

# A job analysis of selected health workers in a district health system in KwaZulu-Natal

## Part two: Job analysis of nurses in primary health care settings

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### Abstract

The aim of this descriptive survey was to do a job analysis of different categories of nurses in a District Health System in order to clarify job expectations, describe current practice of nurses in hospitals and clinics and to make recommendations about skills mix in district services. This article deals with the clinics only.

A mail questionnaire requested the sampled nurses to rate the frequency and importance of the tasks they perform. A total of 71% of the nurses (60 nurses of all categories) returned the questionnaire, and an index taking into account frequency and importance, was calculated. The self-report data was compared with data from non-participant observation done over 11 days in five clinics.

The respondents rated 11 tasks as being performed more

than six times per week, and no task as being important in that more than 70% of respondents felt it could never be omitted. However, on the task index, which combines frequency and importance, 57 tasks received the highest possible score of ten, and few (25%) were rated below five.

The work context of nurses in PHC settings and hospitals was compared using Exhaustion-Disengagement Model and it was proposed that hospital nurses had higher job demands and lower job resources, and therefore ran a higher risk of both exhaustion and disengagement.

A clear difference in the roles of different categories of nurses was found, although they have many tasks in common.

### Introduction

Clinics and health centers are at the primary level of care and problems that cannot be dealt with at this level must be referred to the secondary level. Primary health care (PHC) addresses the main health problems in the community in a District Health System providing promotive, preventive, curative and rehabilitative service accordingly. The current primary health care team to population ratio of 1:30 000 need to be reduced to 1:15 000 (Department of Health, 1997: 55).

The Government Notice N667 (Department of Health, 1997: 54) states that the skills, experience and expertise of all health personnel should be used optimally to ensure maximum coverage and cost effectiveness. In this regard the composition of primary health care teams is important. This government notice of 1997 states, that a primary health

care team need to include a unit of health personnel with appropriate skills to deal with common conditions and execute referral to the next level of care. Such team should be based at health units such as clinics and community health centers. The primary health care team members are identified as community health nurses, primary health care nurses, midwives, doctors, enrolled nurses and nursing auxiliaries, oral therapist, psychiatric nurses, clerical and support staff and rehabilitation personnel.

There has been some attention given recently to the competencies needed by Primary Health Nurses. Strasser (2000) is currently doing a study in which she specifically looks at the competencies needed by PHC nurses for their clinical role, based on a Delphi survey. However, no job analysis studies of nurses or other workers at PHC level have been published. What nurses and those in closest working contact with them is therefore actually doing, and how that

compares to what they should be doing, is not clear.

## Literature Survey

Primary health care is an integral part of the National Health System of South Africa. The declaration of Alma-Ata defined primary health care as essential health care based on practical scientifically sound and social acceptable methods and technology made universally acceptable to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain every stage of their development in the spirit of self-reliance and self-determination. The Alma-Ata Declaration (WHO, 1988: 16) highlighted five principles underlying primary health care as follows:

- **Equitable distribution of resources**, which imply that health care services, must be equally accessible to all.

- **Community participation in decision-making**, referring to the dimensions of community participation, which include:

- The organization of services on a community basis;
- The contribution of the community to the operation and maintenance of the services;
- Community participation in the planning and the management of services;
- Community input into the overall strategies, policies and work plan of the programme.

- **Focus on preventative/promotive health service**, referring to the focus on disease prevention and health promotion rather than curative services.

- **Appropriate technology**, which means the material and methods used in health system, should be acceptable and relevant, including the human resources with appropriate skills, adapted to local needs.

- **A multi-sectoral approach**, which means that health care is regarded as one part or element of total care which include education, nutrition, water supply and housing which are all essential for the achievement of well being.

According to Alma Ata Declaration (WHO, 1978: 24) eight essential elements of primary health care services are:

- Education concerning prevailing health problems and methods of preventing and controlling them.
- Promotion of food supply and proper nutrition.
- An adequate supply of safe water and basic sanitation.
- Maternal child health care including family planning.
- Immunization against major infectious diseases.
- Prevention and control of locally endemic diseases.
- Appropriate treatment of common diseases and injuries.
- Provision of an essential drug supply.

The primary health care package of South Africa (Department of Health, 2001: 10) summarized the services to be provided through district health system, in addition to the services based on elements of primary health care are:

- Mental Health Service,
- School Health Service,
- Accidental and emergency services, and

- Curative services for some chronic diseases.

