Inter-American
Development Bank

Social Protection and
Health Division

TECHNICAL NOTE

No. IDB-TN-482

MEASUREMENT OF PRIMARY CARE

Report on the Johns Hopkins Primary Care Assessment Tool

Leiyu Shi
Diana Pinto Masís
Frederico C. Guanais

December 2012

MEASUREMENT OF PRIMARY CARE

Report on the Johns Hopkins Primary Care Assessment Tool

Leiyu Shi
Diana Pinto Masís
Frederico C. Guanais

Inter-American Development Bank
2012

Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Shi, Leiyu.
Measurement of primary care : Report on the Johns Hopkins primary care assessment tool/ Leiyu Shi, Diana Pinto Masís, Frederico C. Guanais. p. cm. — (IDB Technical Note ; 482)
Includes bibliographical references.
1. Medical care—Research. I. Masís, Diana Pinto. II. Guanais, Frederico C. III. Inter-American Development Bank. Social Protection and Health Division. IV. Title. V. Series.
IDB-TN-482

http://www.iadb.org

Leiyu Shi: lshi@jhsph.edu; Diana Pinto Masís: dpinto@iadb.org; Frederico C. Guanais:fredericog@iadb.org

MEASUREMENT OF PRIMARY CARE:
The Johns Hopkins Primary Care Assessment Tool

Leiyu Shi, Dr.PH, MBA, MPA, Professor of Health Policy and Health Services Research, Johns Hopkins University Bloomberg School of Public Health; Director, Johns Hopkins Primary Care Policy Center

Diana Pinto Masís, MD, DSc, Health Lead Specialist, Social Protection and Health Division, Inter-American Development Bank

Frederico C. Guanais, PhD, Health Lead Specialist, Social Protection and Health Division, Inter-American Development Bank

December 2012

Abstract

Renewed interest in the Primary Health Care-PHC agenda is a common element of the majority of recent health system reforms throughout Latin America and the Caribbean-LAC. Strengthening of PHC has been recognized as a promising solution to address the major challenges the Region´s health systems face. As governments are making substantive long term investments in PHC oriented healthcare reforms, there is a requirement for accountability and increased transparency and reporting on the results of these initiatives. As a consequence, implementation of PHC strategies needs to be accompanied with mechanisms to collect data that will allow assessment of the extent to which primary care processes are being implemented and on their impact of quality, efficiency, cost, equity and consumer satisfaction. The Johns Hopkins Primary Care Assessment Tool or PCAT is amongst the instruments currently available to assess performance of PHC in several dimensions and from the perspective of users, practitioners, and systems. The purpose of this technical document is to provide a description of this instrument including its composition, measurement, functions, uses, and requirements to deploy the tool in practical applications and to discuss the challenges and opportunities to use the tool in the context of the LAC Region.

JELClassification: I10, I13, I18
Keywords: Primary Health Care, The Johns Hopkins Primary Care Assessment Tool, Latin America and the Caribbean

Introduction

Primary health care[1] (PHC) is a cornerstone in building a strong healthcare system that ensures positive health outcomes and health equity and is central in a healthcare delivery system. The international literature has identified different pathways through which PHC has a positive impact on population health, which include increasing access to needed services, improvements in quality of care, emphasis on health promotion and preventive care, early management of disease, and reduction of unnecessary or even deleterious care (Starfield and Shi 2002). These results have been most frequently associated with integrated PHC, understood as services that are community-oriented, provide continuity of care, and offer appropriate mechanisms for referrals and counter-referrals to higher levels of care, as needed. Within a community-oriented model, health professionals have a greater awareness and understanding of the risk factors affecting their patients, which enables them to make more accurate diagnoses, and to address the broader causes of ill-health when treating a disease. Serving as the first point of contact in an integrated system allows PHC professionals to provide continuous service over time, reducing unnecessary procedures while improving prospects for successful treatment and management over the long term. While effective primary care may resolve most cases, PHC services must be appropriately integrated into a network of specialized clinics and hospitals, to which patients are referred and from which they are counter-referred back to their local primary care providers.

Empirical evidence suggests health systems with a strong primary care orientation achieve better health outcomes in terms of reduced all-cause general and premature mortality, cardiovascular and respiratory disease mortality, low birth weight, and in closing equity gaps that affect the most vulnerable populations (Davey Smith and Lynch 2004). In the LAC Region, recent studies of the relationship between the extension of coverage in Brazil by the Programa de Salud Familiar (PSF) –a family-oriented primary care program provided by health teams- have found an inversely proportional association between greater penetration of PSF in a territory and reductions in the rate of ambulatory care sensitive conditions (Guanais and Macinko 2009; Dourado et al. 2011).

Renewed interest in the PHC agenda is a common element of the majority of recent health system reforms throughout Latin America and the Caribbean-LAC (OPS, 2007; 2005).

