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Designing the Primary Care Assessment Tool for Physician Performance Tracking in Indonesia; A Program Planning

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Abstract

Designing the Primary Care Assessment Tool for Physician Performance Tracking in Indonesia;

A Program Planning

Primary care within the Indonesia health care system is key to maintain health of Indonesians. To ensure its function, it is very important to know how Indonesian primary care providers are meeting minimal standards of performance based on key health indicators. This can be measured by using the transcultural adapted tool known as Primary Care Assessment Tool (PCAT). The focus of this capstone is to design a program plan to establish a culturally-sensitive PCAT tool for use in Indonesia. The program plan will include an extensive literature review and comprehensive review of PCAT tool's content, possible utility and ease of use so it will be more readily accepted and widely used by Indonesian primary care physicians.

Based on the study result, there are several conceptual differences in each subdimension found between the original concept and existing condition in Indonesia. These differences mostly focus on health care delivery system aspects consist of three question from dimension of first contact, one question from dimension of coordination and six question from dimension of comprehensiveness. It is proposed to exclude question regarding general check up from first contact question and two question regarding WIC and test for lead and HIV from dimension of comprehensiveness. Also, there are four questions from additional domain that should be adjusted to better fit an Indonesian context. To preserve its content validity, an expert panel must be constituted follow by pre-test/pilot testing. The length of time needed to deliver the questionnaire, difficulities to assemble expert panel and impact from changing or eliminating cultural contextual difference might influence the cross cultural process

Establishment of Indonesian PCAT through cross cultural adaptation is very likely to be successful, since Indonesia has adequate resources and support. Furthermore, increase national policy focus on gatekeeper function, create greater need for the transcultural tool.

Keyword: primary care, performance, PCAT, cross cultural adaptation, Askes, Indonesia

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A Program Planning

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A Program Planning

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I.   Background

The concept of primary care based health services has become the focus of policy interest in many parts of the world. It has rapidly evolved as a response to increasing health inequalities, which are especially pronounced in many developing countries. Factors such as limited infrastructure and the poor distribution of medical professionals commonly contribute to poor performance of health systems in developing countries. A study by Makinen et al. (2000) demonstrated that when inequalities in health care utilization exist, wealthier individuals are more likely to receive treatment from doctors and better access to medicine than are less wealthy individuals. This condition is not an environment in which developing countries can deal with the "dual burden of disease". The "dual burden of disease" is a term used to refer a situation in which there is a combined effect from non-communicable and communicable diseases driven by epidemiologic transition (Khan et al., 2013). Therefore, strong primary care is needed to build a healthier population, increase the quality of care, and decrease socioeconomic inequality (Kringos et al., 2013)

Policy that strengthens primary care has also become a primary concern of the WHO, as mentioned in the 2008 Annual Health Report. The report clearly proclaims primary care reform as an imperative for improving health services delivery. Primary care reform is believed to be an effective response to the health challenges of today's world. The recent trends in health care delivery are moving in a direction that fails to achieve the best health outcomes. Those trends are:

   a. Health systems that majorly focus on specialized curative care;

b. Health systems with less coordination between levels of care creating a fragmented health services delivery

c. Health systems with weak control of regulation that provides opportunity for commercialization of health to flourish.

Reform should be addressed at both the systemic and clinical levels of primary care. At the systemic level, reform should focus on minimizing income disparities, universal health care financing, low or absent of copayments and comprehensive benefit coverage. At the clinical level, reform should address ease of access and reinforcing primary care position as first-contact care, application of patient-focused approach rather than disease-focused for a defined populations, provision of comprehensive services and coordination with a higher level of services (Starfield B, 2009).

Studies have shown the importance of primary care services. Low- and middle-income countries that put primary care at the core of their health systems have been successful in extending coverage for preventive and curative services (Kruk et al., 2010). Furthermore, primary care oriented health care systems are significantly correlated with improvements in population health status. For example, Indonesia has successfully increased life expectancy and reduces child mortality over the past few decades as a result of a primary care based strategy. The life expectancy at birth has increased 9 years, from 60 years in 1986 to 69 years in 2007 (Rokx et al., 2010). The same trend can also be found in other developing countries such as Iran, Cuba and Sri Lanka (Kruk et al., 2010). Starfield et al. (2005) concluded that there are six mechanisms in primary care that explain its connection to population health. Those mechanisms are: (1) provision of greater access to health care, (2) assurance of better quality of care, (3) greater focus on prevention, (4) early detection of health problems, (5) the combined impact of primary care attributes and (6) prevention from unnecessary specialist care.

On the contrary, countries with weak primary care systems have been shown to perform more poorly in terms of health outcomes (Starfield B & Shi l, 2001). This situation occurs not only in developing countries, but also in developed or industrialized countries such as the United States. The US has greater care coordination problems when compared with primary care oriented countries like Australia, England or the Netherlands (Wilcox et.al, 2011). The 2011 OECD Health at a Glance report stated that nearly two-thirds of OECD member countries have higher life expectancy at birth (79.5) than USA (78.3). Also, the US still had higher rates of infant mortality in 2009 compared with other OECD countries (Commonwealth Fund, 2011). This fact demonstrates the importance of primary care in reducing the health status gap among a country's population.