The norms and standards set in the package are comprehensive to be used by the staff to assess their own performances and that of the clinic and the community to assess the quality of service entitled to them. This is in line with the Service Delivery Principles of Batho Pele (People First) (Department of Public Service and Administration, 2001: 10), which are as follows:

- Consultation – which means that people should be consulted about the level and quality of service they received and wherever possible should be given a choice about services they are offered.
- Service standard – the community should be told what level and quality of service they will receive so that they are aware of what to expect.
- Access – all citizens should be treated with courtesy and consideration.
- Information – the community should be given full, accurate information about services provided at primary health care clinics.
- Openness and transparency – people should be told how departments are run, how much they cost and who is in charge.
- Redress – if the promised standard of service is not delivered, the community should be offered an apology, a full explanation and speedy and effective remedy. A positive response should be made to complaints.
- Value for money – services should be provided economically and efficiently.

A district Health System comprises of a population living within a clearly delineated administrative geographical area (Department of Health, 1995: 33). The Alma Ata Declaration stressed the need for health care at Primary Health care level and to be accessible to all people and therefore the District Health System is a framework for its implementation (WHO, 1978: 58). According to WHO (1978: 34) community participation in the planning, provision, control and monitoring of health services is essential. The developmental and inter-sectoral approach required empowering individuals and communities to take full responsibility for the promotion and maintenance of health, to ensure maximal health-gain is achieved at the lowest cost (Department of Health, 1995: 5-6).

## Aim and objectives

The aim of this study was to do a job analysis of all categories of nurses working in a district health system. The job analysis with regard to nurses working in hospitals was described in part one of this series of articles. In this article the job analysis of nurses working in PHC settings will be dealt with, and also the comparison between different groups. The specific objectives addressed in this article are to:

1. Describe the current practice of the nurses in PHC settings in terms of frequency and importance of

**Table 2.1 Sample realization (planned sample numbers in brackets)**

	Enrolled Nursing Auxiliary	Enrolled Nurse	Registered Nurse	Nursing Supervisor	TOTAL
Population	28	54	187	6	275
Planned sample	8	17	57	2	84
Sample realized	4	16	40	0	61*
% of population	14	30	21	0	22

\*One respondents did not indicate her/his registration

- tasks performed, environmental factors impinging on the job, task demands and immediate outcomes.
- Compare the burnout risk of nurses working in district hospitals with those working in PHC settings.
- Compare the tasks performed by different categories of nurses in hospitals and PHC settings.

### Definition of terms

**A task:** is a meaningful unit of work activity generally performed on the job by one worker within some limited time period. It is a discrete unit, which represents a composite of methods, procedures and techniques.

**A job:** is a group of positions that are identical with respect to their major or significant tasks and sufficiently alike to justify them being covered by a single analysis.

**Environmental factors:** This refers to the availability of necessary resources for the performance of the job and any other physical or social factors influencing the level demands or strain of the job.

**Burnout:** Burnout is an occupational syndrome of feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment (Demerouti, Bakker, Nachreiner, and Wilmar, 2000: 455).

**Exhaustion:** Emotional exhaustion refers to intensive physical, affective and cognitive strain, as a long-term consequence of prolonged exposure to work stressors (Demerouti et al, 2000: 455).

**Disengagement:** This refers to a person distancing self from one's work, and negative attitudes towards the work object, work content, or one's work in general (Demerouti et al, 2000: 455).

## RESEARCH DESIGN

This was a descriptive study. A mail survey was done, asking nurses to rate the frequency and importance of listed tasks. The data from this survey was complemented by non-participant observation by an expert practitioner of the functioning of all targeted workers. This focused specifically on tasks performed, job demands, and environmental factors.

### Sampling for mail survey

Two stratified random samples of nurses were drawn from a

sample frame of the district for the task analysis (see table 2.1). The planned sample in PHC settings (84) was big enough to compare different categories of nurses (Registered Nurses, RN; Enrolled Nurses, EN and Enrolled Nursing Auxiliaries, ENA). It was small enough to allow for two samples that do not overlap to be drawn from the population of all nurses in PHC settings in the district (275).

