who provide care have access to current and unified information on the patient's status; to which the reference and counter-reference network is established to ensure follow-up as part of the standard procedure; **Clinical Decision Support**: the degree to which the health system uses protocols to foster integral care that can be used on a routine basis by primary-care workers; **Clinical Information System**: the presence and status of an information system capable of identifying both an individual patient and a population of patients.

Figure 5 – Chronic Care Model



Source: Wagner (1998)

Survey Results

1. Interviews with Community Health Agents

We interviewed 30 community agents – out of a total of 56 – from ten of the city's PSF teams.

Table 1: Selected Questions and Answers – Community Health Agents

QUESTION	%	ANSWER
How long have you been on the job?	27(a) 27(b)	(a) Up to 6 months; (b) 7 to 12 months
How many families does each community agent serve?	47(a) 33(b)	(a) Between 150 and 200 families per month; (b) Between 200 and 250 families per month.
Average time spent on each house call	40	16 to 20 minutes.
The purpose of a community agent	57(a) 23(b) 20(c)	(a) To provide a link between the health unit and families; (b) To provide guidance to patients; (c) To check the health status.
Awareness of causes of the diseases	23(a) 20(b)	(a) Incorrect answers about the causes of SAH (b) Incorrect answers about the causes of *Diabetes Mellitus*
Awareness of consequences of the diseases	20(a) 27(b)	(a) Incorrect answers about the consequences of untreated SAH; (b) Incorrect answers about the consequences of untreated *Diabetes Mellitus*
Training received by community health agents	33	Believe the training they get about both diseases and their job too basic
Receptiveness of the population towards community health agents	90	Claimed that the population is quite receptive to PSF and the ACSs
Explanation for the lack of population adhesion to programs, services and actions	27(a) 20(b)	(a) Believe lack of information about PSF to be the main explanation for low adhesion; (b) Believe that the fact that some families have private health insurance explains the low adhesion
Do patients follow self-care recommendations?	43(a) 47(b)	(a) Claimed that they do; (b) Claimed that they do not
Did you ever receive complaints from the population about care at units and/or referrals?	80	Claimed that they did
What kind of complaint?	47(a) 17(b) 13(c)	(a) Long wait for an appointment; (b) Absent medical doctors; (c) Care provided by nurses (as).
Did you ever receive complaints from the population about lack of medication?	67	Claimed that they did
If you could do something to improve chronic care, what would it be?	37	Giving the population more information on the diseases and PSF might improve chronic care and treatment.

Source: Nascimento et al (2011)

2. Interviews with medical doctors, nurses and orderlies

Seven nurses (out of twelve), four doctors (out of ten) and three orderlies (out of twenty-four) from the health units were interviewed. Interviewing this group required reconciling interviews with professional schedules. Often MDs were absent from their units, allegedly due to reasons including training activities, sick leaves and conferences. In the mornings, the units were full due to a process known as *acolhimento* (receiving patients who have not made appointments but need somewhat urgent care). After this period, appointments begin, which makes for a busy schedule for health workers and leaves them little time available to meet with the interviewers.

