

Adequacy and efficiency of nursing staff in a child-welfare-clinic at Umtata General Hospital, South Africa.

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Background: South Africa has a serious shortage of human and financial resources to provide primary healthcare services especially in the historically under-served areas. It is a tedious task to carry out healthcare delivery for the masses without rationalizing human resources in the form of re-allocation and re-deployment of healthcare personnel. This study aimed to establish the level of adequacy and efficiency of nursing staff in the former Transkei region. The study was carried out in the child and family welfare clinic of the Umtata General Hospital.

Objective: To assess adequacy and efficiency of nursing staff in a child welfare clinic.

Method: This was a retrospective study. The workload of two nurses allocated to the child welfare clinic at Umtata General Hospital South Africa was calculated based on the patient numbers and hours of work per week. Calculations excluded time breaks for tea, lunch and annual leave. This work load was compared to the norms of standard examination time that is 12 minutes per patient obtained from the sub directorate of Natalia Office of the Department of Health. Information regarding number of patients attended to by the nurses and their disease conditions was obtained from retrospective review of hospital records.

Results: While each nurse was on duty for 8 hours per day each had only 6 reproductive hours. The two nurses examined only 310 patients giving staff utilization of 2.46% (i.e. 310/12600) and adequacy of staff of 0.0492 or 310/6300.

Conclusion: There is under-utilization of the staff in Umtata General Hospital, South Africa.

Recommendation: To increase utilization of the nurses a process of sharing and merging with a clinic or a ward with similar type of work is recommended.

Keywords: Efficiency, adequacy, utilization, re-allocation, and re-deployment.

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Introduction

The Departments of Health and Welfare recognized the need of a child and family welfare clinic in Umtata. A child welfare clinic was thus established in January 1996. The objective of the clinic is to look after the welfare of children in the socially and economically deprived areas. The clinic provides services during daytime and has six staff members, 2 nurses, a social worker, a cleaner on full time basis; a psychologist and a District Surgeon (Medico-legal doctor) work on a part-time basis.

Diminishing financial resources and increasing demands for health care made it necessary for one public health district to review its framework of delivery of care for effective and efficient use

of personnel and facilities. Categorical funding patterns had promoted a framework that functioned along specialized programmatic lines, which were identified for funding and staffing, and use of services by clients.¹

A Director appointed by the Department of Health supervises and controls the child welfare clinic. Departments of Health and Welfare finance the clinic, and from time-to-time donations from various charities are also received. The children who are brought to the clinic are mainly sexually abused ones. The child protection unit works hand in hand to investigate these cases. The social worker is involved in counseling the children and their parents. They also take some children to orphan's welfare homes to offer further protection

Maximizing efficiency of the nursing staff can decrease the waiting times for patients, resulting in greater patient satisfaction, and improved productivity.² There is a need for measurement of the escalating costs in public health sector, to create an economic market-based system that connects value to cost. Assessment of adequacy and efficiency of any work place becomes an essential element for future planning and program implementation. In the past, nurses have judged their skills performing procedures

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and their efficiency in carrying out doctors' orders in an organized way for a certain number of patients.³ Now, in South Africa nurses are the basic unit of the health care system. With the public demand for improvement in health delivery system, evaluation of present methods in terms of patient outcome especially the nursing staff becomes more important than ever before. The quality of health care must also be evaluated. Emphasis will be on determining how effective the planned nursing intervention is in meeting the needs of the patient. There is always a question in mind as to how we can give better and uniform care to our patients. Thus, there is a need to evaluate efficiency and adequacy at all the health care delivery points. This will help in relocation, redeployment and redistribution of health professionals in more needy areas.

Methodology

The total working hours per day (8), a week (40 hours), and a year (260 days) were calculated. Details

of actual working times were then determined. The norms of standard working time of 12 minutes for examination of an abused child was obtained from the financial section of the Department of Health, KwaZulu-Natal Provincial office. The number of patients seen from January to December 1996 were ascertained.

Results

Two nurses stationed at the child welfare clinic during normal working hours examined 310 patients over a period of one year. These two nurses were on duty, 40 hours a week. They interviewed the children followed by a complete physical examination. They were referred to a social worker, psychologist and to the local district surgeon. The nurses had their normal tea and lunch intervals during the course of the day. They had to perform administrative functions such as ordering and receiving material from the stores, teaching and supervising junior nurses (Table 1 & 2).

Table 1. Calculation of actual working time in a year by nurses in the Child and Family Welfare clinic, Umtata General Hospital.

Activity	Calculation of standard time of activity	Effective time Utilization
1. Total working days in a year	5 x 52 (weeks in a year)=260 days	260 days
2. Absent from duty in a year	30 days leave+ 20 days sick leave= 50 days	210days
3. Break: Tea, Lunch, and admin. Etc. in a day.	Tea and admin (30 minutes) each, and Lunch (60 minutes) = 2hours	6 hours
4. Effective time utilization	210X6=1260 hours per year by one nursing staff.	1260 X2 = 2520 by two staff in a year.