Only 61 responses were received, which is an average of 22% across categories. Enrolled Nurses respnded best, and Supervisors worst (see table 2.1). Only three of the respondents were males, and they worked in the fixed clinics. In terms of age, the respondents under 30 years of age worked mainly in Health Centres, while those over 50 worked in fixed and mobile clinics.

### Mail survey instrument

The job analysis questionnaire was developed based on the core Primary Health Care Package (Department of Health, 2001: 21-35). The list of tasks developed in this way was be checked against the list of activities used in the job analysis of entry level registered nurses in the USA (Kane, Kingsburg, Colton & Estes, 1986). The list was then finalized and the 141 tasks were listed in a format which required respondents to rate how often they performed each task (less than 1 per week, 1-5 per week, 6-10 per week and over 10 times per week) and how important they thought the task was (whether it could sometimes be omitted or could not be omitted). The questionnaire also included a demographic section that included gender, age, professional rank and the area where the respondent works. A third section dealt with activities that the respondent perform but were not included in the list provided.

Three experts checked the instrument for clarity. The assessment of the stability of the instrument was done during a pilot study using test-retest reliability. Five nurses were selected for the pilot study and completed the questionnaire on two separate occasions at an interval of two weeks and the scores obtained were compared. A 100% correlation was obtained for 139 tasks, 80% for ten tasks, and 60% for three tasks. No changes were made to the instruments.

Developing an instrument based on the Primary Health Care

**Table 2.2 Age and workplace of respondents with column % (n=61)**

AGE	COMHEALTH CENTRE	FIXED CLINIC	MOBILE CLINIC	TOTAL PER AGE-GROUP
25 – 29	3 (30%)	3 (8%)	0	10
30 – 34	1 (10%)	9 (23%)	5 (45%)	23
35 – 39	3 (30%)	4 (10%)	1 (9%)	16
40 – 44	2 (20%)	7 (18%)	0	13
45 – 49	1 (10%)	6 (15%)	2 (19%)	13
50 +	0	10 (26%)	3 (27%)	23
Total and row %	10 (16%)	39 (64%)	11 (18%)	61*

\* One respondent did not indicate age

Package and services provided ensured content validity. Criterion-related validity was ensured by checking that all items covered by Kane et al (1986) in the American instrument, was also covered in this instrument.

Preventive and promotive services (45 items)

Curative Service (39 items)

Maternal and child health service (8 items)

Mental Health Service (16 items)

Rehabilitative Service (10 items)

Planning and Management (33 items)

A total of 21 items address more than one category. Since all categories of the PHC package were well represented in the instrument, and provision was made for respondents to add items, it can be argued that the instrument was valid.

The instrument was mailed to the first sample with a covering letter explaining the research and asking for participation. Respondents were supplied with a stamped envelope to return the completed questionnaire to the University. The mailing was followed up with a reminder letter four weeks later. Three months later the same questionnaire was sent to the second sample. This was done to allow for enough respondents, without nurses in the same setting working on the questionnaire at the same time and therefore influencing each other.

## Observation schedule

The observation schedule was developed to focus on the contextual factors of tasks performed, such as environmental factors (physical and social environment), interruptions, and control over speed of task performance and task demands. The observations were done over one-hour periods, with each category being observed at least on two different days and at least once in the morning and once in the afternoon. Sampled units were approached by mail to explain the research and ask for their participation. They were requested to answer on the answer sheet provided. On receipt of a positive answer, arrangements for the observation visit were made with the person in charge of the service, who arranged with individual units. The field worker

was trained to use all the data collection methodologies in the research plan. This component of the research could be seen as intrusive, and the presence of the observer was therefore explained to patients/clients, and their permission was obtained. The intrusiveness was limited by measures such as sitting outside of the nurse-patient circle, and using a registered nurse as observer.

The project was approved by the University of Natal Ethics Committee and by the provincial and district health authorities. Individual institutions and sampled individuals were then approached and their informed, voluntary participation sought.

## Data analysis

The frequency and importance rating of each task was calculated, and an index of frequency x importance was calculated for each item.

Frequency was calculated, based on the following classification:

- Very frequent: all tasks performed 6 times or more per week as indicated by 70% or more of respondents.
- Frequent: all tasks performed 6 times or more as indicated by 50% of respondents
- Rarely performed tasks performed less than once per week by 50% or more of respondents.
- Very rarely performed: all tasks performed less than once per week by 80% or more of respondents.