Even though a strong commitment to primary care is needed to minimize inequalities in health status, it is still not a guarantee of good health performance. For example, take what happened in Kerala, a state located in the south-west region of India, where the failure of public primary care institutions to fulfill population demand for quality care has threatened the goal of primary care itself (Bhutta et al, 2004). There is a significant demand shifting from people to private entities in order to solve their health problems. This situation creates a higher cost burden for the population, a recipe for greater inequality and low performance health status. The same condition can also be found in Sri Lanka, where the health system cannot provide funding sufficient to tackle the rising incidence of chronic disease and deal with the health issues of an aging population (Withanachchi N & Uchida Y, 2006).

 To avoid such situation, a proper measurement must be taken to ensure primary care reaches the desired goal. Measurement of primary care performance is needed to assess its problem resolving capacity. According to Leiyu S (2013), measurement of primary care can provide opportunities to improve its performance, especially in terms of the four main attributes of primary care. Furthermore, measurement of primary care performance should emphasize

primary care clinical characteristics. Primary care clinical characteristics are essentially the typical functions of primary care. Barbara Starfield (1998), a world leader in the primary care movement, states that clinical dimension can be used as an indicator to set up goals for high performance primary care services. This most important function of primary care can be measured in a way that provides a basis for goal setting and continuous improvement.

To measure its performance, primary care can be approached as a system consisting of three complex levels; namely, structure, process and outcome, where each level consists of several dimensions (Kringos et al., 2010). This approach originally comes from Donabedian (1980), who believed that good performance should come from the interconnection between each level. Structure refers to what is known as input and consists of three dimensions: governance, economic conditions and workforce development. Process refers to the activity that takes place between clinicians and patients. This dimension consists of access, continuity of care, coordination of care and comprehensiveness of care. Outcomes refer to the impact on the patient's current and future health status; namely, quality of care, efficiency of care and equity in health (Kringos et al., 2010). This fact clearly aligns with Starfield's proposal that the clinical characteristics of primary care can be measured from the dimensions of structure and process.

Indonesia has built its health care platform base on primary care. Community health centers and private physician practices are the main forms of primary care in Indonesia. According to the Minister of Health annual report in 2010, there are 9,005 community health centers (*Puskesmas*) scattered around Indonesia. Approximately 2,920 of those provide inpatient facilities for simple cases, such as diarrhea. Between 2006 and 2010, the ratio of *Puskesmas* to population increased from 3.61 per 10,000 to 3.79 per 10,000 (MOH, 2011). In addition to *Puskesmas*, the Minister of Health also established supporting units called Health Sub Centers. While Community Health Centers are responsible for the population of a district, Health Sub Centers are responsible for the population of a village.

In principal, Indonesia has made a remarkable achievement in providing primary care facilities. But the growth in facilities is not necessarily balanced with the supply of health workers like doctors. Large inequities among health workers exist and physicians are often not available or absent from public primary care facilities (Rokx et al., 2010). Furthermore, not every *Puskesmas* owns proper equipment in order to ensure the quality of care they deliver. Some *Puskesmas* are even over equipped like having a ventilator unit or surgery unit which led to inefficiency (Rokx et al., 2010). Indonesia is clearly facing equity and quality of care problems. One study revealed the fact that people in Indonesia often receive low-quality health care in public primary care facilities (Barber et al., 2007).

Primary care is also provided through health insurance schemes organized by the National Social Health Insurance Fund known as PT Askes. The Askes' primary care structure consists of Community Health Centers and private family physicians. Askes' annual customer and provider satisfaction surveys have shown that patients are more satisfied with private family physicians than with community health center services (Askes CSI, 2012). Even though the satisfaction rate tends to increase from time to time for private family physicians, the actual performance has never been measured. The only performance data is available through annual patient satisfaction surveys. This is the rationale for conducting primary care performance assessments. Tracking the integrity of primary care service and quality is necessary to not only improve health outcomes, enhance health equity, and control health care costs, but also to develop evidence-based health policies.

One tool that is commonly used to measure primary care performance is called the Primary Care Assessment Tool (PCAT). This tool, developed by Barbara Starfield and Leiyu Shi from John Hopkins University, has been validated for primary care physicians practicing in urban areas of the US (Shi L et al., 2001). Since its development, it has been cross-culturally adapted and validated for use in Brazil, South Korea, Spain, and Canada. The focus of this capstone is

to design a program plan to establish a culturally-sensitive PCAT tool for use in Indonesia. The program plan will include an extensive literature review and PCAT tool review. The design of the modified tool will be based on the original PCAT content through a comprehensive review of the tool's content, possible utility and ease of use so that the resulting PCAT for Indonesia will be more readily accepted and widely used by Indonesian primary care physicians.