Table 2: Selected Questions and Answers – Medical Doctors, Nurses and Orderlies

QUESTION	%	ANSWER
How long have you been on the job?	36	For up to six months
What are the causes for the population's lack of adhesion to the program?	43	The main cause of low adhesion is the lack of knowledge about the diseases and about the PSF itself
What are the reasons that lead patients to miss routine appointments?	57 (a) 12(b) 12(c) 12(d)	(a) their ease to obtain care during *acolhimento* hours; (b) lack of information on the PSF; (c) patient disinterest towards treatment and the disease; (d) forgetting the dates and times of the appointments
Do people dislike being seen by nurses? Why?	43	Interviewees confirmed that peopled didn't like to be seen by nurses because they believe that medical doctors are more competent and felt that they were treated with disdain when a MD would not see them;
What is the main difficulty you find to do your job?	29(a) 33(b) 14(c) 7(d)	(a) Lack of a preventive medicine "culture" among the population. The usual behavior is to resort do doctors only when they feel pain or uncomfortable symptoms; (b) Lack of infrastructure, such as supplies, tests and medication. The most frequent complaint concerned specific tests; (c) Lack of knowledge about the disease as one of the obstacles to doing the job; (d) The population's low adhesion to the family health program.
If you could improve something in chronic care, what would it be?	36(a) 43(b)	(a) Doctors and (b) nurses would invest more in information and education for the people;
Do patients follow self-care recommendations?	47	Claimed that they do not
Did anyone ever complain about the care at units and/or referrals?	64	Claimed that they did, and that immediate care for their ailments and clams for additional vacancies are among the main complaints.
In your opinion, what are the causes that lead to low-adhesion to the program?	40 (a) 13(b) 13(c) 7(d)	(a) Lack of awareness; (b) They want immediate care; (c) Prescriptions are easily obtained elsewhere; (d) Stubbornness

Source: Nascimento et al (2011)

3. Interviews with the population

The third phase of the study involved applying a questionnaire to diabetic and/or hypertensive patients. The researchers, together with a community agent, visited people's homes and were able to conduct 44 interviews. The main difficulty found at this stage was the distance from one patient's home to the next. In addition, they were often at work and therefore could not be interviewed.

Table 3: Selected Questions and Answers – Population

QUESTION	%	ANSWER
Age	73	Over 55 y.o.
What illnesses?	48 (a) 14(b) 38(c)	(a) *Diabetes Mellitus*; (b) Hypertension; (c) Both
How did you find out you had the disease?	41(a) 52(b)	(a) At a doctor's appointment for various reasons, not because they had symptoms; (b) When they had a crisis;
Are you aware of the consequences of not treating the illness?	48(a) 45(b)	(a) Claimed that they were; (b) Claimed that they were not.
Do you follow self-care recommendations?	23(a) 59 (b) 18(c)	(a) Claimed that they did not; (b) Medications only; (c) Diet, but do not correctly take the prescribed medication
Do you usually show for your routine appointments?	73	Claimed that they did
Did you ever run out of your medication?	66	Said that they did not

Source: Nascimento et al (2011)

4. Interview with Porto Feliz Municipal Health Bureau managers

According to the results obtained, the municipality's health-care system scored 7.35 out of 11 and therefore, given the method's criteria, provides reasonable support to the care required by the chronically ill.

The best-scoring item (8.66 out of 11) concerns **"Health System Organization**". The results indicate 1) a reasonably coherent focus on improving the system and 2) a leadership committed to improve care.

The item **"Delivery System Design**" scored second best (8.33 out of 11). This indicates the presence of flow designs, functions and tasks to ensure access to care, as well as the information patients and care providers need on the population health status.

The items **"Support to Clinical Decision-Making"** and **"Community Outreach**" came next, at 7.75 and 7.33. The results allow inferring that the health-care system uses protocols conceived to be understood and applied on a routine basis by basic care workers, in addition to striking alliances and partnerships (with NGOs, for example) to improve coverage and expand health-care services.

"Self-Care Support" and "**Clinical Information System**", with scores of 6.5 and 6.6, are part of the municipal health bureau's processes, but still at an incipient level.

Finally, the lowest-scoring item (6.33 out of 11) concerns **"Integration".** It is a combination of all of the dimensions of the Chronic Care Model and prescribes, for example, associating self-care goals with records or information systems, or associating local policies with the activities included in the patients' therapy plans.

Analysis and Discussion of the Results

A few findings emerged from the analyses:

- Lack of awareness and consequent low-adhesion to the Family Health Program's critical processes;
- Lack of preparation of most of the community agents interviewed regarding causes, symptoms and treatments of *Diabetes Mellitus* and Systemic Hypertension;
- Absence of MDs from health-care units;
- Prejudice against nurses at care provided by nurses;
- Health-care infrastructure not fully used by the population.