The methodology used to calculate the frequency-importance index was based on that highlighted in the article "Certified Occupational Health Nursing – Job Analysis in the United States of America" (Burgel; Wallace; Kemerer & Garbin 1997: 45). This methodology enables one to compare the both the frequency and the importance of a task, giving more weight to the latter. As highlighted by the abovementioned article, this methodology is common in job analysis studies for the health professions, as the less frequent tasks are often the most important tasks, e.g. ad-

**Table 2.3 Task index for PHC nurses with regard to seven task categories**

	No of tasks	Mean for category	No of tasks rated 8+	No of tasks rated 4-
Assessment of clients and recording of data	42	7,62	22 (52%)	9 (21%)
Diagnosis and planning of patient treatment and care	8	7,5	5 (63%)	2 (25%)
Administering treatment and nursing care	37	6,97	18 (49%)	13 (35%)
Counselling and teaching	27	7,37	10 (37%)	5 (19%)
Preventive and promotive health care	5	5	-	2 (40%)
Management of a unit	18	7,67	11 (61%)	4 (22%)
Collaborating	9	7,11	5 (56%)	2 (22%)

ministering cardio-pulmonary resuscitation (CPR).

## Results

### Task frequency for PHC group

Eleven items were rated as very frequently performed tasks, performed 6 or more times per week by more than 70% of nurses. Six were assessment tasks, one treatment task, three counseling and one preventive and promotive task. The frequently performed tasks were forty-four items, performed 1 or more times per week as rated by 50% and above nurses.

Only one task, urinary catheterization (men), was rated as “very rarely performed” by 80% of nurses. Rarely performed tasks were those related to equipment, multi-disciplinary team, maternity and preparation of a patient as rated by 50% and above nurses.

### Task importance for PHC group

No task was rated as important (never to be omitted) by 70% or more of the respondents. Twenty-seven tasks were rated as important by 50% and above nurses. Six were assessment tasks, eight treatment tasks, six counselling tasks, six management and one related to preparing specimens.

### Task index for PHC group

When looking at the task index (which combined task frequency and importance), there are 57 items (40%) rated at 10 (the highest possible index). A much lower proportion of tasks was rated below 5 (35 or 25%) than in the hospitals. The role category rated the lowest by PHC nurses is preventive and promotive care (5), while they rate unit management highest (7,67) (see table 2.3).

Respondents rated a number of crucial tasks very low:

- the assessment of suicide risk was rated at 3.
- the use of rehydration was rated at 3.

They also rate counselling tasks regarding mental prob-

lems (e.g. dementia, depression) lower than counselling tasks with regard to physical illness (e.g. diabetes, hypertension).

### Data from observations

With regard to the PHC settings, the most frequent tasks were:

- History taking (total 111 of which 92 by RNs),
- Prescribing and dispensing medication according to Essential Drug List (EDL) (total 81 of which 77 by RNs),
- Documenting and record keeping (total 76 with 53 by RNs),
- Taking blood pressure (total 66 of which 27 by EN, 18 by RN), and
- Weight and measure height of patients (total 57 of which 26 by SASO and 15 by EN).

Of the total of 990 tasks observed, 637 (64%) were attributed to RNs. The tasks of the RNs and other categories seem to be different, with RNs doing midwifery care, diagnosis and treatment of minor and common ailments, prescribing and dispensing of drugs, management and a high level of counselling.

Two additional categories of workers were identified in the settings. They were Auxiliary Service Officers (ASO) and Specialised Auxiliary Service Officers (SASO). ENs, ASO and SASO seem to do much of the routine measurement (BP, height and weight, vital signs urinalysis), interpretation, immunization and some counselling.

### The environment in PHC settings

**Clinic 1:** The building was described as “small and congested”, “over-crowded” and it was indicated that privacy was a problem. All nurses shared one examination room, and this caused long delays. They also used the labour ward for antenatal care. When describing the social factors, the poverty in the community was mentioned repeatedly, with high incidence of teenage pregnancy and unemployment. Safety was also a problem, with patients coming

to the clinic with guns. There was no security person at this clinic. All the staff had to share one stethoscope.

**Clinic 2:** Electricity was “on and off”, there was no rest room for nurses, and the dressing room was too small for a stretcher. There was no protective clothing in the labour ward and the television was not working, and could not be used for health education. However, this community did not look as poor as the one served by clinic one, and used the health care provided. This was the only clinic in the area providing a service at night, and that made the work demanding. The observer described the clinic as “having a good personality”.