II.   Literature review

Studies have shown that primary care plays an important role even when economic disparities exist in the population (Starfield, 1998). Countries with strong primary care can achieve effectiveness and equity in their health care system, resulting in a healthier population, lower costs and fewer health care disparities (Starfield, 2009). In reality, the terms "Primary Health Care" and "Primary Care" are sometimes used interchangeably, although they actually refer to two different things. Primary health care, as stated in 1978's Alma-Ata declaration, explicitly refers to primary care health services as part of comprehensive strategy that would respond more equitably, appropriately, and effectively to basic health-care needs (Sanders et al., 2008). Furthermore, the concept of primary health care is formulated to overcome the determinants of poor health status such economic disparities and political instability. The principles of social justice serve as the basis for primary health care concept in the Alma-Ata declaration. "Primary health care aims to provide rational, evidence-based and anticipatory responses to health needs and social expectations" (WHO, 2008). It includes public health measures such as supply of safe water, basic sanitation, etc. Primary health care combine the function of health policy and health care system that create greater opportunity to raise primary care status as the cornerstone of health care (Starfield, 2012).

The term "primary care" commonly reflects a clinical activity that aims to solve individual's health problem (Lee et al., 2009). It focuses on the delivery of personal health services and point out transformation from primary medical services to meeting the goals of primary health care (Starfield, 1998). Furthermore, primary care is also considered as a strategy that critically needed to manage the flow of patient within health system and determine the function from each level of care. It is not only the point where people enter the health system for the first time; it goes beyond that, as defined by IOM in 1994. The IOM defined primary care as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing

a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Donaldson et al., 1996). This definition clearly reflects primary care as a group of function that consists of various dimensions which determine the quality of health care (Eisenberg M J., 1997).

The need to measure primary care performance has been recognized as imperative since the Alma-Ata Declaration (1978). Alma-Ata is an international high summit meeting initiated by the WHO held in Alma-Ata, today known as Kazakhstan. This meeting produced a remarkable declaration that can be considered a primary health care revolution (Lawn et al., 2008). The Alma-Ata describes primary care function as the first level of contact for individuals, families, and communities within a national health system that strives to bring health care as close as possible to where people live and work. Also it is the first element of a continuing health care process. Furthermore, affordable primary care that can be accessed by all individuals across diverse socioeconomic levels is the key for sustainability and balance.

Following the 1994 IOM definition of primary care, Safran et al. (1998) created a tool that aimed to measure essential primary care attributes. The tool, known as the Primary Care Assessment Survey (PCAS), consisted of 51 questions. The PCAS is designed to measure and improve the performances of primary care practices in the health delivery system (Safran et al., 1998). In the same year, Barbara Starfield introduced the concept that primary care performance measurement should cover the four core attributes which includes: first contact, continuity of care over time, comprehensiveness and coordination with other parts of the health system.

Cassady et al. (2000) describe the need to measure people's experience with primary care services that extend beyond satisfaction and adequacy. Additional concepts that are important may include; patient-centered care; identification of system problems, such as communication; efficiency; and coordination of care (Browne et al., 2010; Shi et al., 2001). Starfield and Shi

created a tool that attempts to capture these broader components that are critical to comprehensive, quality primary care (Shi et al., 2001). This tool has been translated to several languages, including Portuguese, Spanish, Catalan, Mandarin Chinese and Korean (Jeon, 2011; Lee et al., 2009; Pasarin et al., 2007). The opportunity for a cross-cultural adaptation to be used in Indonesia exists, and this capstone seeks to fulfill that purpose. The process to adapt the tool to be used in Indonesia will follow guidelines set forth by Guillemin and colleagues (1993), which include translation by independent translators, back-translation, committee review, and pretesting/pilot testing.

a.   First contact

First contact related to ease of access for patient whenever they encounter a new problem or new episode of health problem (Starfield, 1998). First contact reflects the function of primary care as an entry point to the health system whenever people experience a health problem. The literature has mentioned about the importance of accessibility that relate with primary care workforces numbers to ensure its effectiveness. Shi (2002) conducted a study based on 1987 data from the U.S. Department of Commerce and the Census Bureau in order to assess the relationship between health service resources and life chances. The study found that the number of primary care physicians is significantly correlated with improving the life chances of the population. Study that analyzes a state-level data for the period of eleven years have found significant correlation between primary care availability and low mortality rates in both African American and white population (Starfield, B et al., 2005).

There is also a significant association between number of primary care physician and health care utilization. Kravet et al. (2008) conducted a retrospective cross-sectional analysis using data from the Area Resource File (a Health Resources and Services Administration U.S. county-level database) for the years 1990, 1995, and 1999. This study found out there is a

negative association between the proportion of primary care physician and rates of health care utilization. Data have shown that higher proportion of primary care physician in the healthcare system can reduce utilization of hospital services. .