Age, high educational attainment and low compensation of most of the community agents may explain their high turnover rate and, therefore, lack of knowledge about the treatments, despite the training received and against the PSF's every prescription. It is

crucial for ACSs to be prepared to provide accurate information on how the PSF operates and on the diseases that affect the ones they care for .

The frequent absence of doctors from health-care units implies the lack of a crucial link in the operation. For Campos (2005) the high turnover among PSF workers may jeopardize the effectiveness of a model based on the bonds between health-care workers and the population.

Campos (2005) confirmed his hypothesis of correlation between satisfaction at work and turnover among PSF medical doctors. The satisfaction with work factors presenting the highest correlation with turnover were training, commuting distance from the units, and availability of supplies to carry out their work. As for wages, the study shows that PSF salaries attract doctors, but do not retain them. Out of 21 interviewees, 12 emphasized entering medical residency program as a cause of turnover among doctors.

Out of these twelve, six named it as the main factors and two named it as the only factor leading to turnover among PSF doctors. The second turnover factor was commuting distance. Another of the study's findings is that users prefer to be seen by doctors, as they believe nurses lack the appropriate skills for care.

In addition, in Brazil nurses are not allowed to prescribe medications. This perception arises from the population's lack of information and knowledge about the nurses' job and the purposes of PSF. In this case, the population does not need to know PSF's objectives, but to reach its goals cultural factors must be identified and addressed.

In this sense, there is a communication gap between the health-care system as a whole and its users. Community agents, doctors and nurses agree on the absence of a single and coordinated discourse for health workers, ACSs and the Municipal Health Bureau. As a consequence, the population does not receive consistent information on the PSF, on diseases and on their treatment, which hampers their comprehension and discourages them to seek for follow-up at regular ambulatory care health facilities.

References

Abrucio, Fernando Luiz. **A reconstrução das funções governamentais no federalismo brasileiro**. In:HOFMEISTER, Wilhelm; BRASILIENSE CARNEIRO, José Mário (Orgs.). Federalismo na Alemanha e no Brasil. São Paulo: Fundação Konrad Adenauer, 2001.

Brito, Fausto. A reinvenção da transição demográfica: envelhecer antes de enriquecer? / Fausto Brito. – Belo Horizonte: UFMG/Cedeplar, 2010. Viewed on Dec/27/2011 http://www.cedeplar.ufmg.br/pesquisas/td/TD%20401.pdf

Almeida-Filho, Naomar**. Ensino superior e os serviços de saúde no Brasil.** The Lancet Saude no Brasil, May 2011. Published Online May 9, 2011 DOI:10.1016/S0140- 6736(11)60326-7. Viewed on Dec/27/2011. http://download.thelancet.com/flatcontentassets/pdfs/brazil/brazilporcom4.pdf

Paim, Jairnilson; Travassos, Claudia; Almeida, Celia; Bahia, Ligia: Macinko, James. **O sistema de saúde brasileiro: história, avanços e desafios.** The Lancet Published Online May 9, 2011 DOI:10.1016/S0140-6736(11)60054-8. Viewed on Dec/27/2011 http://download.thelancet.com/flatcontentassets/pdfs/brazil/brazilpor1.pdf

Brazil. **Hipertensão arterial sistêmica (SAH) e Diabetes mellitus (DM): protocolo.** Cadernos da Atenção Básica. Caderno 7. Brasil. Ministério da Saúde, Departamento de Atenção Básica. Área Técnica de Diabetes e Hipertensão Arterial. – Brasília: Ministério da Saúde, 2001

Wagner, E.H. **Chronic disease management: what will it take to improve care for chronic illness?** – Effective Clinical Practice, 1: 2-4, 1998.