**Clinic 3:** The male toilet had been out of order for a long time. The clinic was small and patients often had to stand outside. There was no labour room and the emergency room served multiple purposes, e.g. storing of trolleys. The water supply was unreliable, and was cut off without warning. Unemployment and teenage pregnancies were social problems in the area, and the incidence of HIV/AIDS and TB was high. The community had a poor toilet system, and transport was also a problem. There was a chronic staff shortage.

**Mobiles:** The observer indicated that there was no building where the mobile stopped, and nurses were working in a garage, with no water, toilets or electricity. The other mobile did not use a building at all. Some patients had to cross a river to attend, and attendance was poor on rainy days and during harvest. The road was not good, and worse when it rained. Health projects had been politicized by some community members. HIV/AIDS prevalence was high in this area. Teenage pregnancy, early school leaving, unem-

ployment, and child neglect were problems in the area.

## Comparisons

### The work context

The observer had to comment on four task related factors (interruptions, delays, necessity to use people or material and demands) and three environmental factors. The observer rated so few instances of using people or material and demands, that those two categories were disregarded in the analysis.

The average frequency of interruptions and of delays was calculated per category, and is reflected in table 2.4. From this data it would seem that nurses in the PHC setting complete more tasks per hour, and has twice as many interruptions and delays as their counterparts in the hospital setting.

### Comparison of settings in terms of burnout risk

In order to understand these factors better, they were coded for each setting according to Exhaustion-Disengagement Model suggested by Demerouti et al (2000: 454-462). They have shown that there are six main Job Demands, and six main Job Resources. If the Job Demands are too high, it leads to Exhaustion, and when the Job Resources are too low, it leads to Disengagement (see table 2.5).

The scores reflected in table 2.5 are motivated as follows:

1. Job demands:

1.1 Physical workload: It would seem from the observations that PHC nurses perform more tasks per hour than hospital nurses. They also have to deal with more interrup-

**Table 2.4 Frequency of tasks, interruptions and delays in PHC and Hospital settings per category.**

	RN	EN	ENA	ASO	SASO	Other	Total
<b>PHC settings</b>							
Total tasks	790	237		98	73	84	1282
Hours observed	23	11		4	3	4	45
Average tasks per hour	34,3	33,9		24,5	24,3	21	28,5
Interruptions per hour	1,5	0,9		1	0,7	0	(53) 1.2
Delays per hour	1,4	0,7		1,75	1,3	0	(54) 1.2
<b>Hospital settings</b>							
Total tasks	773	574	613			36	1996
Hours observed	42	41	28			4	115
Average tasks per hour	18	14	22			9	17,4
Interruptions per hour	0,8	0,7	0,3			0,3	(69) 0.6
Delays per hour	0,4	0,5	0,5			0	(57) 0,5

**Table 2.5 Comparison of settings in terms of Exhaustion-Disengagement Model**

1. Job demands	PHC	Hospital	2. Job resources	PHC	Hospital
1.1. Physical workload	1	0	2.1 Supervisor support	1	0
1.2 Cognitive workload	0	1	2.2 Feedback	0	1
1.3 Time pressure	0	1	2.3 Participation in decision-	1	0
			making		
1.4 Demanding patient contact	1	1	2.4 Control over job	1	0
1.5 Poor environmental conditions	1	0	2.5 Rewards available	1	0
1.6 Shift work	0	1	2.6 Task variety	0	1
Job demand index	3/6 (50%)	4/6 (67%)		4/6 (67%)	2/6 (33%)

tions and delays.

1.2 Cognitive workload: However, more staff from hospitals complain about overwork, and ask for more staff.

1.3 Time pressure: Since PHC settings are less busy in the afternoon, they can extend work into the afternoon. This is not true for hospital settings.

1.4 Demanding patient contact: Both settings deal with demanding patients.

1.5 Poor environmental conditions: In general it seems that physical conditions in PHC settings are poorer than those in Hospitals.

1.6 Shift work: PHC staff generally do not work shifts to the extent that Hospital staff do.

2. Job resources:

2.1 Supervisor support: Support is high in terms of orientation and teaching at PHC settings (tasks 104 + 109 + 13) compared to hospital for almost double the observation time.