In terms of health outcomes, studies reveal an association between accessibility to primary care and good health outcomes. Shi (1992, 1994) demonstrated that states with higher ratio of primary care physicians to population are more likely to have better health outcomes compare with low ratio states. Those health outcomes are mortality rate including mortality from heart disease, cancer, or stroke; infant mortality; low birth weight; and poor self-reported health. The result remains robust after controlling for socio demographic factors (percentages of elderly, urban, and minority; education; income; unemployment; pollution) and factors related with lifestyle such as seatbelt use, obesity, and smoking. Furthermore, Macinko, Shi, & Starfield (2007) stated that an increase in primary care supply were strongly associated with improved population health outcomes. An increase of one primary care physician per 10,000 populations will contribute to 0.66 to 10.8 percent improvement of health outcomes studied.

An insufficient number of primary care providers could become a significant barrier to achieved effectiveness in primary care systems, instead other factors like geographical barriers or issues with timely access. Countries with poor quality of after- hour primary care are more likely to have higher utilization of emergency departments (EDs) (Grol et al., 2006). This situation resulted in higher cost, less efficiency and poor continuity of care. First contact also reflects the financial capability to attain care. One study suggested that the poor tend to visit primary care physician more often comparing to the non-poor in Canada (Starfield B, 2010). This is at least partially a result of the absence of copays and better distribution of primary care physicians which reflects the accessibility and utilization value.

b.   Continuity over time (longitudinality)

Longitudinality refers to the capacity of primary care in creating a long term relationship between practitioner and patients. It also refer to the relationship that mutually beneficial for both patient and clinician where patient values and preferences are highly appreciated and become the primary consideration to reach the treatment goal (Starfield, 1998). Continuity of care also refers to a relationship where a patient sees the same practitioners or same practice over some period of time. In most developed countries with better health outcomes than the US, most of the people have a usual primary care contact. A 2004 survey of primary care experiences among adults in five countries (Australia, Canada, New Zealand, the United Kingdom, and the United States) found that vast majority of adults in all five countries reported having a primary care contact (either a regular doctor or place of care, such as a clinic, health center, or group practice) and that the relationship tended to be long term. More than half of adults in the UK stay with the same physician or seek treatment at the same place for five years or longer. This phenomenon is also found in Australia, Canada, and New Zealand (Schoen et al., 2004). For patients and their families' perception, continuity refers to situation where they prefer to remain committed to their doctors for knowing the history of their illness and the future of their treatment. Providers also benefited by being able to practice their medical skill and knowledge to patient with high level of familiarity. This also a boost of evidence for their suggestions might be adopted by other provider (Haggerty et al., 2003).

Continuity of care is also associated with better results in term of health outcomes and costs. A population-based cohort study of 155,590 adults in 4 community health centers and 9 hospital-affiliated primary care practices by Atlas et al. (2009), found evidence that the relationship between patient and their primary care physician has a significant impact on the quality of care. A validated algorithm was used to connect patients to either 1 of 181 physicians or 1 of 13 practices in which they received most of their care. Performance measures included breast,

cervical, and colorectal cancer screening in eligible patients; hemoglobin A1C measurement and control in patients with diabetes; and low-density lipoprotein cholesterol measurement and control in patients with diabetes and coronary artery disease. The results showed that patients who were connected to a specific physician were more likely to receive guideline-recommended care than patients who were not connected to a specific physician.

In another study, continuity of care was found to have a strong positive impact on the likelihood that mothers receive advice about dental health, child nutrition, and child development from their child's principal medical caregiver (Bradford D et al, 2004). A study based on a 2009 survey of primary care doctors in eleven countries (Australia, Canada, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, the United Kingdom, and the United States) by Schoen et al. mentioned that 75 percent or more of doctors in all countries except France reported routinely using written guidelines for diabetes, asthma/COPD, and hypertension.

c.   Comprehensiveness

Starfield (1998) defines comprehensiveness as a function where primary care facilities must arrange for the patient to receive all types of health services, even though some may not be provided efficiently within the primary care facilities. This function also includes referral to higher levels, providing promotion and prevention services and supporting other services like home care or other community services. In a study by Schoen et al. (2004) which was based on 2004 survey of primary care experiences among adults in 5 countries (Australia, Canada, New Zealand, the United Kingdom, and the United States), the authors found that most adults in countries outside the United States mentioned that treatment goals and plans are made clear every time they seek for health treatment. Among all countries, adults in Australia and New Zealand have the highest level of satisfaction.

A cross sectional study from the 1999 National Health Interview Survey (NHIS) examines the association between the source of preventive care and the exposure of information about screening and prevention service (Blewett et al., 2008). The results suggest that the odds of receiving such services increases for patient or adults who stay with the same provider and place compared to those who only stay in the same place or neither. The odds of receiving past year flu shot almost tripled for elderly patients who have the same provider and place compared to those who had neither. Similarly, the odds of receiving a PSA test increased ten times among elderly man. For adult women, the odds of receiving clinical breast cancer exam and Pap Smear testing almost quadrupled for those with same provider or place, while the probability of mammogram almost quintupled.

