

ASSESSMENT/EVALUATION

## Developing a Competence Framework and Evaluation Tool for Primary Care Nursing in South Africa

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**ABSTRACT Context:** Nurses provide the bulk of primary care services in South Africa. Post-apartheid health legislation envisions the provision of comprehensive primary services at all public clinics, which implies the need for a cadre of primary care nurses able to render such services.

**Objectives:** To identify core competencies of clinic nurses and develop an evaluation tool for primary care nursing in South Africa.

**Methods:** The descriptive and exploratory techniques used included two meetings of a reference group of South African primary care professionals, followed by a consensus-building exercise. Using the Delphi technique expert opinion was solicited from South Africa, Canada and the USA.

**Findings:** The reference group meetings yielded a list of nine core competencies. Infrastructure issues, such as the supermarket (one-stop shopping) approach to service delivery, communication and transport systems, and the quality of supervision still cause concern. These issues underscore that competence cannot be measured in a vacuum. Input from Delphi participants affirmed the nine core competencies and the need to assess the impact of core competency training. One possible way to measure the nine core competencies would be to use proxy indicators.

**Discussion/Conclusions:** Identifying core competencies is a complex process. There is a need to process a wide range of views and ideas. Also, balancing academic concerns with service delivery needs and constraints is an ongoing challenge. A potential limitation of the Delphi technique is participant selection bias and fatigue. Accessing a diverse international panel and making numerous follow up attempts via phone, mail and email were used to attempt to ameliorate these inherent limitations. Although the process is cumbersome, providing “experts” with a venue to wrestle with these ideas can be fruitful. Future studies would help to assess the reliability of the findings.

**KEYWORDS** Competence, training, primary care, nursing.

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## Context

As South Africa's health system undergoes major transformation, primary care services are faced with two important challenges: first, the need for high-quality primary clinical care; and second, the need for more nurses with adequate skills to provide such services. Primary care nurse training is a high-priority issue. This paper outlines a framework for addressing these challenges by presenting (a) the results of reference group meetings held in South Africa and (b) an international Delphi study. The meetings and the study enabled the authors to develop a core competency framework for primary care nurse training and evaluation.

## Nursing Skills for the Transformation of the South African Health Care System

The end of apartheid in South Africa in 1994 heralded major health policy changes. A shift in emphasis toward a district health system based on primary health care (PHC) was laid out in policy documents (e.g., ANC, 1994a, 1994b), which called for retraining and reorienting all existing health workers. The district health system is now seen as the functional unit within which primary care services are rendered.

The role of the primary care nurse requires integrating preventive care with curative services. Rendering curative services at a primary level requires strong history-taking, diagnostic and management skills. Providing preventive services requires effective communication and public health skills. The combination of knowledge, skills and experience that is necessary to provide the full spectrum of services, often in isolated areas, must not be underestimated. Furthermore, primary care nurses are seen as leaders in the community, and their role extends beyond the confines of clinic walls to involvement in such things as school health programs and community AIDS awareness campaigns.

The expanded role of nurses within primary care has long been recognized, yet training has not kept up with demand (Evian, 1988). The reasons for this are both historic and logistic. Historically under apartheid, there was an emphasis on tertiary care. Given the government's emphasis on curative (hospital) services, student nurses constituted an important part of the labor force. Nurse educators explained that hospital-based obligations make it extremely difficult for significant periods of learning to take place in primary care settings (Edelstein *et al.*, 1998). The establishment in 1986 of an integrated (inclusive of general nursing, midwifery, community and psychiatric nursing) four-year basic training for registered nurses was an early attempt to reorient nurse training away from hospital-centered practice to primary care settings.

Yet as Strachan and Clarke (2000) explain, changing curricula is not enough, since training is entrenched in hospitals. Preparing nurses for primary care requires revamping basic education, practice settings, tutor qualifications and long-held cultural expectations.

### *Improving Competence Through Training*

The South African Nursing Council (SANC) diploma in Clinical Nursing Science, Health Assessment, Treatment, and Care is seen as the “gold standard” for attaining competence in primary care. The course is offered to registered nurses who have completed either a baccalaureate or diploma program. Cameron (2003) reports that nurses generally feel well prepared to work in a primary care setting after completing this diploma. Nurses who undergo primary care training show increased knowledge in primary therapy for common ailments (Pick *et al.*, 1998). Diploma courses are generally considered of high quality but add a year of full-time study.

Alternative approaches to improving competence, include in-service training often as specific classes based on selective or vertical priority programs. However, vertical programs threaten the vision of comprehensive PHC. Strachan (1999) contended that these programs, provided by a variety of role players, are often poorly coordinated. Moreover, they cannot entirely bridge the gap in basic competencies necessary for quality primary care. As WHO (1997) stated, “the implementation of PHC continues to be weakened by over-reliance on separate vertical programs” (p. 3). Yet, the important development of competent primary care nurses is but one aspect of achieving primary health care.