2.2 Feedback: Feedback is higher in hospital settings (task 103) than in PHC settings, where every nurse works relatively independently.

2.3 Participation in decision-making: The workforce is small and more of a primary group in PHC settings than in hospital settings. This leads to greater sharing of power.

2.4 Control over job: PHC workers control their own jobs to a large extent. The frustration of hospital General Assistants about "running errands", which interferes with their own.

2.1 Rewards available: None was mentioned. However, RNs have rewards such as working in a consulting room, and engaging in high status jobs such as deliveries, and dispensing medication. The rewards of hospital nurses may be in doing ward rounds with high status colleagues such as doctors or matrons. However, few of them are involved in this.

2.6 Task variety: According to the task frequency, PHC nurses perform 55 tasks frequently or very frequently, and 7 infrequently. In contrast, hospital nurses perform 42 tasks frequently or very frequently, and no task infrequently. It would therefore seem that hospital nurses perform a greater variety of tasks. The same is true of hospital workers in other categories.

If this analysis is accepted, it would seem that hospital nurses have a higher Job Demands and lower Job Resources. They can therefore be expected to run a greater risk of both exhaustion and disengagement. Both of these lead to lower life satisfaction according to Demerouti et al (2000: 457).

### Comparison between different categories of nurses

To compare the frequency of tasks performed by different categories of nurses each item was cross tabulated with category (RN, EN, ENA), and to test for the significance of the differences observed, a Chi Square was calculated for each item. There was a significant difference between categories only on 19 items, but a further 10 showed a strong trend towards a significant difference. These items (Table 2.6) will be explored in more depth.

If one scrutinizes these scores there seems to be only three tasks that are regularly performed, mainly by RNs (wound closure by suture; arrange environment to promote patient safety; and attending community meetings). In contrast, there are many tasks that are shared by RNs and ENs, but are regularly done by ENs (see items 4, 18, 21, 25, 27, 42, 48, etc in table 2.6). These tasks include diagnostic tests such as reading glucose finger pricks (task 32), counseling (task 55,7) and management (task 109). Although ENs might not do a lot of formal in-service training, they seem to do a lot of orientation of new staff members, and informal teaching to individuals. This is done more frequently than the more formal teaching done by RNs. However, the dominant impression left by the comparison of roles is that there are not a great difference, and that there are very few tasks exclusive to RNs.

If one considers the data based on the observations, the picture looks a bit different. Many of the tasks reported by ENs as frequently done by them, was never observed

When this data is compared to that collected through ob-

servation, questions arise about the validity of especially the EN ratings. For instance ENs report themselves to be performing a number of tasks more than ten times per week, but they were never observed to be performing them during the 160 hours of observation. These tasks include counseling clients about depression (task 55,7), administering local anesthesia (task 78), and counseling victims of abuse (task 79). Furthermore, these tasks were not observed being done by any nurse during the observations. Another set of tasks which the ENs rate themselves as performing more than 10 times per week is shown by observation to be done mainly by RNs, who rated the frequency much lower. This set of tasks include assist with personal hygiene (task 4), Teaching parenting skills (task 72), Supervising subordinates (task 103), and Staff in-service (task 109). It might therefore be the case that ENs, tend to over-estimate the frequency of tasks they perform.

## Discussion

The picture that emerges for the PHC group is one of nurses involved most frequently in assessment and recording, and counselling and teaching tasks. When it comes to importance, they rate their assessment, treatment and care, counselling and management all at about the same level. When these two measures are combined into the task index, the group seems to perform many very important tasks or perform many tasks frequently, since they have a high percentage of top rated task indexes. However, there are also many tasks in the instrument that is not particularly relevant to their work, so that 25% of tasks have indexes of below 5.

When looking at the different role components (table 2.3), they rate all high with average tasks indexes ranging from 6,97 to 7,62, except Prevention and Promotion, and perhaps Management. The observations confirm the high frequency of some assessment tasks, such as history taking, assessing health status, weighing and measuring, assessing understanding of normal development with an average observation of 8,5 tasks per hour for this category. Their lowest rating also coincide with the lowest observation index, which is in the category Prevention and Promotion. This low rating in a category, which is usually associated with the task of PHC settings, is probably related to the items included. All four of the tasks, which were never observed, refer to nurses moving out of the clinics and into homes and communities. In the observation schedule, reference was made to the fact that transport was not available to make this possible.