In Spain, primary health care coordinates prevention, promotion, treatment, and community care activities. Primary care considered as the only place to treat most psychiatric disorders (Robbins et al., 1994). People tend to receive preventive services when they visited community health centers compared to the general population (Agency for Healthcare Research and Quality 2004).

d.   Coordination

Starfield (1998) describes coordination as "a state of being harmonized in a common action or effort". The principle of this term is the significance of past information on treatment and problems in the relevance of the current care. Primary care physicians have an important role to improve care coordination by proper referral management and associating health care with medical information continuously throughout different settings. Previous study suggests the level of care coordination may disrupt the quality of care, thus create serious problems. (Bodenheimer, 2008). A study by Stille et al. (2006) noted that the lack of communication from

PCPs to specialists is common and is strongly associated with physician reports of problems with providing optimal care.

Despite the extensive level of coordination, care must be coordinated among primary care physicians, specialists, diagnostic centers, pharmacies, home care agencies, acute care hospitals, skilled nursing facilities, and emergency departments, especially in chronic disease care. The management of acute myocardial infarction (AMI) patients is examined when general practitioners and cardiologists work individually or jointly (Willison et al. 1998). To accomplish this study, data of 1716 AMI patients from 22 hospitals in Minnesota from 1992-1993 are analyzed. Patients are recruited based on their eligibility for thrombolytic aspirin, beta-blocker and lidocaine therapy as defined by the 1991 American American College of Cardiology guidelines. Drugs usage was examined for three types of patients: (1) those attended by general practitioners, (2) those attended by both GP and Cardiologist and (3) only by cardiologist. The result shows that for patients with AMI, consultation between generalists and specialists may improve the quality of care.

In summary, the measurement of primary care performance is very important in order to ensure its role in minimizing health inequalities in the population. Indonesia is definitely facing systemic problems with equity and low quality primary care services. Increasing access is not the sole answer to overcoming the burden disease in Indonesia. Cross cultural adaptation of the PCAT is needed to ensure its validity and accountability for use in an Indonesia setting. The planning process for cross cultural adaptation will be the main focus of this capstone.

III.   Approach

a.   The importance of health care quality

High demand for health care, stable cost escalation, limited resources and variations of treatment have increase focus to measure and improve the quality of health care (Campbell et al., 2000). As it is the backbone of the health care system, it is very important to ensure the quality of primary care service. Primary care performance basically comes from the interaction of its four cardinal features: (1) It is the first contact for patient whenever they seek care, (2) It is a person centered care that see person as a whole not only the disease they have, (3) It provides a comprehensive care along people life cycle, and (4) It coordinates and integrates care resulted an optimal health outcome (Starfield, 2009). Furthermore, achievement of these four core functions will create an opportunity to deliver a care that focus on patient need, emphasizes on family perspective, and suitable with the need of person both medically or social.

There is no widely accepted definition from quality of care (Campbell et al., 2000). Quality of care is a concept that can be viewed from the individual perspective as well as the population perspective. This concept can apply to primary care, depending on the scope of concern. The individual perspective defines quality of care as ease of access for individuals to obtain effective services according to their need (Campbell et al., 2000). It is directly focused on the impact of individual practitioners or groups of practitioners to individual's health status (Starfield, 1998). From the population perspective, quality of care can be defined as the opportunity for the whole population to get effective care so they can have a sustainable state of well-being in every aspect of life. This perspective is primarily focus on the impact of health system to the whole populations and minimizing inequities across different group of population (Starfield B., 1998).

As the focus of health systems moves from individual patients to a defined population or the entire population, the perspectives begin to overlap, creating less of a boundary between them.

b.   The Primary Care Assessment Tool

As concern over the quality of primary care increases, there are significant efforts to assess the adequacy of primary care. The Primary Care Assessment Tool is one of the few instruments that are commonly used to measure primary care performance. It is designed to measure the extent and quality of primary care services in a provider setting designated by consumers as their main source of general care and to be consistent with a focus on attributes of primary care. The PCAT instruments consist of: The Child Consumer/Client Survey, The Adult Consumer/Client Survey, and The Facility/Provider Survey. Each survey is further divided into a long and short version. The number of questions provided in the Child and Adult long versions are 121 and 128 item respectively. While the instrument's short version consists of 68 and 59 questions (Pasarín MI et al., 2007). All surveys are based on individual statement coming from patients and providers. The Consumer/Client Survey is designed to capture experiences from consumers or their family when they seek care from primary care providers (Shi et al., 2001). The instrument can be used to survey populations through various view point such as geography, health plans, and sites of care, payment mechanism, or specific health care needs. In average, it takes approximately 40 minutes to fill the long version questionnaire in. For the short version, it takes less time to complete it, which is approximately around 20-30 minutes (Pasarín MI et al., 2007).

The survey can be delivered through various ways including phone, direct interview or mail. It only needs a high school reading level to understand the questionnaire content. For the purposes of this capstone project, The Adult Consumer Survey long version will be used as the

measurement. It is provided by courtesy from John Hopkins School of Public Health through email request.