[1] Primary health care refers to primary care applied on a population level and includes a set of population level primary care services.

Strengthening of PHC has been recognized as a promising solution to address the major challenges the Region´s health systems face, which include an unfinished agenda in both maternal and child health care and infectious disease prevention and treatment- including neglected tropical diseases, the onset of a rapidly-growing epidemic of chronic noncommunicable diseases, and equity gaps in access to services and health outcomes.

In the Declaration of Montevideo of 2005, as part of their commitment to strengthen PHC, countries made explicit the need to define evaluation and monitoring criteria. Yet, to date, with few exceptions, implementation of PHC strategies in LAC has lacked systematic and periodical monitoring and evaluation mechanisms. A comprehensive assessment of PHC requires several types of indicators, including (Macinko 2011):

- Structure
  - -Inputs (human resources, infrastructure, equipment)
  - - Organization, financing, political environment
- Processes
  - -Achievement of attributes of primary care (first contact, longitudinality, comprehensiveness, coordination, family and community orientation)
  - -Technical quality of care
- Results (prevention of events, solution of cases, referrals)
- Health outcomes (primary care sensitive indicators in population exposed to primary care)

Countries will not only need to identify existing data for PHC reporting and strengthen national information systems to leverage ongoing data collection, but will also need to supplement information gaps in priority areas with new data sources. Furthermore, adopted definitions and measurement instruments should be consistent, standardized, and based on evidence of effectiveness of primary care components (Macinko 2009).

The Johns Hopkins Primary Care Assessment Tool or PCAT is amongst the instruments currently available to assess performance of PHC in several dimensions and from the perspective of users, practitioners, and systems. The purpose of this technical document is to provide a description of this instrument including its composition, measurement, functions, uses, and requirements to deploy the tool in practical applications and to discuss the challenges and

opportunities to use the tool in the context of the LAC Region. We start by providing an overview of how primary care may be defined and its essential functions.

Defining Primary Care

Since its introduction in 1961, the term primary care has been defined in various ways, which include (Alpert and Charney 1973; Fry 1980; Lee 1994; Abramson and Kark 1983; Starfield 1998)

- The care provided by certain clinicians — the Clinton administration's Health Security Act, for example, specified primary healthcare as family medicine, general internal medicine, general pediatrics, and obstetrics and gynecology. However, some countries (particularly in Europe and Asia) consider obstetrics and gynecology more as specialists than primary care. Other experts and groups have also included nurse practitioners and physician assistants;
- A set of activities whose functions act as the boundaries of primary care — such as curing or alleviating common illnesses and disabilities;
- A level of care or setting — an entry point to a system that also includes secondary care (by community hospitals) and tertiary care (by medical centers and teaching hospitals);
- A set of attributes, as in the 1978 IOM definition — care that is accessible, comprehensive, coordinated, continuous, and accountable — or as defined by Starfield (Starfield 1998) — care that is characterized by first contact, accessibility, longitudinality, and comprehensiveness;
- A strategy for organizing the healthcare system as a whole — such as community-oriented primary care, which gives priority and resources to community-based healthcare while placing less emphasis on hospital-based, technology-intensive, acute-care medicine.

The World Health Organization (WHO) defines primary care as follows: *"Essential healthcare based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community by means acceptable to them and at a cost that the community and the country can afford to maintain at every stage of their development in a spirit of self-reliance and self-determination. It forms an integral part of both the country's health system of which it is the central function and the main focus of the overall social and economic development of the community. It is the first level of contact of individuals, the family, and the community with the national health system, bringing*

healthcare as clos e as possible to where people live and work and constitutes the first element of a continuing healthcare process (WHO 1978)."

In the WHO definition of primary care, three functions are particularly noteworthy for an understanding of primary care: point of entry, coordination of care, and essential care (WHO 1978, 2008).

- Point of Entry

Primary care is the first contact that a patient makes with the health services system; healthcare delivery is, in turn, organized around primary care. This first contact feature is closely associated with the "gatekeeper" role of the primary care practitioner (PCP).

- Coordination of Care

One of the main functions of primary care is to coordinate the delivery of health services between the patient and the myriad of delivery components within the health system. Hence, in addition to providing basic services, primary care professionals serve as patient advisors, system gatekeepers, and more than ever before, advocates since patients are getting too much information and will need people to help them sort out and understand this information. In this coordinating role, the provider refers patients to sources of specialized care, gives advice regarding various diagnoses and therapies, discusses treatment options, and provides continuing care for chronic conditions. Coordination of an individual's total healthcare needs is meant to ensure continuity and comprehensiveness of services. These desirable goals of primary care are best achieved when the patient and provider have formed a close mutual relationship over time.

