

STANDARD FOR CLINICAL/ NURSING UNIT MANAGEMENT IN SOUTH AFRICA



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ABSTRACT

The nursing unit manager is responsible and accountable for quality management of a clinical unit to facilitate quality nursing/midwifery care and education. The unit manager therefore requires practice guidelines on nursing unit management, reflecting excellence and presented in the form of standards and criteria in the form of a user-friendly instrument. The purpose of this research is to formulate standards for quality nursing unit management in South Africa and to develop an instrument for the evaluation of the quality of nursing unit management. A quantitative research design was followed. The standards were developed by the researcher, validated and tested by 391 appraisers in 137 different nursing units in Gauteng, over a period of four years. Construct/criterion validity and intra-class/rater reliability were statistically confirmed. The recommendations include further national validation of the standards and instrument, as well as the utilisation of these standards and instrument in the learning and education of students in nursing unit management, and as part of a quality improvement programme in a nursing service.

OPSOMMING

Die eenheidsbestuurder is verantwoordelik en aanspreeklik vir gehalte-bestuur van 'n kliniese eenheid om gehalte-verpleging en -onderrig in die eenheid te fasiliteer. Die eenheidsbestuurder benodig dus praktykriglyne oor eenheidsbestuur wat voortreflikheid reflekteer en in die vorm van 'n gebruikersvriendelike instrument aangebied word. Die doel met hierdie navorsing is die formulering van standaarde vir gehalte-eenheidsbestuur in Suid-Afrika. 'n Kwantitatiewe navorsingsontwerp is gevolg. Die standaarde is deur die navorser ontwikkel en deur 391 evalueerders in 137 verskillende verplegingseenhede in Gauteng oor 'n tydperk van vier jaar gevalideer en getoets. Konstruksie/kriteriumgeldigheid en intra-klas/beoordelings-betroubaarheid is statisties bevestig. Die aanbevelings sluit die volgende in: 'n verdere nasionale validering van die standaarde en instrument, asook die benutting van die standaarde en instrument as 'n leer/onderrighulpmiddel vir studente in verplegings-eenheidsbestuur. Die instrument kan ook benut word in die gehalteverbeteringprogram van 'n verpleegdiens.

INTRODUCTION

The nursing unit manager is responsible and accountable for quality clinical unit management to facilitate quality nursing/midwifery care and education. The unit manager is a professional nurse or midwife that has been formally authorised to manage the clinical nursing/midwifery unit by virtue of the post description and designated lines of authority within the nursing service. Quality nursing unit management refers to compliance with the characteristics of excellence as reflected in pre-determined standards (Muller, 1998b:237). In health service management, these characteristics of quality nursing unit management should reflect clinical nursing/midwifery care (or the facilitation thereof by means of a quality improvement programme), nursing/midwifery care delivery in a cost-effective manner, outcomes related to patient/client satisfaction (which could include the medical practitioner in a private hospital context), as well as human resource management to provide a happy and productive work force.

When the quality of nursing unit management is determined, the full quality cycle must be followed, implying the formulation of standards on nursing unit management, monitoring and evaluation of compliance with these standards, with appropriate remedial action to improve the desired outcomes (Muller, 1998b:242).

The formulation of standards is therefore the first step in the quality improvement process, followed by the design of an appropriate monitoring/measurement instrument. In quality improvement activities, the formulated standards are stated as part of the evaluation instrument.

There are no national standards on nursing unit management in South Africa and therefore the quality of nursing unit management cannot be determined. In the absence of written standards for nursing unit management, the question arises what the nature and scope of such standards should be within the South African health service context? The purpose of this study is to formulate (explore and describe) standards for nursing unit management in South African health services, reflected in an evaluation instrument. These standards could be valuable as part of a quality improvement programme in a nursing service and for the accreditation of a nursing unit as part of an external accreditation system by the South African Nursing Council, Nursing Education Institutions or by a health service accreditation body.

DEFINITION OF CENTRAL CONCEPTS

Standard

A standard is the written description or statement of the expected level of performance to reflect excellence

(Muller, 1998b:242). A standard in this article reflects the desired level of performance in relation to clinical/nursing unit management in South Africa.

Clinical/Nursing unit management

A clinical/nursing unit is the smallest patient care management structure within the health services of the organisation. Clinical/Nursing unit management refers to the execution of the managerial responsibilities by the unit manager (professional nurse/midwife in charge of the unit) who assumes accountability for the outcomes (clinical nursing/midwifery care, managerial/ strategic outcomes, cost-effectiveness, and quality human resource management) of that unit within the strategic management plan of the health care organisation (Muller, 1998b:127).