Topics for in-service training may be extremely diverse and unrelated (van Rensburg & van Rensburg, 1999). The profusion of courses has led both managers and nurses to complain that “there are too many training programs, and members suffer from information overload with no time to absorb the content or practically develop the necessary skills” (Drennan, 2002, p. 8). Given the considerable cost associated with training, a clear understanding of access to and return on training investment is needed. Despite the numerous initiatives to improve competence as discussed above, too few primary care nurses are trained, and other significant gaps exist.

### *The Training Gaps*

In addition to too few nurses being trained in primary care, there is a large inter-provincial disparity in the distribution of primary care nurses. There is better coverage in the more affluent Guateng and Western Cape provinces (Pick *et al.*, 1998). In a rapid audit of primary care nurses in KwaZulu Natal province, Drennan (2002) found that only 22% of nurses providing primary care services were diploma-trained. This training gap has been worsened by the

loss of primary care nurses to the private sector and to careers overseas. The problem is a lack of enough nurses with primary care skills.

### *Developing a Framework of Competence*

Rice and Rapson (1999) suggest that the reason for developing models of competence is to find local solutions to human resource needs. O'Neill-Hewlett & Eichelberger (1999) argued that narrowly delineating nurse competencies is no easy task, especially when one moves from nursing theory to practice. For example, when a nursing task force in New Mexico attempted to develop precise standards for various levels and settings of nursing care, some members of the task force, according to Stephens (1999), "objected to the apparent reduction of nursing to a series of tasks, (while) others believed that outlining tasks would help clarify and specify skills that must be included in training and educational programs" (p. 299).

After this study was done, Alexander and Runciman (2003) published a framework of competence for general nursing, and the International Council of Nurses [ICN] (2003) provided an implementation model for that framework. Future application and assessment of the impact of this framework will add to the growing body of knowledge on competence. In addition, there is a need to enhance understanding of a minimum competence level below which a person is deemed incompetent.

### *Assessing Competence*

Kruger and Dunning (1999) provide strong evidence of the need for an objective assessment of competence. They explain that novices have poorer metacognitive skills than experts and thus poorer judgment and self-assessment. Incompetence can be conceptualized as a matter of degree, since there is no "magic" line that divides between competent and incompetent individuals (Kruger & Dunning, 1999). Yet, Benner (1996) through extensive research on nursing sees competence as an early stage in the clinical skills development of a nurse.

### *Objectives*

This study aimed to develop a framework for training and assessment in primary care based on identifying core competencies needed by nurses working in a PHC context. The initial research questions were:

- (1) What are the core competencies of primary care nurses?
- (2) How should a clinic nurse's core competence be measured considering both effectiveness and efficiency of tool use?

Exploratory and descriptive methods used to answer these two questions included reference group meetings followed by an international Delphi study.

## Methods: Reference Group Meetings

Two daylong meetings were held in 1998 to outline *essential knowledge, skills and attitudes* for primary care nurses. The meetings conducted in Durban and Cape Town, included 18 nurse educators, clinical primary care trainers and working nurses from around South Africa. The researchers selected participants based on their reputations and experience in nurse training, education, research and district development.

The meetings began with a discussion of the rationale behind core competencies—*what are they and what purpose do they serve?*—followed by a review of current training programs, including certificate and diploma courses offered through government departments of health and academic institutions.

In preparation, participants were mailed (by post) relevant readings (Dunn *et al.*, 1985; Boylan & Westra, 1998) and asked to bring a draft list of core competencies to the day-long meeting. At both Cape Town and Durban meetings participants were then tasked with establishing priority competencies based on “what we *know* and *value*”. This was followed by a brainstorming session on how to measure core competencies.

## Findings of the Reference Group Meetings

Despite reluctance to generate a list of specific competencies, a number of possible models emerged. *Model one* combined technical competence and country specific priority programs such as HIV/AIDS (Figure 1).

*Model two* (not illustrated) simply presented competence within three learning domains: cognitive, psycho-motor and affective. *Model three* emphasized holistic care and based competence on one’s ability to complete a multi-stage assessment of the client’s presenting problem and context including the quality and character of the interaction between the client and nurse (Figure 2).

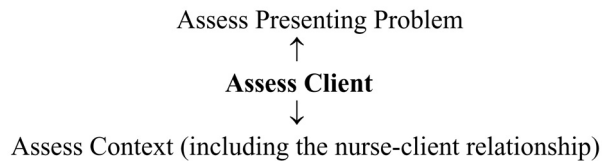
Technical Competence	Priority Programs
Clinical (History taking, examination, diagnosis, counseling and prescribing)	For example, Maternal and Child Health Infectious Diseases
Public Health	Malnutrition HIV/AIDS
Management	Rational Drug Use

**Figure 1.** Framework of Technical Competence and Priority Programs

Final consensus among participants generated a list of nine core competencies (Figure 3) that was felt to be a worthwhile starting point yet requiring further specification.

