

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

Part one: Job analysis of nurses in hospital 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.

A mail questionnaire requested the sampled nurses to rate the frequency and importance of the tasks they perform. Only 19% of the nurses (41 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 19 days in 14 units in all three hospitals.

A total of 39 tasks were done more than six times per week, of which most (16) were in the category of clinical assessment and recording. Counselling and teaching

(8 tasks), were the second most frequent type of task. Only two tasks were rated as very important (giving injections and assessing respiratory status). When frequency and importance were combined into a Task Index, a large number of tasks scored in the middle range, with very few very high or low. Respondents identified 33 tasks that did not appear on the questionnaire.

The observations showed that all categories of nurses shared many tasks in hospital settings. However, Registered Nurses were involved in specialized treatment and care, as well as administration of the unit. The specialists type tasks of Registered Nurses were also clear in Operating Theatre settings.

The implications of the study are discussed and recommendations are made.

Introduction

In the light of the fact that about 60-80% of operating costs are from staffing, cost containment programmes demand that the right skills are employed at the right place. The term skills mix has been coined to describe a range of human resource options to contain cost while delivering optimal care. It may involve the mix of posts in the establishment, the mix of employees in the post, the combination of skills available at a specific time and/or the combination of activities that comprise each role (Buchan, Ball and O'May, 2000: 18). These authors summarized the eight main approaches to determining skill mix, which includes task analysis and job analysis, interviews/role reviews. The approaches vary in terms of the level of staff involvement (and therefore acceptance of results), quality of data, cost and time demands.

Problem statement

In South Africa the nursing resources consists of three categories of nurses:

- registered nurses, with at least four years of education after 12 years of school,
- enrolled nurses, with at least two years of education after ten years of school, and
- nursing auxiliaries, with at least one year of education after eight years of school.

The Scope of Practice regulations of the South African Nursing Council makes inadequate distinction between the registered and enrolled categories, with almost all functions listed exactly the same (SANC, 1984). A recent government task team has also requested that these regulations be revised, since they do not allow for the shortage of

professionals to be addressed creatively (Department of Health, 2000).

To ensure the most rational human resource planning with regard to skills mix, job analyses can be done. However, Buchan, Ball and O'May (2000) point out that most skills mix studies have been done in the USA, most have methodological flaws and most did not provide appropriate evaluation of outcomes in terms of quality or cost.

In accordance with the South African Qualifications Authority Act of 1995 (South Africa, 1995) a Nursing Standard Generating Body was constituted in South Africa to establish the standards for all nursing qualifications. One of the methods used in establishing the standards for an occupation is to do a job analysis of the current practice. This has never been done in South Africa.

A study was therefore done to describe the jobs of all categories of nurses and selected other health workers at Primary Health and Secondary Care level in one health district in order to allow for human resource planning and training decisions to be based on empirical data. Although the study involved nurses in hospital and community settings, this article deals only with hospital settings. The study will be described in three sections.

Section one will deal mainly with data about nurses working in hospital settings.
Section two will deal with nurses working in PHC settings, as well as contextual factors and a comparative analysis of the burnout risk of nurses in both settings.
Section three will deal with other health workers in both settings, and conclude with the recommendations of the total study.

Literature survey

Job analysis: In a discussion of job analysis, Landau and Rohmert (1989: 4) highlight that a job analysis process should adhere to the following principles:

1. It should be based on a theoretical model that allows a practical interpretation of the results obtained.
2. Offer complete coverage of all demands that are present on a worker.
3. Offer maximum cost-effectiveness with regard to application, data processing and data evaluation.
4. Go beyond merely verbal work description and allow quantitative statements at least at the ordinal scale level.