The Adult Consumer Survey may be suitable for use in an Indonesian context because it has been designed to collect information from users, which in this case refer to Askes' member. As a Social Health Insurance Fund, Askes implements a Capitation and Gatekeeper system for its members. This policy requires each member to register with primary care providers based on area where they live. For the first time, members can choose their primary care provider on their own or be automatically registered by Askes. Every member must register at least 3 months with their primary care providers before they switch to another primary care provider. It is assumed that members have visited their primary care provider at least once before they decide to change their primary care provider. This condition will definitely support the data validity collected from members. Also, it supports continuity, a basic characteristic of primary care.

According to Levesque et al. (2012), PCAT is considered to have the best coverage of primary care health attributes when compared to other tools. Based on their research, PCAT covers all important attributes that determine primary care clinical performance. Measuring primary care quality based on patient perspectives involves trade-offs and instrument coverage is one aspect that needs to be considered. PCAT has an extensive coverage to measure quality through structure and process elements related to the four key domains of primary care. That is why it is used as the main instrument for the purpose of this project.

Furthermore, the response options are four categories on a Likert scale. Measurement result can be obtained by calculating the average response score from each domain (Pasarin MI et al., 2007). Likert scale is a rating format that is commonly used for surveys. Likert scales were developed in 1932 as the familiar five-point bipolar response and it widely used today. The scales consist of several categories that describe individual perception regarding their

experiences. It commonly ranges from least to most to indicate personal level of agreement (Allen & Seaman, 2007).

Considering the fact that PCAT was designed in the United States, the instrument must be modified to suit the target environment. A transcultural adaptation is required in order to maintain instrument validity. The concept of health and social environment that underlie the PCAT design is significantly different from the situation in Indonesia. Each cultural group has variation in disease expression and in their use of various health systems. According to Guillemin et al. (1993), there are two different ways to measure the outcome of health care services through a survey tool; first, we can develop a new instrument or second, we can use available instrument in foreign language. Creating a new measure surely requires a lot of effort devoted to arrange and developing the instruments content. For the second option, if the translation is done by just simply translating the original instrument, it is unlikely to be successful due to language and cultural differences. It need a systematic approach and cross cultural adaptation process to ensure the translated instrument validity.

There is a certain standard that exists for cross cultural adaptation of health related quality of life measures. Many countries has used this standard to translate PCAT includes: Canada (especially Quebec), Brazil, Spain (Catalonia), South Korea, and China (both in Taiwan and in the People's Republic of China-PRC). PCAT also exist in Spanish, Catalan, Portuguese, Mandarin Chinese (both PRC and Taiwan), and Korean. The result shown significant cross-cultural reliability when it used to assess the primary care performance. Guillemin et al. (1993) propose cross cultural guidelines which consist of several measures, including: (1) Translating the tools into the target language, (2) Back translating into original language, (3) Questionnaire review by committee, (4) Conduct a pre-testing for the final version and last (5) Weighting scores. The cross cultural adaptation for this capstone project will be based on these standards.

IV.   Guidelines for Cross Cultural Adaptation

a. Translation

The goal of this step is to produce at least two translations. Guillemin et al. (1993) stated that translations are high quality when undertaken by at least two independent translators. Furthermore, the quality of translation will be much higher if it is undertaken by teams rather than individuals. The translation process must be conducted by qualified translators. 'Qualified translator' may be defined as an individual that has sufficient skill and knowledge about the tool and its underlying concepts.

b. Back translation

According to Guillermin et al. (1993), the back translation process has been shown to improve the translation quality. Translating back from the final language into the source language should be carried for the entire translated section of the tool. Each original translation must be translated back independently. This process will help to identify misunderstandings or translation mistakes in the first translation. Furthermore, back translation can reveal cultural adaptation failure and ambiguity within the original source (Guillermin et al., 1993). High quality back translation can be obtained whenever the translator has sufficient knowledge regarding the idioms and colloquial forms of the source language. Sufficient knowledge of the underlying concept is not a necessary requirement for back translators in order to keep him/her away from biases or self-interest. Furthermore, back translation may create unexpected meanings or interpretations within the final version.

c. Committee review

A committee must be established in order to justify the final version of the modified measure based on the various translations and back translations. The Committee task should include

viewing the introduction, instruction and scaling response from each question (Guillemin et al., 1993). The committee should be a multidisciplinary team. They should consist at least an individual's who sufficiently understand primary care topics including concept of performance measurement that underlie measurement instrument. Bilingual committee members are preferable, to increase team capability. The committee may use structured techniques to improve cross cultural adaptation, such as decentering (Guillemin et al., 1993). The technique performs modification on both original and translated source to resolve discrepancy found.