According to Coulson (in HST, 1999: 298), the core package of primary health care services includes health promotion as a community service. She says: "This implies that health promotion should involve outreach work into health districts" (p 298). She further voices doubt that PHC nurses will be able to fit this into their schedule, due to the pressure of primary curative care. Community rehabilitation, another component of PHC, is also greatly dependent on home visits being done, and the health worker therefore

moving out of the clinic.

In nursing education, the community-based nursing education programmes have adopted the community empowerment approach to health promotion (Naidoo and Wills, 1994: 6-24). In this bottoms-up approach the professional facilitates the community in developing the knowledge, skills and organization to increase their control over their own lives and health. It means giving attention to such strategies as provision of water, the production of food and income generation. In the community health nursing components of all pre-registration programmes, approaches such as school health, occupational health and illness prevention is the focus. Strasser (in HST, 1998: 83) pointed out in her discussion of PHC training for nurses that the majority of training is still hospital-based and not district health or PHC focused. If this is to change over the next few years, it is essential that the decision be made what the PHC training for pre-registration nurses should focus on, based on the reality in the services.

From this data it would seem that PHC nurses might be able to include more outreach activities (home visits, school visits, community projects) in their work, with some redesign of jobs and services. However, it is important that the question be clarified what the role expectations of the employer really are. If the roles of the RNs at PHC clinics are to deliver a primary curative care services, together with midwifery and illness prevention, then the relevant components to put into the pre-registration programmes are diagnosis, treatment, prescribing skills, Integrated Management of Childhood Illness. In contrast, if the role includes a strong emphasis on working with the community, on health promotion and community rehabilitation, then it makes sense for the generalist nurse to be prepared in community or public health nursing, and diagnosis, treatment and prescribing to be left for a specialist programme. Strasser (in HST 1998: 88) pointed out that the post-registration training available for nurses that this focuses mainly on primary curative care. Although these efforts lags far behind the real need for these skills in the services, this approach seems to support this approach to the human resource needs of Primary Curative Care.

What is happening at the moment is that community-based education, strongly supported by government policy, is moving in one direction, but in the actual services, the expectation seems to be different, and the support for outreach activities is absent.

The fact that PHC nurses rate the estimation of suicide risk at only 3 is worrying. As PHC workers, they seem to be having the same difficulty as that reported in earlier studies (Hall & Williams, 1987) of identifying depression in clients. The low index of counselling with regard mental illness and its total absence in observations is a problem in a system where long term care for this group of clients is being moved into PHC. It is probably related to lack of knowledge and understanding of nurses in this field.

PHC nurses also score their use of oral rehydration low (item 48). It could be argued that rehydration is done by



**Table 2.6 Comparison of task frequency between categories of nurses.**

Item	Chi -Square significance	Low frequency categories	High frequency: (more than 10 times/week)
4. Assist client with personal hygiene	0,077	RN over	<b>EN over</b>
18. Taking a blood pressure	0.00*	RN over	EN over
21. Administer oral medication	0,000*	RN under	EN over
22. Giving an intra-muscular injection	0,068	EN and RN over	EN and RN over
25. Administer Oxygen to a patient	0,012*	RN under	EN over
27. Wound care and dressing	0,078	-	RN under EN over
28. Wound closure by suture	0,094	-	RN over
32. Reading glucose by finger prick	0,064	ENA over	EN + RN over
42. Administer an immunizing agent	0,053*	RN over	EN over
48. Oral hydration	0,028*	-	EN over
55,7 Counsel pt/family re depression	0,001*	RN over	<b>EN over</b>
56. Check for complications re immobility	0,050*	RN over	EN over
58.1 Counsel pa/family re gastro- enteritis	0,025*	RN over	EN over
62. Record observations related to mood	0,098	-	EN over
63. Record intake and output	0,018*	RN over	EN over
64. Help client dealt with negative attitude re illness	0,058	RN over	EN over
68. Measures to improve the client's appetite	0,008*	-	EN over + RN under
72. Teaching parenting skills	0,004*	-	<b>EN over +</b> <b>RN under</b>
73. Assess environmental hazards	0,010*	RN over	EN over
75. Alter IV rate	0,016*	RN over	EN over
76. Assess attitude re birthing methods	0,060	RN over	EN over
78. Administer local anesthesia	0,031*	RN over	<b>EN over</b>
79. Counsel victims of abuse	0,068	RN over	<b>EN over</b>
87. Teach client exercises	0,097	Results unclear	
98. Arrange environment to promote clients' safety	0,000*	-	RN over, EN under
103. Supervise subordinates	0,000*	-	<b>EN over</b>
106. Attend community meetings	0,025*	EN over	RN over
108. Identify staff training needs	0,023*	Results unclear	
109. Staff in-service training	0,035*	RN over	<b>EN over</b>