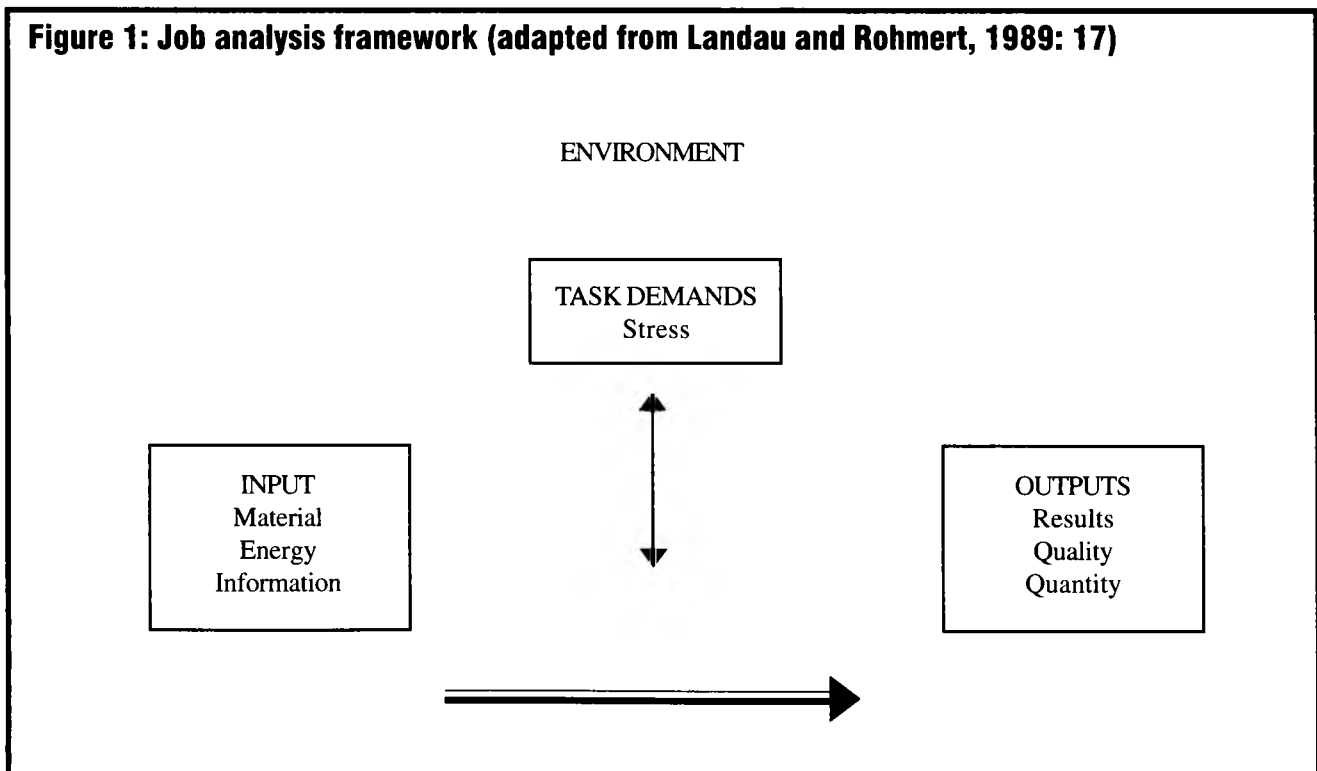
They also identify a number of issues that should be taken into account or form part of the job analysis (Landau and Rohmert, 1989: 10).

These include:

- Preparation for the job (setting up the environment for the job).
- The possibility of the worker influencing the duration or the tasks which makes up the job (full, limited, no).
- Type of utilization of other workers and equipment (full, limited, no).
- Work order (interrupted, uninterrupted).
- The types of demands made by the job (information reception, information processing, information output or activity).

In Diagram 1 the thick arrow refers to the tasks the worker performs. Each task comprises of a specific performance, which is either mainly mental or physical or a combination.

Figure 1: Job analysis framework (adapted from Landau and Rohmert, 1989: 17)



Each task also comprises of an object, which can also be mental or physical, and may require means such as material or equipment. It is done somewhere and at a specific time for a specific time. Many of the job analysis approaches described in the literature (Fisher, Schoenfeldt and Shaw, 1999: 28-42) have the aim of comparing the weight of different jobs. Since that is not the purpose of this study, many of these methodologies, which aim to classify all tasks into a few general categories, are not appropriate for this study.