- Essential Care

Primary care is regarded as essential healthcare. The goal of the healthcare delivery system is to optimize population health, not just the health of individuals who have the means to access health services. Achieving this goal requires that disparities across population subgroups be minimized to ensure equal access. Because financing of healthcare is a key element in determining access, universal access to primary care services is better achieved under a national healthcare program. It is for this reason that lack of access to primary care for countless millions is a pressing concern in the United States.

Finally, in her landmark book "*Primary care: Balancing health needs, services and technology,"* Starfield (Starfield 1998) defined primary care as the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority

of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community.

Measuring Primary Care: The Johns Hopkins Primary Care Assessment Tools

Instrument development

The Primary Care Assessment Tools (PCAT) are practical, well-validated instruments that are useful for describing the adequacy of primary care as received by people (adults and children) and as delivered by practitioners, facilities, and systems. The development of PCAT represents the culmination of efforts to determine the extent to which primary care is achieved for populations enrolled in different types of healthcare organizations and plans. These efforts represent a partnership that originated with the financial and administrative commitment of the US federal Maternal and Child Health Bureau (MCHB), several state and local MCH programs (1990-1996), the Henry J. Kaiser Family Foundation, the Child and Adolescent Health Policy Center (CAHPC), and the Primary Care Policy Center (funded by the Bureau of Primary Health Care) at Johns Hopkins University Bloomberg School of Public Health.

Between 1995 and 1996, as part of the effort to develop and validate the Primary Care Assessment Tools, child and adolescent versions of the Consumer-Client and Provider surveys were administered via telephone to parents of 1,017 children and health plans enrolled in Florida's Healthy Kids subsidized insurance program (Hurtado 1998).

Further testing of the instruments was conducted and described in a 1998-published study, which ascertained the quality of primary care delivered by various healthcare settings to children in Washington, DC. The Consumer-Client and Provider survey tools were administered by telephone to a random sample of 450 consumers and by mail to 101 of their providers. Results indicated that the tools measured key primary care domains with a "reliability and a consistency that [suggested] validity" and that they had the ability to detect differences across various types of provider organizations and facilities with regard to primary care delivery (Starfield et al.1998).

In order to test an adaptation of the tools for adult populations, a 1999 in-person and mail survey of 890 individuals randomly selected from an HMO group and a low-income group was conducted in South Carolina (Shi et al. 2001). The data collected in these surveys were used to conduct additional statistical testing for validity, reliability, and instrument refinement of adult

populations.

Further experience with the PCAT tools has taken place in Canada (especially Quebec), Brazil, Spain (Catalonia), South Korea, China (both Taiwan and People's Republic of China-PRC), Argentina, and Uruguay Republic. Versions exist in Spanish, Catalan, Portuguese, Mandarin Chinese (both PRC and Taiwan), and Korean and, as the need for assessment of the adequacy of primary care is arising throughout the world, in other countries and languages as well. Some of the evaluations have been published; they indicate cross-cultural reliability of the instrument for assessing primary care.

Conceptual Framework

In 2001, the World Health Organization (WHO) proposed a global goal of achieving universal primary care in six domains as established by the 1978 Alma-Ata Declaration: first contact, longitudinality, comprehensiveness, coordination, person- or family-centeredness, and community orientation. These six attributes, agreed upon internationally, have proved effective in identifying breadth of primary care services and monitoring primary care quality (WHO 2008; Starfield 1998; Forrest and Starfield 1998; Franks and Fiscella 1998).

The PCAT instruments are organized around the principles of primary care. The four domains of primary care (with their two subdomains) are First Contact (accessibility and utilization), Person-focused Care over Time (affiliation with a provider and strength of interpersonal relationships), Comprehensiveness (range of services available and services provided), and Coordination (information systems and integration of services). In addition, there are scales for Community Orientation, Family-centeredness, and Cultural Competence, and there are short sections for Demographics, Insurance, and Health Status. The latter three might have to be modified for particular populations or in different countries. An understanding of these concepts will help clarify the purpose and importance of the questions included in the questionnaires.

- **First contact care** means that care is first sought from the primary care provider when a new health or medical need arises. In order to be considered as providing first contact care, the services must be accessible (a structural characteristic) and used by the population each time a new need or problem arises (a behavioral characteristic).
- **Continuous (ongoing) care** refers to the longitudinal use of a regular source of care over

time, regardless of the presence or absence of disease or injury. Continuous care is a characteristic that refers to care over time by a single individual or team of healthcare professionals ("clinician continuity") as well as to effective and timely communication of health information (events, risks, advice, and patient preferences) ("record continuity"). It requires identification of a population for whom the service or provider is responsible (a population registry), and it requires an ongoing person-focused (not disease-focused) relationship over time between providers and patients.