Each core competence required a detailed description and could be applied in a matrix to each priority program. For example under problem solving skills, there could be a list of indicators such as: history taking, physical examination, differential diagnosis, decision making, planning, prioritizing, implementing and evaluating. Such indicators of competence should be realistic and reflect the broad range of tasks of a primary care nurse. Having a set of indicators to use as a baseline would help define a level of safe practice.

Supplementary issues included the conflict between selective and comprehensive primary health care and debate about training methods. Primary care refers to clinic-oriented services, which meet common health needs, whereas primary health care is a broadly defined and comprehensive construct involving many aspects of health including, but not limited to, health services. The continued disagreement on the role of the primary care nurse (clinic-based or



**Figure 2.** Multi-stage assessment of nursing practice

- Core Competencies**

  - Able to problem solve: The consultation & health assessment skills
  - Capable of managing common conditions such as tuberculosis, diarrhea and acute respiratory infections
  - Demonstrates effective communication and counseling skills
  - Able to apply rational drug use
  - Identifies when and where to refer
  - Capable of accessing and using information
  - Demonstrates a caring, confident approach
  - Capable of providing general clinic management
  - Demonstrates a community orientation

**Figure 3.** The Nine Core Competencies of Primary Care Nursing

community-based) was concerning. System-wide issues, such as a the move to a supermarket (one-stop shopping) approach to service delivery (which adds breadth to the nurse’s role), the need for effective supervision, concerns about task-oriented service delivery and the numerous expectations put on nurses, were raised. Weak communication and transport infrastructures continue to challenge primary care nursing. These issues emphasize that competence cannot be measured or discussed in a vacuum and must be seen in context.

*Methods: Delphi Study*

The aim of the Delphi study was to conceptualize a measurement tool for the nine core competencies produced by the reference groups (Figure 3). Two tasks were used to meet this objective.

- (1) To gain consensus on what is meant by a competent primary care nurse;
- (2) To identify measurable competence criteria.

The Delphi technique is used to obtain input from a panel of experts. Opinions, predictions and/or judgments are requested on a subject. The principal investigator then synthesizes these, and a narrower set of questions/statements are fed back to the panel for further input. This cycle can continue until responses appear stable and/or group fatigue is seen (Polit & Hungler, 1991; Bettcher *et al.*, 1998). The operational definitions for the terms primary care nursing, competence, core competencies and safe practitioner, as used in the Delphi are provided in the Appendix.

The questions in the Delphi study (Table 1) explored aspects of competence in training, the idea of “core” competencies as well as competence assessment.

The first Delphi questionnaire was sent to an international panel of experts in nurse training and primary health care. The six respondents included an employee of the South African Nursing Council and educators at South African and Canadian universities. The second round of the Delphi was hindered by a

**Table 1.** Delphi Study Questions

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<b>Question 1:</b> Can training around core competencies yield a “safe practitioner” more quickly than traditional methods?
<b>Question 2:</b> Should a truncated training program look at both clinic and community-based needs?
<b>Question 3:</b> In one sentence, define a competent primary care nurse.
<b>Question 4:</b> Do you feel the competencies listed in figure 3 are “core” competencies? Please modify, add or delete as necessary.
<b>Question 5:</b> Do you feel that the list of core competencies manifested in specific programs (e.g. maternal-child health) could be a helpful way of assessing competence?

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low response rate ( $n = 2$ ), although numerous attempts were made to increase it through follow up letters and emails.

Figure 4, which was provided to Delphi participants, illustrates hypothetical relationships between training and competence. The diagonal (straight) line represents some conventional assumptions about training (a 4-year basic nursing education followed by a one-year primary care nursing diploma), which presume a linear relationship between amount of training and competence, i.e. increased training time equals increased competence. However, the curved line illustrates this paper's hypothesis that core competency training can more quickly achieve a "safe practitioner level" (point A). Less training time is needed to reach point A with core competency training than traditional training, representing potential savings in training time. Point Z represents the lower competency level compared to point A despite the same amount of time in training. The difference between point A and point Z could be described as the training jump achieved through core competency training. Point B represents a hypothetical "expert practitioner" which is achieved much later and at relatively similar rates.

#### *Findings of the Delphi Study*

Participants agreed that training around core competencies yielded a "safe practitioner" more quickly than traditional methods, but indicated that this was conditional on the quality and context of training.

"... training around core competencies will be a quicker way of attaining a safe practitioner. But, to achieve this outcome, the training approach must be assessed..."