For educational purposes: Tanner (2000: 141-2) criticized as being biased the curriculum development approach in which the individual or group devises programmes, which decide on the content based on their opinions and experiences rather than reality of nursing practice. She compared the content of the current theatre nursing course devised by individual schools against the content determined through research observed skill undertaken by nurses and knowledge required to perform those activities.

In the United States of America job analysis studies are conducted by the National Council for Licensure Examination so as to form the basis of the state board examinations allowing nurses entry to the profession (National Council of State Boards of Nursing NCSBN, 1991). Large stratification random samples of newly licensed nurses are requested to:

- Indicate the frequency with which they perform each list of nursing activities.
- Rate the impact of these activities on the maintenance of client safety.
- Provide information about the type of setting they work in and the types of clients they work with.
- The participants are also asked to do frequency rating and critical rating for each of 222 activity statements. Frequency rating and critical rating are then combined to provide an "importance" rating. The importance weight for each of the activities is determined. Data is collected by means of mailed questionnaires, and factor analysis performed to group activities that cluster together. Data is given to the examination committee for interpretation and reflect the current practice of nurses (National Council of State Boards of Nursing, NCSBN, 1991).

According to Burgel, Wallace, Kemeer and Garbin (1997: 581), educational programmes need to be based on current practice to maintain validity. In a job analysis that was performed by the American Board for Occupational Health Nurses, four approaches were used, that is local analysis, direct observation, critical incident technique and task inventory. Job analysis reflected comprehensive description of the diverse knowledge skills needed by occupational health nurses.

In South Africa Troskie (1998: 3) evaluated the competency of newly qualified nurses by looking at communication skills, management and clerical skills. The instrument the researcher used for the study was constructed based on a number of scales from the literature. These instruments need to be re-evaluated and expanded, so as to be used for job

analysis purposes.

Objectives

The objectives of the study were to:

1. Clarify the job expectations of the identified categories based on all documentation related to job descriptions, including the core package and service description.
2. Describe the current practice of the nurses in hospitals in terms of frequency and importance of tasks performed, environmental factors impinging on the job, task demands and immediate outcomes:
3. Identify the skills and knowledge gaps in current practice of these workers in relation to job expectations.
4. Make recommendations about skills mix in district services, by also referring to cost.

This article deals only with objectives one and two and only related to nurses in hospital 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.

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 the mail survey

Two stratified random samples of nurses were drawn from a sample frame of the district for the task analysis (see table 1.1). The planned sample in hospital settings (216) was big enough to compare district hospitals and regional hospital, and also to compare the different categories of workers, except for supervisors. It was small enough to allow for two samples that do not overlap to be drawn from the population of all nurses in district and regional hospitals in the district (720).

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 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 (PHC) 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 et al, 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. administering cardio-pulmonary resuscitation (CPR).

The calculation is done as follows:

1. Frequency was rated on a 4 point scale: 1 = less than 1 per week, 2 = 1-5 per week, 3 = 6-10 per week, 4 = over 10 per week.
2. Importance was rated on a 3 point scale: 1 = does not apply, 2 = can sometimes be omitted, 3 = can never be omitted.
3. The ratings for the frequency index and importance index was summed, with importance given twice the weight of frequency. The sum of the two indices yields an index score per task.
4. The highest possible index score is 10 (frequency 4 + importance 3x2).

Table 1.1 Sample realization (planned sample numbers in brackets)

	Enrolled Nursing Auxiliary	Enrolled Nurse	Registered Nurse	Nursing Supervisor	TOTAL
DISTRICT HOSPITALS					
Population	75	118	130	20	343
Sample	4 (21)	7 (34)	6 (38)	1 (9)	18 (102) 1 missing
REGIONAL HOSPITAL					
Population	125	113	122	17	377
Sample	2 (38)	8 (34)	11 (36)	1 (6)	2 (114) 1 missing
TOTAL					
Population	200	231	252	37	720
Sample % of pop	6 (59) 3%	15 (68) 6%	17 (74) 7%	2 (15) 5%	42 (300) 5%

* Two respondents did not indicate their registration

- A mean index was calculated by dividing the sum ratings from all respondents for each task by the number of respondents.