- **Coordinated care** is the linking of healthcare visits and services so that patients receive appropriate care for all their health problems, physical as well as mental. The essence of coordination is "the availability of information about prior and existing problems and services and the recognition of that information as it bears on needs for current care" (Starfield 1998). Coordinated care ensures the provision of a combination of health services and information to meet a patient's needs. It also refers to the connection between, or the rational ordering of, those services, including the resources of the community.
- **Comprehensive care** refers to the availability of a wide range of services in primary care and their appropriate provision across the entire spectrum of types of needs for all but the most uncommon problems in the population by a primary care provider. This includes services that promote and preserve health; prevent disease, injury, and dysfunction; and care of illness, disability, and discomfort as long as these needs are not too uncommon for the primary care practitioner to maintain competence in dealing with them. Comprehensive care addresses any health problem at any given stage of a patient's life cycle.

Each of the above four core domains of primary care has two subdomains: a structure-related subdomain (which indicates the capacity to provide needed services) and a behavior-related subdomain (which indicates that the service is provided when needed). Thus, there are a total of eight core subdomains. All eight core subdomains of primary care apply to both adult and child consumer-client surveys and to the provider/facilities versions.

Three aspects of care follow from the achievement of the four main ones, and are sometimes also included in assessments of primary care.

- **Family-centered care** recognizes that the family is a major participant in the assessment and treatment of a *patient*. Context of family and community refers to an understanding of the patient's living conditions, family dynamics, and cultural background. Family-

centered care reflects an understanding of the nature, role, and impact of family members' health, illness, disability, or injury on the entire family and the impact of family structure, function, and dynamics, as well as family history of illnesses on both risks of ill health and promotion of health of family members. Family-centered care is distinguished from 'patient-centered care,' which is visit based and emphasizes coordination of care during the visit. Family-centered care focuses on accumulated knowledge of people, which is essential to a better recognition of health problems.

- **Community-oriented care** refers to care that is delivered in the context of the community. Community refers to the population served, whether they are patients or not. It can refer to a geopolitical boundary (a city, county, or state), to members of a health plan, or to neighbors who share values, experiences, language, religion, culture, or ethnic heritage. The distinguishing feature of community-oriented primary care (COPC) is that it takes into account the healthcare needs of a defined population. COPC therefore is concerned, for example, with the healthcare needs not only of patients and families being seen by the provider, but also of people in the community whose healthcare needs are not being met and the characteristics of communities that influence the healthcare needs of everyone in the community.
- **Culturally-competent care** refers to care that honors and respects the beliefs, interpersonal styles, attitudes, and behaviors of people as they influence health. It implies skills that help translate beliefs, attitudes, and orientation into action and behavior to preserve and promote health.

Uses and Functions of the PCAT

PCAT consist of four modules: Consumer-Client surveys, Facility surveys, Provider surveys, and Health System survey. For each module, there are expanded version and short version. They are appropriate for measuring the attainment of primary care attributes because they provide information on the structure and process elements related to the four key domains of primary care. This also includes information on the focus of the healthcare facility, patient characteristics, services available on-site, and patient-, provider-, and facility-related perspectives on the experiences of care received and care provided. Subdomain (structure and process), domain, and total primary care scores can be derived from the item scores.

Depending on the objectives of the survey activity, there are three options for using the survey tools:

1. The Consumer-Client surveys may be used independently to assess experiences with healthcare of patients or populations as defined by geography, sites of care, payment mechanisms, or specific healthcare needs. They provide information on the characteristics of the usual source of primary care and on experiences in receiving care there.

The Consumer-Client surveys were originally designed for interviewer administration, but have been adapted for self-administration.

2. The Facility and Provider surveys are parallel in structure and content to the Consumer-Client surveys, thus enabling comparisons between consumer and provider reports of primary care attributes. They are appropriate for conducting an assessment of the characteristics of primary care and the processes of providing care from the viewpoint of practitioners, clinics, group practices, and institutions. The Facility and Provider surveys can be administered using in-person, telephone, or mail survey methods.

If the survey team is interested in representative characteristics of a site and responses by individual providers are not required, then the Facility and Provider surveys are completed by the site administrator or lead primary care provider. However, if the assessment project dictates data collection from either a sample of or all primary care providers at a specific site, or those providing care to a specific group of patients, then the providers should complete the Provider surveys individually.

3. The Facility and Provider surveys may be used in conjunction with the Consumer-Client surveys. The Facility and Provider surveys can be sent to the usual source of primary care that is identified by the consumer respondent. Comparisons of reports and perceptions of general site characteristics and those specific to the domains of primary care can be examined (Starfield et al. 1998).

The results of the Consumer-Client surveys can indicate the specific areas of primary care that are not being met for target populations, while the results of Facility and Provider surveys can be used by public agency administrators, planners, and program managers to assess the characteristics of primary care and monitor changes in the care being provided. The information can be used to:

- Plan for further, more in-depth studies of specific areas of concern.