Another task for the committee is to modify instructions or format includes modify or reject inappropriate items or create new items. The introduction part and use instruction should be translated with caution in order to keep its replicability (Guillermin et al., 1993). The committee should ensure that the translation is comprehensively run. The translation must be composed in language that is easily understood by 10-12 year old children. Furthermore, the cross cultural equivalence between the original source and final version should be checked with caution.

d. Pre-Testing

Pre-testing is very important to ensure the equivalence between source and final version. It can be done by using pre-test techniques, known as probe techniques, or appraisal by bilingual individuals. Probe techniques are used to determine whether a questionnaire can be easily understood correctly by distributing it to a group of patients and justify their perception by asking them a probe question such as "what do you mean?" after each answer. Another method is to hand over the source and final versions to be reviewed by bilingual people in order to identify any possible discrepancies. They are asked to rate the equivalence of each item between the source and final version. This method is only effectives to use with immigrants (Guillermin et al., 1993). The exact number of people that should be included in the pre-testing process is unclear. Based on previous studies, Guillermin et al. (1993) recommended that pre-testing be conducted

by 12 to 31 bilingual individuals. The data obtained from pre-testing can be used to make appropriate changes, especially in the wording of the question.

e. Weighting scores

Since most health related questionnaire use a scoring method, it is recommended to consider adapting the weights of scores to the cultural context when it is relevant. It is not suitable to use this method for non-cultural situation. It can also be reexamined either by judgment or by using a mathematical approach (Guillemin et al., 1993). Judgment can be conducted by an expert, who may be a health care professional, patient or common people.

However, it is not clearly established if all steps are essential. The author suggest to put more attention on aspects such as choosing a high quality translator, given clear explanation to them and put them work together with the expert committee (Guillemin, 1995). Based on several previous PCAT cross cultural adaptation projects, the processes were carried out until pre-testing phase. None of the sample studies conducted a weighting scores phase. (Pasarin et al.,2007; Lee et al., 2009)

V. Recommendation

Based on previous guidelines, the following steps should be taken:

a. Establish translated version of PCAT Adult Edition

The translation process will be carried out by two independent translators. The translator must at least have English fluency, a suitable educational background and sufficient experience in the primary care field. This capstone proposes that Askes should use the following eligible candidates. The first candidate is a medical doctor who works as an Askes family physician. She also a lecturer in one of the private medical schools in Jakarta and speaks English fluently. The second translator is a public health practitioner who works in PT Askes as the head of the provider management department. He has a very good knowledge about primary care and is actively involved in designing Askes' Primary Care Guidelines.

b. Back translation

The back translation will be conducted by a single translator with English as his native tongue. This capstone proposes that the candidate be taken from a foreign partner organization such as USAID, since they will likely already be familiar with the Indonesian context. The candidate can be found among USAID staff members who currently work in the developing health program in Indonesia. Candidate should actively speak and understand Indonesian language (*Bahasa Indonesia*). He/she will have lived in Indonesia for at least two years.

c. Committee setting

It is strongly recommended to establish an expert committee that will comprehensively review the translated tool. The committee will review the translated tool contents for clarity, acceptability, familiarity, cultural related aspects and correlation with existing situation. There will at least four experts that sit on the committee panel. This capstone proposes that the

committee members should consist of the following individuals. The first candidate will be a distinguished, publicly known, health economics professor from the University of Indonesia. The professor is an expert in health system strengthening. The second candidate will be a Public Health Doctor who works as the head of Vice President Office of Poverty Reduction Team. She is also a well-known academician and has strong knowledge of primary care. The third candidate is an independent primary care expert. He is a PhD in public health who formerly worked as secretary general of Minister of Health. He is also the main advisor for the national primary care council. The last candidate will be the current Askes CEO, who is a former head of Indonesian Doctors Association. He is a medical doctor who holds a PhD degree from University of Indonesia and is very familiar with the primary care system and challenges in Indonesia. All of the candidates possess a sufficient background, in terms of academics and experience.

d.   Pre testing

Pre testing will be carried out in order to test the questionnaire's validity. A team consisting of several Askes employees will be set up to run the pre-testing. The tool will be administered to approximately one hundred adult respondents in three major cities that represent each region in Indonesia. Data will be collected through direct interviews with those respondents. All respondents should be over 18 years of age, as stated in law no. 12/2006. They will represent a range of demographic characteristics and will be living in three different major cities: Jakarta, Medan and Surabaya. These cities have been selected because they represent the characteristics of each region in Indonesia. The analysis will conduct using descriptive statistical methods.

VI.   Analysis

a. Conceptual differences in core dimension

The Primary Care Assessment Tools Adult version basically consists of 128 items. The long version of PCAT will be used for the purposes of this capstone. The questionnaire covers all four main attributes of primary care and three additional attributes. In total, there are 84 questions that cover the essential attributes/cardinal domains which consist of: 15 questions to assess the first contact aspect, 15 questions to assess longitudinality, 16 questions to assess coordination aspects and 38 questions to assess the comprehensive aspect. The rest of questions are intended for assessing additional features/subdomains from primary care, such as family centeredness, community orientation, and cultural competence.