To compare the roles of different categories of nurses, cross tabulations of frequency of task performance was done based on category, and the Chi Square correlation was calculated to identify significance of observed differences.

Sample realization and description

The response rate was poor, even though services were telephoned, and nurses reminded once by mail. Only 19% (42) of the randomly selected nurses in hospitals responded, and this represents only 6% of the total population in the hospitals of the District (see table 1.1). Nevertheless, the distribution across the different strata was maintained as

planned, and all the relevant groups are represented. The sample was accepted because the data was also being checked against direct observation data.

Not a single respondent from one district hospital returned the questionnaire. This hospital had no member on the research team, and was also going through significant turmoil during the research period. The response rate from enrolled and enrolled auxiliary nurses was poorer than that from registered nurses. These groups are not used to completing questionnaires, and a mail survey might not be the best way of involving them in a survey.

Of the 38 respondents who gave their ages, there was a relatively equal spread of about 60% (12) of the regional hospital nurses between the ages of 25 and 49, and the rest (9 or 43%) were over 50. In the district hospitals the majority of respondents (13 or 76%) were under the age of 39. Older nurses seem to dominate in the regional hospital, while younger nurses dominate the district hospitals.

Of the 41 respondents, only five were males, and three worked in the regional hospital.

Table 1.2 Age and workplace of respondents with column % (n=38)

AGE	REGIONAL HOSPITAL		DISTRICT HOSPITAL	
	n	Column %	n	Column %
25-29	3	14	1	6
30-34	2	10	6	35
35-39	2	10	6	35
40-44	3	14	1	6
45-49	2	10	2	12
50+	9	43	1	6
Total	21		17*	
Row %		54		46

* 4 respondents did not give their age.

Sample Description for observations

A registered nurse observer spent 19 days and a total of 114 hours in non-participant observation in all three hospitals in the district. A total of 141 nurses were observed, 75 of which were Registered Nurses (RNs) (24 hours in PHC and

Table 1.3 Task index for hospital nurses with regard to six task categories

	No of tasks	Mean for category	No of tasks added	No of tasks rated 8+	No of tasks rated 4-
Assessment of clients and recording of data	42	6,95	4	25 60%	3 7%
Diagnosis and planning of patient treatment and care	8	7,13	-	5 63%	1 13%
Administering treatment and nursing care	37	6,57	19	15 41%	3 8%
Counselling and teaching	27	8,67	6	15 56%	1 4%
Preventive and promotive health care	5	6,8	-	3 60%	1 20%
Management of a unit	18	5,56	14	1 6%	2 11%
Collaborating	9	6,56	4	3	-

32 hours in Hospitals), 50 Enrolled Nurses (ENs) (40 hours in Hospitals and 11 in PHC), and 16 Enrolled Nurse Auxiliaries (ENAs) (30 hours in Hospitals and 7 in PHC). Each person was observed for an hour at a time and every task was noted separately. If the same task was repeated, it was recorded again.

Results

Task frequency

According to the respondents only three tasks were very frequently performed, that is 6 or more times per week by 70% or more of respondents, and these were assessing the patient's health status, taking a blood pressure, and attaching monitoring equipment to the client.

However if one looks at the items performed frequently, or more than six times per week by more than 50% of respondents, the number increases to 39. These 39 tasks can be classified as follows:

- Clinical assessment and recording (16 items)
- Planning (3 items)
- Giving treatment (5 items)
- Doing counseling and teaching (8 items)
- Collaborating (2 items).

There were no very rarely performed tasks or rarely performed tasks, but the tasks most infrequently done were preparing a patient for investigating procedures, assessing maternal and fetal status during labour. The last item indicates that few respondents worked in labour units.