- Justify requests for new funding or for budget reallocations.
- Plan training opportunities and continuing education offerings for primary care providers and staff.
- Identify changes in the characteristics of primary care delivery after specific interventions have been implemented.

Use of the adult and child Primary Care Assessment Tools Consumer-Client surveys provides information on:

- The sources of primary care for individuals and the use of that source for a variety of needs.
- Their ease in accessing healthcare when they feel it is needed.
- The characteristics of the communication and mutual understanding between them and the primary care provider.
- Level of coordination between the primary care provider and a specialty service or specialist, and follow-up discussion with individuals.
- Types of services available at the site of primary care.
- Discussion of relevant aspects of guidance during visits to the primary care site.
- Participation of family members in discussions of care and treatment of individuals.
- Community involvement by the primary care provider and staff.
- Type of health insurance coverage and whether a copayment is required. (May be modified in accordance with the particular health system where administration takes place.)
- Socio-demographic characteristics including race/ethnicity, monthly rent or mortgage, and household income. (May be modified to take into account the particular health system where administration takes place.)

The Facility and Provider surveys have been designed to parallel the topic areas of the Consumer-Client surveys. The Facility and Provider surveys can be used independently of the Consumer-Client surveys. In studies where surveys are completed by the providers or facilities identified by consumers as their usual source of primary care, more detailed analyses can be done:

- Consumer responses to individual items can be compared with the responses provided by their identified usual source of care. Example: The availability of services at

facility/provider sites can be compared with the reported availability according to the consumers utilizing that practice.

- Domain scores for a group of consumers who identify the same source of primary care can be calculated to determine significant differences. Example: Consumer responses can be used to determine differences in the characteristics of care provided to adolescent populations versus younger age groups.
- Specific characteristics of a primary care domain can be studied for groups of consumers who use different primary care facilities/providers. Example: Characteristics of coordination processes for children referred to mental healthcare or other specialty services by the primary care facility/provider.

Recommendations and Requirements for Administering the PCAT

The estimated sample size for consumer/client or provider surveys is generally determined by a project statistician. The group of individuals or providers selected will be representative of people being served or healthcare providers in the study area. Sample size determination for facility and system surveys would depend on the objective of the study. If the objective is to assess the primary care achievement within a facility or system, a sample size of one would be adequate. If the objective is to assess the primary care achievement within a region or area, a representative sample of the healthcare facilities or systems within the region or area would be necessary.

The Consumer-Client surveys contain skip patterns that allow for a smooth sequence of questions when the interviewer ascertains that certain survey items are not applicable. These skip patterns make the survey difficult for self-administration by the potential respondents. Because of this, it is not recommended that the Consumer-Client surveys be mailed to potential respondents for completion. It is recommended that the Consumer-Client surveys be administered either over the telephone or through in-person interviews. However, decisions on data collection methods are generally determined by budget, timelines for completion, characteristics of the target population, location of target areas, availability of physical resources, and number of staff currently available.

A Training Manual has been developed to be used for telephone administration of the Primary Care Assessment Tools. It is designed in a neutral manner so as to allow for adaptation by

specific projects. The Manual provides information on the purpose of conducting the survey, the background of the individual project, the concept of primary care, the role of the interviewer, ethics and confidentiality issues surrounding survey research, the survey format, questions included in the survey instrument, completing the survey form, and responding to difficult questions that might arise during the interview process. It is recommended that training be conducted in two sessions and the Training Manual contents be used as the lesson plan to assure consistency in training. PowerPoint slides, which can be used and/or adapted, are provided to supplement the didactic content. Along with the training manual, administrative protocol which specifies the role of supervisors, logistics, schedules, telephone sheets, tally sheets, callbacks, completed surveys, terminated interviews, and how to provide help for respondents, as well as referral sources for respondents in real need of assistance should also be included in the training packet.

We have also prepared a technical manual with coding rules and analysis rules to get subdomain and domain scores. This manual contains information that will help researchers administer it in a research context.

Those wishing to use the survey instruments should note that these materials are copyrighted. Changes may not be made in those aspects of the instrument that address the characteristics of primary care without the permission of the authors. Any research reports or publications prepared based on use of the instruments should appropriately reference the authors.

Royalty-free permission to use and reproduce the survey instruments is granted to individual researchers and nonprofit organizations for their own use upon receipt of the completed User's Agreement. A nominal fee may be assessed if further technical assistance is required in designing, analyzing, or reporting the study.