After a comprehensive translation process conducted by both translators, a few significant conceptual differences were found. These differences mostly focus on health care delivery system aspects as shown in Table 1 below:

Table 1

Dimension	Sub dimension	Original Concept	Existing condition in Indonesia
First Contact	Utilization	Regular, general check-up	Regular, general check-up is not covered
	Access	PCP open on Sunday	All primary care providers in Indonesia are closed on Sundays, except for

			24 hour clinics
		PCP sees patients at night	Home visits still not common in Indonesia
Coordination		PCP makes appointments for patients to visit Specialist	Patient has individually seek an appointment whenever he/she want to see specialist
Comprehensiveness		PCP provides substance abuse counseling or treatment	Such services are not provided by primary care provider
		PCP provides services for lead poison testing and HIV testing	Such tests are not covered by insurance nor provided by primary care providers
		PCP checks patient's family's eligibility for other social programs	It is very rare for PCP to make such measurements, since many social programs are not integrated with health services and

			participation in such programs are determined directly by National Statistical Bureau
		WIC services	There are no such services or benefits available in Indonesia
		PCP makes suggestions for nursing home care	Nursing home care is not yet accepted as an essential benefit for insurance members and it is only available in a few large cities
		PCP asks about gun ownership and storage	Only active military personnel, police and certain public officers such as judges are permitted to bring a gun

Since the target population consists of health insurance members, there are certain limitations to their benefits. Health care services related to substance or drug abuse are among the excluded benefits for Askes members. Only a selective health screening is covered under

Askes scheme. Services for substance or drug abuse are available and financed through special programs provided by the Minister of Health and National Bureau for Counter Narcotics and Harmful Substances. Also, most primary care providers in Indonesia do not work on Sundays or public holidays. A person usually goes to a 24 hours clinic or a hospital emergency room in an urban or suburban area. Most doctors who remain open on holidays or make regular home visits are doctors who practice in rural areas. In light of the current situation, it is proposed that the question regarding general checkup, test for lead and HIV and WIC services are excluded, while the other questions can be modified or just left as is.

b.   Conceptual differences in additional dimension

Another important aspect that should be considered is the contents from additional domains. Some of the questions in this domain should be adjusted to better fit an Indonesian context, as stated in the table II below:

Table II

Additional Dimension	Original Concept	Modification suggestion
Community Orientation	PCP surveys patients to see if the services are meeting people's needs	Usually such surveys are conducted by an insurance company or Minister of Health, including its network like district health office. This item should excluded from the questionnaire

Culturally competent	Respondent recommends PCP to someone who doesn't speak English well	Respondent recommends PCP to someone who doesn't speak *Bahasa Indonesia* well. This situation might occur especially in the east part of Indonesia where most people usually speak in their local language
Insurance Questions	Who pays for health care cost during the last 12 months : - HMO - Other private health insurance company - Medicaid or Medical assistance - Governmental health department clinic - Personal income - Any other way	Who pays for health care cost during the last 12 months: - Private health insurance company - Personal income - Any other way
Demographic/Socioeconomic characteristic	Available options regarding questions about respondent's race: African-American	This question should be excluded because the insurance scheme is only available for native

	• White	Indonesians.
	• Hispanic or Latino	
	• Native African	
	• Native American/American Indian/Alaskan Native	
	• Asian, Asian –American or Pacific Islander	
	• Other:	

Based on previous studies, modifying the questionnaire is still possible as long as it can represent the thrust of the original questionnaire. To preserve its content validity, an expert panel must be constituted to evaluate the relevance of item changes from the questionnaire along with the opinion of the original questionnaire's author (Pasarin et al., 2007; Lee et al., 2009; Berra et al., 2011). Later, pre-test/pilot testing must be conducted to analyze the validity and reliability of the translated tools.

VII.   Summary and Implication

Indonesia is facing an equity and quality problem within its health system. Optimizing primary care is the right option for Indonesia to overcome these health challenges. The opportunity to improve primary care is wide open since existing health policy still focuses on primary care's role as a gatekeeper. PCAT can be used to track the integrity of primary care service and quality. Establishment of Indonesian PCAT through cross cultural adaptation is very likely to be successful, since Indonesia has adequate resources and support.

There are several limitations that might influence the cross cultural process:

1. The length of time needed to deliver the questionnaire, since it takes at least 40 minutes to complete it. To overcome this challenge, it is highly recommended to consider the use of PCAT-AE short version. Further coordination with the author is necessary to obtain the authority to use it.

2. The chance to assemble all expert committees, since all of them consists of very important people in Indonesia.

3. Impact from changing or eliminating the cultural contextual differences in PCAT core dimensions. Further communication with the author of the tool is necessary to ensure its validity.

Regardless of the limitation stated above, documentation of primary care quality is critical to informing system improvement. Findings can be used to inform policy makers, including Askes, about problems within Indonesia's primary care system. Proper intervention can be delivered to ensure the optimization and the adequacy of primary care attributes. National policy or regulation should widen the opportunity for primary care to improve its quality as the heart of national health system.

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