Task importance

Only two tasks (assess respiratory status and giving an intramuscular injection) was rated as very important, or can never be omitted, by more than 50% of respondents.

Task frequency and importance (task index)

In contrast to the task index of the PHC settings, only 6 tasks (4%) were given a 10, but only 11 got indexes lower than 5 (8%). The tasks were categorized into six roles, and the average task index for each role calculated. These categories and the tasks data of each are reflected in table 1.3. Nurses rated their counselling and teaching tasks most highly (8,67) and their management of the unit the lowest (5,56). Tasks infrequently done are highest in the role of preventive and promotive health care.

Additional tasks

At the end of the questionnaire respondents were asked to add any task, which they perform and could not find in the questionnaire. Respondents identified 128 such tasks. On analysis it was found that 56 of them (44%) actually did appear in the questionnaire, but in a more general form. For instance, "weighing pregnant women" was already included in task 19. One respondent indicated that paediatric procedures such as "Inserting an IV infusion to a paediatric pa-

Table 1.4 Task frequency per category in Operating Theatre

Task	RN	EN	ENA	Total
a. Prepare and check theatre equipment, e.g. water for irrigation, suctioning machine, respirator, table	1	6	10	17
b. Help patient transfers (trolley to table and back)	4	6	4	14
c. Interact with patient (explain, comfort)	9	6	2	17
d. Position patient	2	8	4	14
e. Observe, assess patient	4	2	7	13
f. Prepare patient (clean, drape)	13	-	-	13
g. Scrub up	6	-	-	6
h. Manage tray (set, remove instruments)	14	-	-	14
i. Manage swabs (open, count, discard)	23	-	-	23
j. Blade and needle management	8	-	-	8
k. Ask assistance from floor nurse, give instructions	26			26
l. Assist surgeon (hand instruments, mop site suture)	52	-	-	52
m. Manage specimens	3	-	-	3
n. Assist floor nurse (connect suctioning, record swab-count, fetch instruments)	6	2	21	29
o. Assist anaesthetist	-	3	9	12
p. Take patient to recovery room or ward	7	3	2	12
q. Hand patient over to nurses	3	2	-	5
r. Clear tray	5	-	2	7
s. Clean instruments	3	5	8	16
t. Sort instruments	4	1	-	5
u. Pack and/or check trays	16	3	2	21
v. Load autoclave	-	1	2	3
w. Issue packs to wards	-	2	4	6

tient" should be listed separately. This is a valid point, but will depend on whether the research has a specific focus on paediatric care. Another respondent listed separately the activities included in task 4 and 92 (hygiene and activities of daily living).

Two items were not clear ("creativity clinics" and "sewing"). However, a total of 33 tasks could be added from the list provided by respondents, and 4 tasks could be changed to make them more inclusive. The categories in which the additional tasks were added, are indicated in table 1.3.

Observation of tasks

In the Hospital settings, the most frequent tasks were taking blood pressure (total 174 of which 142 by ENA's); interpreting for doctor (total 166 of which 78 were by ENs, and 59 by RNs); recording (133 of which 54 by ENAs and 52 by RNs); taking vital signs (total 94 of which 71 is by ENAs); directing patients and families (total 81 of which 30 by ENAs); bedmaking (total 79 of which 32 by ENs, and 26 by RNs) and history taking (total 62 of which 28 were by RNs).

The variety of tasks is bigger in the hospital setting than that found in the PHC settings, but they are done less seldom. Nevertheless the RN has a number of therapeutic or specialised tasks (e.g. Applying Plaster of Paris and splints 10 times; Putting up or discontinuing IV 28 times; Checking patients, sorting them out 32 times), The administrative tasks of the RNs seems to be higher, especially arranging movements of patients (13 times), carry out stock checks (7 times), completing forms (8 times). Two tasks that seem to take a lot of time of all categories of nurses are interpreting for doctors (166 times) and directing patients and families (81 times). Although both of these tasks were also seen in the PHC settings, it is on a much smaller scale.