Opportunities and challenges for use of the PCAT in LAC

The adoption of PHC strategies in the LAC Region is characterized by large variation in the design, scale, organization modalities and duration of implementation, both between and within countries. On one end there are mature experiences of PHC as the backbone of unified national systems providing universal healthcare coverage, such as those in Cuba and Costa Rica. Brazil is moving forward to consolidate a similar primary care orientation for its national health system, mostly driven by the expansion of the PSF. Several countries such as Ecuador, Uruguay,

Nicaragua and El Salvador are at different stages of reforms that seek a move towards national integrated systems with a strong PHC base. At the other end, there are countries where PHC has been circumscribed to programs to expand coverage of a minimum package of services to the poorest population, such as Bolivia and Paraguay. Within countries, it is generally the case that the public sector leads the implementation of comprehensive PHC approaches, while private and social security agents focus on PHC as a gatekeeping and cost control strategy.

Therefore, assessment of the extent to which PHC achieves its purpose in LAC is a challenge for health system research, specially due to difficulties in measuring the particular characteristics of the diverse models of PHC that have been implemented and in linking outcomes to specific dimensions. For example, indicators of PHC "exposure" have been restricted to residence within a geographic area in which a program or project was implemented, and PHC "treatment" indicators are limited to presence of a village health worker in a community, use of specific health services or the presence of integrated network of health and social services in the community. More widespread adoption of validated PHC measurement tools such as the PCAT may allow for more reliable and standardized measurement and increased comparability both at the national and international level.

Several countries have made progress in adapting and testing the PCAT in local contexts. As an example, researchers from Argentina, Brazil, Uruguay and Spain have formed a collaborative group[2] to conduct studies to promote its application.

These experiences highlight the importance of a rigorous transcultural process beyond mere translation of the instrument and provide insight regarding the feasibility of applying the instruments in the LAC Region. For example, during a study of cross-cultural adaptation of the PCAT tools for users and care provider in Argentina, almost half of the original PCAT items were modified after forward translation (Berra et al. 2011). Items belonging to the primary care domains were slightly or moderately modified, and one of them was removed. Questions to characterize centers, providers and healthcare coverage underwent major changes. In preliminary tests, participants from the population and health professionals did not find difficulty answering the questionnaire and found the language adequate. However there was a low level of response amongst healthcare professionals. The authors concluded it was possible to adapt certain PCAT items to the local context in Argentina. Pilot studies to test the validity of these versions are

[2] See http://ciess.webs.fcm.unc.edu.ar/grupo-ia-pcat-2 accessed on December 14, 2012.

being planned in the province of Cordoba.

Besides validating the PCAT, Brazil has taken a lead in the application of the instrument in Porto Alegre (state of Rio Grande do Sul), Petropolis (state of Rio de Janeiro) and nine municipalities in the states of Goias and Mato Grosso do Sul. Some of the lessons learned from these exercises are the following:

- In the Porto Alegre study, issues arose related to the stability of the scale over time, especially in a context when the tool is applied to assess healthcare to children, and where there are important frequent changes in a small period of time (Harzheim et al. 2006). This may be an important point for the case of health systems in transition, such as the case of LAC.
- The health professionals component of the PCAT is designed to assess the performance of individual workers, and not of groups (van Stralen et al. 2008) This is an important challenge not only for the case of Brazil but for many other countries in the region, where PHC strategies are based on use of multidisciplinary teams of health professionals, including physicians, nurses, technicians, and community health workers.
- It is necessary to expand the local level applications of PCAT

Since 2008 the Uruguay PCAT group has been working extensively in validating the tools and developing a plan for their implementation in the country. Publications of the results of this effort are forthcoming. Uruguay's Public Health Services Administration (Administración de los Servicios del Estado-ASSE) will be using the PCAT tools to monitor and evaluate the implementation of primary care networks in each region of the country. Quoting the Primary Health Care National Director of ASSE[3]:

"…PCAT will be incorporated by ASSE as a powerful tool, to think, reflect and monitor together if we are changing. PCAT has the potential to take into account the user's gaze, the worker and the manager point of view. Because we know there will be no Health system reform without participation."

The time is ripe to consider incorporating the PCAT tool into the health information systems of LAC countries. Receptiveness to apply PHC measurement instruments developed for countries outside the Region is favored by increased consensus amongst academics and policy makers regarding the relevance and appropriateness of conceptual models, the purpose of PHC,

[3] See http://pcatuy.blogspot.ca/2011/03/applying-pcat-in-asse-public-health.html accessed on December 14, 2012.

and the dimensions and attributes that should be taken into consideration for its assessment (Starfield 2001; Yavich et al. 2010). For example, as a result of a Delphi exercise LAC experts found the objectives and conditioning factors determined for the Canadian PHC performance framework highly pertinent to the LAC context (Haggerty 2009). However, the experts identified important differences in the organization and provision of healthcare in the Canadian health system vis-a-vis LAC. One of these is that while challenges to access in the Canadian health system relate to improving the supply of PHC providers, availability of emergency care and maintenance of a relationship with a usual provider, the challenges in most LAC countries have to do with struggles to increase access to health services and reducing inequities in basic coverage to the population. Issues like these will need to be considered to improve the relevance of the PCAT instruments as evaluation tools for the Region.