\* Significant different 5% level **Bold:** Contradicted by observation data

caretakers at home, and not by nurses in PHC settings. The low indexes for tasks which demands that the nurse moves out of the clinic, such as assessing safety at home or school or in the community, attending community meetings and taking part in community projects indicate a service-based approach to PHC instead of a community-based approach. There is a clear difference in roles of different categories of nurses according to the observations. RNs diagnose and treat minor and common ailments, prescribe and dispense drugs, manage the clinics, deliver a midwifery service, and do a lot of counselling. In contrast, other categories do routine observation and measurement, immunization, interpretation and some counselling. Although they do not have many multi-disciplinary team members at hand, the task indexes of the tasks requiring collaboration are quite high.

This role of the RN in diagnosis and treatment in PHC is not a traditional nursing role (Sokhela and Uys, 1999), although it has been developing world-wide over the last few decades. Studies usually find that nurses give acceptable care in terms of quality and client satisfaction in these roles (Sokhela and Uys, 1999) In the PHC settings in South Africa, it seems in this study that it is well-established, and not seen as extra or additional.

In terms of job demands, PHC nurses score at 50% and for job support they score 67% (Table 2.3). Although they have a heavy workload and poor working conditions, the other factors balance this out, and this group should not suffer from burnout. From the interviews it would seem that most clinics are less busy in the afternoons. It would be ideal to use this time for out-of-clinic outreach, and for continuing education.

## Recommendations

In terms of further education, it would seem that PHC nurses need additional Mental Health training and training which would support an outreach function related to prevention and health promotion if they are expected to fulfil this function.

It is important for educators and those responsible for formulating outcomes of nursing education programmes to study the current roles of nurses in order to develop relevant educational programmes with outcome competencies fit for the tasks of nurses are actually required to perform.

It is important to discuss the implications of these findings for the newly established Standard Generating Body for Nursing, and for the SA Nursing Council. In an article describing a job analysis done on Occupational Health Nurses in the USA, Burgel and Kemerer (1997: 582) states that "For any certification program to be sound, the examination must be reflective of what individuals in the specialty area actually 'do' in their profession and the knowledge needed to perform those activities. In other words it must validly represent practice". It is also true in the South African situation, where the minimum standards from nursing education are in the hands of these two bodies. It would therefore

seem to be appropriate that the description of actual task performance in this study be used to:

- Compare the content of nursing education programmes for different categories of nurses. Especially the balance between assessment, intervention, health education and other role components in the curriculum needs to be explored based on the actual proportion of time spent on those roles.
- Compare the evaluation of nurses in the different categories with the tasks required in practice. The correspondence between, for instance the tasks evaluated in clinical examinations, and the task indexes of tasks listed here, should be explored.

It is also urgent that the Community Health Nurses, the SA Nursing Council and the Department of Health at all levels discuss the problem of the focus of Community Health Nursing in the pre-registration programmes and the post-basic programmes. The question is whether the nurse-generalist (pre-registration programmes) should be prepared for an outreach task (health promotion and community-based rehabilitation) or for a primary curative care task. Both of these cannot fit into a four - year entry level programme, and one is clearly currently the job of RNs in clinics, and the other is not.

With regard to further research, job analysis studies should also be done in other kind of services, so that a valid picture can emerge of what nurses actually do. This can inform policy and education. It should also be repeated at regular intervals, to see whether changes in policies and procedures change practice. Since the supervisory nurses in this sample was too few to draw any conclusions, their tasks should be explored in a more targeted research project.

## Conclusion

There is no doubt that nurses are the back-bone of the health services in South Africa. In terms of their numerical strength and their distribution across all services, there is no other health workers that can compare with this group. This study throw some light on the work done by different categories of nurses in a district health system, and the implications the work setting has for them.

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