Operating theatre nursing

The tasks observed in this setting differs greatly from those in the more general settings, and the observation data is therefore listed in a table. This data is based on 24 hours of observation, 12 of RNs, five of ENs, and seven of ENAs in one regional and one district hospital (table 1.4).

Twenty-three tasks were identified, with only the role of the scrub nurse (seven tasks from f to m) exclusive to the registered nurse. In one hospital the Central Sterilization Department is attached to the Operating Theatre (OT), which explains tasks v and w.

The more general tasks also found in the OT, such as recording, supervising and teaching was discussed with the general data above.

Environment

Observations of the context within which nurses work, were recorded. The district has very hot summers and very cold winters.

Regional hospital:

Security is poor during the night, and some patients come in drunk or drugged. Poor patients stay long after they have been discharged.

Surgical ward: Not enough toilets, and only one bath, which is used to soak linen from clean and septic cases. Walls need painting, and the roof leaks. Double-adapters are needed. Patients steal from each other.

Medical ward: Psychiatric patients cause a problem, and the ward is not equipped to deal with them. There is a shortage of bed linen. Elderly and terminal patients put a strain on nurses.

Casualty: Spacious and well-equipped, but toilets next to nurses station is not a good idea. Security is a problem, especially at night, and with psychiatric patients. It was very hot, since the air conditioning was out of order. Staff who take unpaid leave without notice, and poor supervision is a problem.

Operating Theatre: Staff feel over-worked. They often can take no tea - time, have to work over-time, and have to help out in other areas within the theatre. Off-duty roster is unpleasant because of the shortage, and orientation to the unit is poorly done. The ceiling is in poor condition, lighting poor and air conditioning not very good.

Outpatient Department(OPD): Inadequate space for patients to wait for treatment increases pressure on staff. All communities use the service. There are not enough doctors, and this causes delays, which are stressful. Also, there is no social worker to attend to Social grants. Air conditioner not working, and it gets very hot. There is no isolation area.

District hospital one:

OPD: There is no toilet for staff, and male and female patients share a toilet. Doctors come late, and this causes stress for nurses. The waiting room is small, and so is the dressing room. The community has many problems, such as unemployment and poverty.

Theatre: There is no toilet in CSSD section, and they have to use theatre toilet. There is no porter in theatre, so that two nurses from theatre has to take patients to ward. The theatre also acts as CSSD for the whole hospital. The staff has no resting place, and no lockers to keep bags.

District hospital two:

There is only one kit - room for the whole hospital, and it is too small.

Casualty: The building is old. The place is over-crowded, especially the corridor. All kinds of patients are mixed and casualty and OPD are not separate. There is no privacy to attend to confidential matters. There is no change room, and no duty-room. The dressing room is small. The bed in the POP (Plaster of Paris) room cannot be adjusted.

Medical ward: The building and ventilation is good, but

there are partitions in the ward that are good for privacy, but bad for view. The kitchen is next to the toilets. There is a relative staff shortage, with the categories of nurses not well balanced, so that there is a skills shortage. Staff also change very often. Staff is often away for meetings and courses. Doctors do rounds late, so that medication to take home is late and patients cannot go home, and blood samples are too late for the laboratory. They nurse many terminal patients, who need home based AIDS care.

Surgical ward: The toilets are out of order and the rough floor looks dirty. They also have many cases that need AIDS home care. They also need a social worker to deal with abuse cases. There is no wall suctioning and oxygen, making it difficult to handle emergencies. Shortage of staff and over-crowding leads to poor patient care. There are good relationships between staff.

Discussion

The Hospital nurses are involved in a far wider range of tasks than the PHC nurses, but performs each less frequently. Thus only 42 tasks rate as frequently or very frequently done, in comparison with the 50 tasks rated as such by PHC nurses. Nurses in hospital settings also rated their tasks as less important than the PHC nurses did. This might be because there are other team members who can take up the slack in a hospital setting, when a nurse omits a task, while that is not the case in PHC settings. The task index of different tasks indicates the wide range of tasks done by hospital nurses. This finding is supported by the observations, in which Hospital nurses were observed doing 67 tasks compared to the 56 of PHC nurses.