As governments are making substantive long term investments in PHC oriented healthcare reforms, there is a requirement for accountability and increased transparency and reporting on the results of these initiatives. As a consequence, implementation of PHC strategies needs to be accompanied with mechanisms to collect data that will allow assessment of the extent to which primary care processes are being implemented and on their impact of quality, efficiency, cost, equity and consumer satisfaction. The PCAT tools have the potential to become part of the armamentarium for rigorous evaluation renewing a PHC approach to healthcare organization and delivery in LAC.

References

Abramson, J.H. and Kark, S.L. (1983). "Community-Oriented Primary Care: Meaning and Scope Community-Oriented Primary Care: Meaning and Scope". In *Community Oriented Primary Care—New Directions for Health Services*, edited by Eileen Connor and Fitzhugh Mullan, 21–59. Washington, D.C.: National Academy Press.

Alpert, J.J., and Charney, E. (1973). The Education of Physicians for Primary Care. DHEW Pub. No. (HRA) 74-3113. Washington, DC: US Department of Health, Education and Welfare, PHS Health resources Administration, Bureau of Health Services Research, 1973.

Berra, S., Audisio, Y., Mantaras, J., Mamondi, V. and Starfield, B. (2011). "Adaptación cultural y al sistema de salud argentino del conjunto de instrumentos para la evaluación de la atención primaria en salud." *Revista Argentina de Salud Pública*, Vol. 2. N° 8: 6-14.

Cassady, C.E., Starfield, B., Hurtado, M.P., Berk, R.A., Nanda, J.P. and Friedenberg, L.A. (2000). "Measuring consumer experiences with primary care." *Pediatrics*, Vol. 105: 998-1003.

Davey Smith, G., and Lynch J. (2004). "Commentary: Social Capital, Social Epidemiology and Disease Aetiology." *International Journal of Epidemiology,* Vol. 33. N° 4: 691–700.

Dourado, I., Oliveira, V.B., Aquino, R., Bonolo, P., Lima-Costa, M.F., Medina, M.G., Mota, E., Turci, M.A. and Macinko, J. (2011). "Trends in Primary Health Care-Sensitive Conditions in Brazil: The Role of the Family Health Program (Project Icsap-Brazil)." *Official Journal of the Medical Care Section*, Vol. 49. N° 6: 577-584.

Forrest, C.B. and Starfield, B. (1998). "Entry into primary care and continuity: the effects of access." *American Journal of Public Health*, Vol. 88. N° 9: 1330-1336.

Franks, P. and Fiscella K. (1998). "Primary care physicians and specialists as personal physicians. Health care expenditures and mortality experience." *Journal of Family Practice*, Vol. 47. N° 2: 105-109.

Fry, J. (ed.) (1980). *Primary Care.* London. Heinemann Medical.

Guanais, F., and Macinko, J. (2009). "Primary Care and Avoidable Hospitalizations: Evidence from Brazil." *Journal of Ambulatory Care Management*, Vol. 32. N° 2: 115-122.

Grupo PCAT.UY - Pizzanelli, M., Ponzo, J., Buglioli, M., Toledo, A., Casinelli, M. and Gómez, A. (2011). "Validación de Primary Care Assessment Tool (PCAT) en Uruguay." *Revista Medica Uruguaya*, Vol. 27. N° 3: 187-189.

Haggerty, J.L, Pineault, R., Beaulieu, M.D., Brunelle Y., Gauthier J., Goulet F. and Rodrigue J. (2008). "Practice features associated with patient-reported accessibility, continuity, and coordination of primary health care." *Annals of Family Medicine*, Vol. 6. N° 2: 116-123.

Haggerty, J.L., Yavich, N. and Báscolo, E.P. (2009). "Grupo de Consenso sobre un Marco de Evaluación de la Atención Primaria en América Latina. Un Marco de Evaluación de la Atención Primaria en América Latina." *Revista Panamericana de Salud Pública*, Vol. 26. N° 5: 377-384.

Harzheim, E., Starfield, B., Rajmil, L., Alvarez-Dardet, C. and Stein, A.T. (2006). "Internal consistency and reliability of Primary Care Assessment Tool (PCATool-Brasil) for child health services." *Caderno de Saúde Pública*, Vol. 22. N° 8: 1649-1659.

Hurtado, M.P. (1998). *Factors associated with primary care quality for low-income children in HMOs: Florida's Healthy Kids Program*. Baltimore, MD: Johns Hopkins School of Public Health.