Schmidt, Maria Inês; Bartholow Duncan, Bruce; Azevedo e Silva, Gulnar; Menezes, Ana Maria; Monteiro, Carlos Augusto; Maria Barreto, Sandhi; Chor, Dora; Menezes. Paulo Rossi. **Doenças crônicas não transmissíveis no Brasil: carga e desafios atuais.** Published Online May 9, 2011 DOI:10.1016/S0140- 6736(11)60135-9. The Lancet Series – Saúde no Brasil. Viewed on Dec/27/2011 http://download.thelancet.com/flatcontentassets/pdfs/brazil/brazilpor4.pdf

Brazil. **Diretrizes e Recomendações para o Cuidado Integral de Doenças Crônicas Não-Transmissíveis Promoção da Saúde, Vigilância, Prevenção e Assistência**. Ministério da Saúde. Secretaria de Vigilância em Saúde / Secretaria de Atenção à Saúde. Série B. Textos Básicos de Saúde / Pactos pela Saúde Series 2006, v. 8 / Brasília – DF 2008.

WHO. **Preventing Chronic Diseases a vital investments**. World Health Organization (WHO), Geneva, 2005.

WHO. **Adherence to long term therapies: evidence for action.** World Health Organization. Geneva: World Health Organization, 2003. ISBN: 92-4-154599-2

Gusmão, Josiane Lima de; Ginani, Giordano Floripe; Vieira da Silva, Giovanio; Coelho Ortega, Katia; Mion Jr., Décio **Adesão ao tratamento em hipertensão arterial sistólica isolada**. Rev Bras Hipertens vol.16(1):38-43, 2009.

Brazil. A Vigilância, o controle e a prevenção das doenças crônicas não transmissíveis: DCNT no contexto do Sistema Único de Saúde Brasileiro – Situação e Desafios Atuais. Ministério da Saúde/ Secretaria de Vigilância em Saúde / Departamento de Análise de Situação de Saúde / Pan-american Health Organization / World Health Organization 2005

WHO**. Adherence to long-term therapies – evidence for action**. WHO – World Health Organization, 2003.

Brazil. Conselho Nacional de Secretários de Saúde. **A saúde na opinião dos brasileiros**. Brasília: Conass; 2003.

Brazil. Conselho Nacional de Secretários de Saúde. **Para entender a gestão do SUS.** Conselho Nacional de Secretários de Saúde – Brasília : CONASS, 2003.

Campos, Claudia Valentina de Arruda. **Porque o Médico não fica? Satisfação no Trabalho e Rotatividade dos Médicos do Programa de Saúde da Família do Município de São Paulo**. Master's Dissertation – Escola de Administração de Empresas de São Paulo.2005.

Brazil. IBGE/ Diretoria de Pesquisas. Coordenação de População e Indicadores Sociais. Gerência de Estudos e Análises da Dinâmica Demográfica. **Projeção da População do Brasil por Sexo e Idade para o Período 1980-2050 – 2004 and 2008 revisions**.

Batistella, Carlos**. Análise da Situação de Saúde: principais problemas de saúde da população brasileira.** In: "O Território e o Processo Saúde-Doença", from the collection "Educação Profissional e Docência na Saúde: a formação e o trabalho do Agente Comunitário de Saúde", Anamaria D'Andrea Corbo (Org.). Fundação Fiocruz, 2007

Bonomi, Amy E; Wagner, Edward H; Glasgow, Russell E; VonKorff, Michael. **Assessment of chronic care (ACIC): a practical tool to measure quality improvement.** Health Services Research. Volume 37, Issue 3, June 2002

Nascimento, Isis Luz Souza; Dos Santos, Luana Barros; Justa, Maria Grazia. **Sistema de Saúde do Município de Porto Feliz: uma investigação sobre a baixa adesão de pacientes de doenças crônicas (Diabetes Mellitus e Hipertensão Arterial Sistêmica)**

ao Programa de Saúde da Família. Research Report for the *Conexão Local* Project of Escola de Administração de Empresas de São Paulo – Função Getulio Vargas, 2011

Fleming, G, **Hospital structure and consumer satisfaction**. Health Serv. Res., 16 (1), 1981.