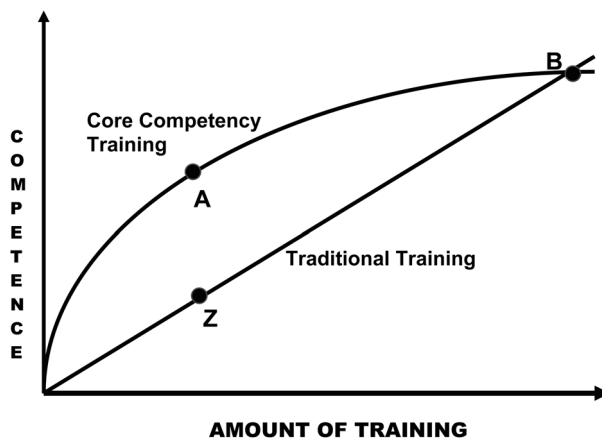


Figure 4. The relationship between training and competence

“PHC training is geared towards clinical practice... yet there are more health needs in the community than in the clinics. There should be a balance between the two, or alternatively, the larger percentage of training should be on community...(oriented) PHC.”

Many descriptors were provided to define a competent primary care nurse (Figure 5) and agreed with input from the reference group meetings (Figure 3).

Participants disagreed whether core competencies were best measured in specific programs (e.g. maternal-child health and infectious diseases). Only three respondents listed programs suited to measure each competence and there was little commonality in responses. Some respondents felt that to manage programs well, people need to be competent in all domains.

“I do not think that one or two programs would best measure each core competency. ...all the core competencies given will be needed to some degree in all... programs.”

The majority of respondents agreed with the use of proxy indicators of competence.

“...useful and simple, practical method of assessing knowledge, specific programs and core competencies needed to treat them.”

In addition, concern about the varied scope of practice between rural and urban primary care nurses, as well as the need to integrate curative and health promotion activities, were raised. As mentioned, round two was limited by the low response rate, yet there was agreement for the need to make core competencies measurable. Suggestions included the use of minimum standards and a combination of a practical assessment (OSCE or real clinic setting) and a written test using case studies. These findings informed the development of a core competency assessment tool, which is currently being evaluated.

- Demonstrates sound judgment, critical thinking and a caring attitude
- Effectively assesses needs; diagnoses and treats common conditions
- Assists client to attain optimal health and promotes self-care
- Works within scope of practice and practices independently
- Serves as a change agent

**Figure 5.** Descriptors of a competent primary care nurse

## **Discussion/Conclusions**

This paper has reviewed one attempt to develop a framework for measuring competence of primary care nurses. An understanding of the nurse's role is necessary, but agreement cannot be assumed. Identifying core competencies can increase role clarification and guide training. Secondly, ways to assess competence, which are reliable and valid, are needed.

Identifying core competencies is not a straightforward process, requires processing a wide range of views and ideas and balancing academic concerns with service delivery needs. Although the process is cumbersome, providing experts with a venue to wrestle with these ideas can be fruitful.

Using a participatory approach affirmed by an international Delphi, this study has outlined nine core competencies for primary care nursing in South Africa. Key descriptors of competence include critical thinking, independence and assisting clients to achieve optimal health. This study has also suggested using proxy indicators to assess competence. Focusing training around the nine core competencies may facilitate the rapid expansion of nurse training needed to increase the number of primary care nurses in South Africa. Yet, competence cannot be removed from the context within which the nurse works. Priority programs may be a valid reference point from which to assess core competence, but further studies are needed to assess the reliability of these findings.

This study has identified a number of areas for further investigation. What role do rural and urban differences play in role definition and core competence? How does training around numerous vertical programs, as currently exists, affect competence? How do the structure of health services (e.g. a supermarket approach) and the integration of curative and health promotion activities affect competence?

Following the reference group meetings and Delphi study, a lengthy measurement tool was developed to assess the nine core competencies. The tool has an observation guide and self-test which focus on proxy indicators of competence and assess priority programs in South Africa. It is currently being piloted in three sites.<sup>1</sup>

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<sup>1</sup>For further information on this core competency evaluation tool please contact Susan Strasser at [susanstrasser@webmail.co.za](mailto:susanstrasser@webmail.co.za)

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## Appendix

### *Operational Definitions*

The following operational definitions were employed in this study:

*Competence*: Possessing a range of skills, abilities, knowledge and attitudes, which are adequate for the purpose.

*Core competencies*: The broad, yet essential, competencies necessary to produce a safe practitioner.

*Primary Care Nursing*: Nursing services that are provided at the first point of contact with the public (western) health system and which include health promotive, disease prevention and curative services.

*Proxy Indicator*: An indicator, which is used as a surrogate or stand-in measure of competence. For example, the ability to accurately interview and assess a patient's signs and symptoms of cough as a proxy indicator of problem solving competence.

*Safe Practitioner*: A nurse who demonstrates competence in day-to-day practice.