RESEARCH DESIGN

The objective of this research is achieved by means of a quantitative exploratory, descriptive and instrument development research design, within the context of clinical/nursing units in South Africa. The standards are based on the conceptual framework for nursing unit management in South Africa as described by Muller (1998b). These standards were developed in 1994, revised in 1997, with a further refinement in 1999.

Standard development was based on the principles as described by Muller (in Booyens, 1998a:607-608, 636-637), consisting of the development and quantification phases, but modified to meet the requirements as described by Lynn (1986:382-385) for instrument development, as well as for the development of valid guidelines as described by Grimshaw and Russell (in Cluzeau *et al.* 1999). The quantification phase consisted of two different steps: a perception survey with appraisers to determine the Content Validity Index (CVI) of the standards, followed by a quality survey to determine the construct validity of the standards. The population for the quantification phase consisted of the public and private nursing services and relevant nursing units in both public (N=3) and private (N=15) hospitals in Gauteng with whom the Rand Afrikaans University has an agreement with for clinical learning and of which the various units are approved by the South African Nursing Council as clinical learning facilities for the approved nursing/midwifery programmes in the basic BCur-degree and post-basic Diploma in Medical and Surgical Nursing Science. A total of 391 appraisers were used, based on the principle of convenience and purposeful sampling. The quality survey was conducted in 137 different clinical/nursing units over the period of four years.

Perception survey

A perception survey was conducted with selected appraisers to determine the content validity of the

standards. Content-related validity evidence examines the extent to which the method of measurement includes all the major elements relevant to the construct (nursing unit management) being measured. This evidence is obtained from three sources: the literature, representatives of the relevant populations and content experts (Burns & Grove, 1993:343). The selected appraisers that were used in this study are field experts - nursing unit managers (N=137) and students (N=254) as potential nursing unit managers on completion of the educational programme in Nursing Dynamics. These appraisers validated the standards and criteria by judging the following dimensions: relevance and appropriateness of the standards and criteria within the context of clinical/nursing unit management in South Africa, clarity of the standards and representativeness of the standards in relation to the application and implementation in practice/reality. The standards were validated/appraised by the nursing unit managers (N=137), the fourth year BCur-students at the University (N=63), all post-basic students following the Diploma in Medical and Surgical Nursing Science: Critical Care Nursing General (N=135), Operating Room Nursing (N=32) and Trauma Nursing (N=24) over a period of four years (1995-1998). The students evaluated these standards as part of their practical learning programme and examinations in Nursing Dynamics. Individual validation discussions were held with these participants (N=391) on the relevance and appropriateness of each standard, clarity of standards and whether any re-formulation was required, as well as on the representativeness (applied in reality) of the standards. The students were questioned during the practical guidance sessions and they were invited to score these dimensions on completion of the practical examination where they had to evaluate the quality of nursing unit management in a particular unit of practice during their education and training. The nursing unit managers (N=137) have a shared responsibility in the achievement of learning and educational outcomes and were therefore directly involved in the judgement of these standards by also scoring these dimensions.

Each standard and the related criteria (excluding standard fourteen which was not included in the quantification phase) were assessed individually by the appraisers (N=391). In order to allow comparison of standard performance, dimension scores (relevance/appropriateness, clarity and representativeness) for each standard were calculated. A "yes" response was given a value of one and other responses ("no; not sure; not applicable") were given a value of zero. Individual appraiser's scores were calculated as the content validity by summing their scores for each dimension within a standard. A final score - Content Validity Index (CVI) - was obtained by calculating the mean of the appraisers' scores. This was then expressed as a percentage of the maximum possible score for that standard (see table one). Evidence of content validity was also sought by

calculating Pearson's correlation coefficients between appraisers' dimensions scores and their global assessment/validation of a standard. In an attempt to investigate validity further, Mann-Whitney tests were used to examine differences between the scores of the two professional groups (students and nursing unit managers). Content validity of the standards is therefore based on the conceptual framework and on the validity evidence, expressed as the Content Validity Index (CVI) by the students (N= 254) and the unit managers (N=137).