Note: 8 duty hours but 6 actual productive hours (360 minutes) a day.

Table 2. Standard consultation, workload, and effective working days in relation to patients in a year.

Standard consultation	Calculation	Patients examined
1. Standard workload	(6 hours) 360 minutes/12*	30 patients per day
3. Standard workload for a nurse in a year.	210** X 30	6300 patients
4. Standard workload for two nurses in a year.	2 X 210 X 30	12600 patients

*12 minutes is the standard consultation time per patient

**210 days are the effective working days in a year.

Discussion

Public hospitals have been characterized as being less costly than private hospitals in the country, but they are still expensive for the ordinary South African citizen. This is largely due to budgetary constraints. Underutilization of the staff is an indirect form of waste of public funds. The government will fund only those services, which are efficient to maintain an adequate patient care.⁴ The child welfare clinic employed two nurses full time. The effective time utilization in a year is shown in Table I. The nurses examined only 310 patients during 1996. When the standard workload is calculated, it is 30 patients per day (Table II). The average consultation time is 12 mins. per patient. For the 2 nurses it is 60 patients per day. Each nurse is therefore supposed to examine 6,300 patients a year (Table II). Therefore there is gross under-utilization of the nursing staff, the social worker and the psychologist. It is disturbing that fully paid workers put in such a low volume of work. It is the duty of the hospital management to reorganize these services.

Staff in the child welfare clinic is only $(310/12600 \times 100)$ 2.46% utilized. This is the measure of their utilization. The clinic should therefore be merged with another clinic where the human resources could be better utilized. The audit of material and human resources has shown their availability and the distribution. The challenge is to make these resources available equitably in the district, and used them effectively and efficiently.⁵ The result of a study carried out by Campbell et al in 2000 at a nurse-led clinic has shown that nurse consultations lasted longer than those of doctors. This is either the nature of work itself, which is more time consuming in the form of motherly treatment of the patient, or it is laziness, less attention being paid, and slow pace of work. This requires further confirmation that specialist-nursing staff, given appropriate medical support, may provide more effective care for patients.⁶

The adequacy of staff when calculated for 310 patients comes to $(310/6300)$ that is: 0,0492 nurses which is less than 1. Thus it confirms that there is no necessity for this clinic to be in operation on its own and that it should be merged with another clinic of similar nature. There are clinics where overcrowding is the order of the day, with long waiting lists of appointments, and chronic understaffing. In addition, the concept of cross training to acquire multi-skilling in core health

services is an important issue and should be carried out in the health sector.¹ This is an issue which needs many heads to put together to design, train, and distribute the trained staff in primary health care, so that the under-utilization of skilled workforce could be resolved.⁷

The best approach would be to merge the training of nurses in generalized and specialized clinic services so that everyone will be a suitable candidate anywhere in the health delivery system. An efficient clinic will manage the patients cost effectively

A measurement of efficiency and adequacy of staff should be carried out in larger institutions in South Africa. It is important to point out that all the managers and supervisors who deal with planning and policy making, should know the importance of the efficient and adequate utilization of human and financial resources, and when the need arises, their re-deployment.

Limitations

The evaluation of the impact of illness and treatment of the patient is essential for capturing all dimensions of outcome. It is difficult to calculate mathematically the productivity of medical personnel. The timing for each case allocated as a standard norm is difficult to fix uniformly for all the cases. Some of the cases consume more time than standard norms. Actual time in dealing with a patient must start the moment the patient enters the consultation room till he/she leaves. Therefore it is difficult to allocate only 12 minutes per patient. The consistency of case examination and actual timings is also significantly different from hospital to hospital. The quality of care is sidelined while calculating actual workload. Public hospitals offer specialized services such as child welfare clinic and they are of immense importance to the public. Their efficiency and adequacy cannot be calculated mathematically. Demand for these services may be higher than the demand for other specialized services such as heart transplantation.

Conclusion

The child welfare clinic in Umtata General Hospital is underutilized. The merger of this clinic with another of a similar nature such as the "Violence Referral Center" is appropriate.

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One hundred years ago

Syphilis in pregnancy

The patient was admitted on 8.06.1903

She had syphilis for 1 year and is 8 ½ months pregnant. She has had one miscarriage at 1½ months. She has come to hospital on account of her disease and her condition.

Present condition: *The only evidence of syphilis is extensive ulceration of both labia majora. There is a raw, ulcerated discharging surface where the labia meet and in the cleft between the vulva and thigh. The uterus is size of the 8½ months – child lying in V₁ position. Foetal heart heard in normal position on left side = 148. Mothers pulse 92. Pains are said to have began this morning – there has been no discharge of blood or water.*

Treatment:

1. *Mist pot iod t.d.s*
2. *Vulva to be bathed with hydrogen perchlor and dusted with calomel.*

Discharged with ulcers healed on 27.06.1903

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 Sir Albert Cook Library
 Makerere Medical School
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