Lee, J.H., Choi, Y.J., Sung, N.J., Kim, S.Y., Chung, S.H., Kim, J., Jeon, T.H., Park, H.K. and Korean Primary Care Research Group (2009). "Development of the Korean primary care assessment tool-- measuring user experience: tests of data quality and measurement performance." *International Journal for Quality in Health Care*, Vol. 21. N° 2: 103-111.

Lee, P.R. (1994). "Models of excellence." *The Lancet*, Vol. 344. N° 8935: 1484–1486.

Macinko, J., Almeida, C. and de Sa, P.K. (2007). "A rapid assessment methodology for the evaluation of primary care organization and performance in Brazil." *Health Policy and Planning*, Vol. 22. N° 3:167-177.

Macinko, J., Starfield, B. and Erinosho, T. (2009). "The Impact of Primary Healthcare on Population Health in Low and Middle Income Countries." *Journal of Ambulatory Care Management*, Vol. 32. N° 2:150-171.

Macinko, J. (2011). *Measuring primary care and its role in chronic disease control. Presentación en el Seminario BID: Enfermedades crónicas, atención primaria en salud y desempeño de los sistemas de salud: diagnóstico, herramientas e intervenciones*. Salvador, Bahía, Brazil. December 6-8, 2011.

Motta, M.C., Villa, T.C., Golub, J., Kritski, A.L., Ruffino-Netto, A., Silva, D.F., Harter, R.G. and Scatena, L.M. (2009). "Access to tuberculosis diagnosis in Itaborai City, Rio de Janeiro, Brazil: the patient's point of view." *International Journal of Tuberculosis and Lung Disease,* Vol.13. N° 9:1137-1141.

Organización Panamericana de la Salud (OPS) (2007). *Renovación de la atención primaria de salud en las Américas: documento de posición de la Organización Panamericana de la Salud*. Washington, D.C.

Organización Panamericana de la Salud (OPS) (2005). *Declaración Regional sobre las Nuevas Orientaciones de la Atención Primaria de Salud (Declaración de Montevideo). 46.º Consejo Directivo, 57.ª Sesión del Comité Regional*. Washington, D.C.

Pasarin, M.I., Berra, S., Rajmil, L., Solans, M., Borrell, C. and Starfield, B. (2007). "An instrument to evaluate primary health care from the population perspective." *Atencion Primaria,* Vol.39. Nº 8:395-401.

Pongpirul, K., Starfield, B., Srivanichakorn, S. and Pannarunothai, S. (2009). "Policy characteristics facilitating primary health care in Thailand: A pilot study in transitional country." *International Journal for Equity in Health*, Vol. 8: 8.

Shi, L., Starfield, B. and Xu, J. (2001). "Validating the Adult Primary Care Assessment Tool." *Journal of Family Practice*, Vol. 50. Nº 2:161, 175.

Starfield, B., Cassady, C., Nanda, J., Forrest, C.B. and Berk, R. (1998). "Consumer experiences and provider perceptions of the quality of primary care: implications for managed care." *Journal of Family Practice*, Vol. 46. Nº 3: 216-226.

Starfield, B., Shi, L. and Macinko, J. (2005) "Contribution of primary care to health systems and health". *Milbank Quaterly,* Vol. 83. Nº 3: 457-502.

Starfield, B. and Shi, L. (*2002*). "Policy Relevant Determinants of Health: An International Perspective". *Health Policy,* Vol. 60. Nº 3: 201–218.

Starfield, B. (2001). *Atención Primaria. Equilibrio entre necesidades de salud, servicios y tecnología*. Barcelona: Masson.

Starfield, B. (1998). *Primary care: Balancing health needs, services and technology.* New York: Oxford University Press.

van Stralen, C.J., Belisario, S.A., van Stralen, T.B, Lima, A.M., Massote, A.W. and Oliveira, C.D. (2008) "Perceptions of primary health care among users and health professionals: a comparison of units with and without family health care in Central-West Brazil." *Caderno de Saúde Pública*, Vol. 24. Nº 1: 148-158.

Villalbi, J.R., Pasarin, M., Montaner, I., Cabezas, C. and Starfield, B. (2003). "Evaluation of primary health care." *Atencion Primaria*, Vol 31. Nº 6:382-385.

World Health Organization (WHO). (2008). "The World Health Report 2008: Primary Health Care, Now more than ever." Available at http://www.who.int/whr/2008/whr08_en.pdf.

World Health Organization (WHO). (1978). *Primary health care*. Geneva, Switzerland: WHO.

Yavich, N., Báscolo, E.P. and Haggerty, J. (2010) "Construyendo un marco de evaluación de la atención primaria de la salud para Latinoamérica." *Salud Pública de México*, Vol. 52. N° 1:39-45.