The role components according to the task indexes, reflect counselling and teaching as first priority, with diagnosis and planning, assessment and recording and then prevention and promotion next. Observations put assessment and recording at the top, with treatment and care and management next. The difference might be based on the fact that tasks such as planning are less visible (observable), but this cannot explain the discrepancy totally. It might be that nurse's under-estimate the time they spend on the routine tasks of assessment (such as taking vital signs and blood pressure) recording of treatment and care and management.

A number of tasks that were observed very frequently or frequently deserve further discussion.

- Bed making was observed 79 times and 33% of this was by RNs. It is granted that beds have to be made, but it seems a very low skilled job for RNs to engage in. However, it may be that they do this while waiting for the doctor to arrive, since this is a task from which they can easily withdraw.
- The task of directing patients and families, observed 81 times, is interesting. Although this also happens in the clinic, it is much less. In the old hospitals in the region, full of nooks and crannies, and a confusing layout, getting people from one place to another, seems a major problem. A number of workers re-

ferred to the fact that there is no easy way (such as a line on the floor), which can assist people with finding their way. This simple solution needs to be explored, and the time spent on these tasks monitored.

- The high rate of interpretation for doctors (166 observations) needs to be pointed out, especially since 36% of these observations involved RNs. RNs might be interpreting for doctors during doctors' rounds. This practice should be explored more fully. If the ward round is in effect a multi-disciplinary meeting to discuss the treatment of care of patients, even though only two people take part, that might be a good use of time. However, if the RN is in effect mainly there as interpreter, this needs work redesign. It might then be better to supply an ENA to accompany the doctor, and for him to read nursing notes for a patient report. In any case, it would seem that the task of interpretation has always just fallen on the nearest person who speaks the language. Perhaps it is time to plan and implement different models of supplying an interpretation service for doctors, and evaluate their effectiveness and cost.
- The rate of taking of vital signs and blood pressure is also high. Perhaps it would be useful to investigate whether all these observations are really necessary, or whether much of it is done because of routine.
- RNs seem to have an important task of generally checking on patients, prioritising their care and monitoring their condition (A8, 32 times). This is an important task, since the RN does not do routine observations, and therefore might not be in contact with patients on a continuous basis. The continual checking keeps her in touch with what is happening to patients. This was particularly mentioned in relation to new patients, and patients in waiting rooms.
- Another task that takes much of the RNs time is arranging for transfer of patients (A1, 13 times). Although ENs assist with this task, it is mostly the duty of the RN.

The roles of nurses in this setting seem to be less differentiated, with ENs and even ENAs sharing much of the tasks with RNs. ENAs have an especially wide range of tasks in this setting. RNs however, remain responsible for some specialized tasks and for management tasks.

The University of Natal has launched a one-year "Unit management" course that aims to address the continuing education needs of mainly this group of nurses. It includes one semester of advanced clinical skills, and one semester of unit management skills. The clinical skills include an introduction to intensive care nursing, resuscitation, selected mental health and community health competencies. If one compares this programme with the tasks of nurses in the Hospital setting, it seems that there is a basic fit. However, it might be necessary to include a module on splinting techniques.

With regard to Operating Theatre Nursing the role of scrub

nurse was exclusive to the RN, but all other tasks were done interchangeably by RNs, ENs, and ENAs. The use of the ENAs for duties such as assisting the scrub nurse seems a particularly useful way of using a person with limited training. It allows for direct supervision in a useful and essential job.

Recommendations

In terms of educational needs, it would seem that hospital nurses in a District Health System need unit management and advanced clinical skills for RNs to enhance current roles.

Planning for and designing an efficient translation service should be considered in these settings, where it is currently not a planned activity, and might therefore not be done in the most cost-effective manner.

To decrease directing time, hospitals should be equipped with clear markers, understandable to the whole population, which will save time nurses spend on directing patients and families.

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