Table 1 Distribution of Content Validity Index results

Standard	CVI Relevance and appropriateness	CVI Clarity	CVI Representativeness
Strategic plan	90%	95%	78%
Legislative and professional-ethical framework	87%	92%	74%
Teamwork	93%	89%	73%
Participative management	95%	77%	69%
Policies and procedures	83%	70%	61%
Stocks, supplies and equipment	94%	92%	89%
Organised clinical unit	73%	78%	69%
Directing and leadership	89%	71%	60%
Appropriate control	81%	82%	69%
Disaster plan	96%	94%	95%
Quality improvement programme	82%	71%	23%
Financial management	79%	82%	31%
Personnel management	96%	80%	58%
Research in the nursing unit	38%	53%	18%
TOTAL CONTENT VALIDITY INDEX	78%	80%	60%

Quality survey

The standards were presented in the form of an instrument and the same students (N=254) had to evaluate the quality of clinical/nursing unit management as part of their practical examinations in Nursing Dynamics. The purpose of the quality survey was to evaluate the quality of nursing unit management (of which the results are not presented in this article) and to determine construct validity of the instrument (standards and criteria). Validity designates an ideal state to be pursued, but not necessarily to be attained. Validity therefore has to do with truth, strength and value. Examination of construct validity determines whether the instrument actually measures the theoretical construct it purports to measure (Burns & Grove, 1993:342). The determination of construct validity begins with instrument development, followed by the determination of Content Validity Index (Lynn, 1986). As soon as content validity has been confirmed, the instrument is tested to determine whether it

measures what is intended to measure. This was done by means of the quality survey and a cross validation of the results between the perception survey and the quality survey (see table two) which also indicated the Intraclass Correlation Coefficient. Further construct validity evidence needs to be sought from factor analysis to examine the relationship between the different criteria within a standards and between the standards.

Table 2 Distribution of validity and reliability results

Standard	Average CVI	Average quality	Cronbach's α	ICC (95% CI)
Strategic plan	88%	72%	0,89	0,90
Legislative/professional-ethical framework	84%	75%	0,87	0,82
Teamwork	85%	70%	0,84	0,91
Participative management	80%	69%	0,74	0,69
Policies and procedures	71%	65%	0,84	0,85
Stocks, supplies and equipment	92%	80%	0,91	0,90
Organised unit	73%	70%	0,98	0,93
Directing and leadership	73%	64%	0,83	0,72
Appropriate control	77%	71%	0,92	0,84
Disaster plan	95%	90%	0,96	0,94
Quality improvement programme	59%	50%	0,94	0,71
Financial management	84%	60%	0,97	0,92
Personnel management	78%	71%	0,96	0,92
Research in the nursing unit	36%	34%	0,99	0,61

CVI: Content Validity Index

ICC: Intraclass Correlation Coefficient

Reliability

The reliability of the instrument used for the quality survey was assessed in two ways: first, internal consistency was measured by calculating the correlation between all dimensions to test to what extent they measured the same underlying concept, using Cronbach's alpha coefficient. The inter-rater agreement was measured by calculating the intra-class correlation coefficient (ICC) for the standard scores according to the criteria of Shrout and Fleiss (1993). Reliability of the perception survey was determined by comparing the average CVI scores with the scores obtained for each standard during the quality survey, using the Mann Whitney test.

CONCEPTUAL FRAMEWORK: STANDARDS FOR NURSING UNIT MANAGEMENT IN SOUTH AFRICA

The conceptual framework is discussed in relation to

the context of nursing unit management in South Africa, the purpose of nursing unit management and the managerial dimensions (content), as described by Muller (1998b:129-352).

Context

The clinical/nursing unit manager, a registered professional nurse/midwife, is responsible and accountable - as a member of the nursing service management team - for quality clinical/nursing unit management to facilitate quality nursing/midwifery care and education within the nursing service and health care organisation, in a cost-effective manner. Clinical/nursing unit management is conducted at operational level in the health care organisation within the context and scope of the health care service delivery and the financial framework of the health care organisation. Clinical/nursing unit management is therefore practised within the legislative, national/provincial and local policy framework of the health care organisation and in accordance with the strategic plan of the health care organisation, as well as in accordance with the strategic plan of the nursing service (Muller, 1998b:129, 143-145).

Purpose of nursing unit management

The expected outcomes of nursing unit management, within the given context of the service delivery and legislative framework, is as follows (Muller, 1998b:151-152):

- quality nursing/midwifery care (evidenced-based practice)
- quality nursing unit management in relation to financial outcomes (efficiency), strategic objectives (including transformation) and the realisation of the mission
- quality human resource management.

Managerial dimensions

Nursing Unit Management is the achievement of the objectives/stated outcomes of the nursing unit by means of the application of the management process in relation to planning, organising, directing and control (Muller, 1998b:131). The nursing unit manager is responsible for ensuring that the nursing/midwifery care takes place within the legislative/professional-ethical framework of the nursing profession (Muller, 1998b:77-91; Mellish & Wannenburg, 1994:175-195; South Africa, 1978, as amended). The various legislation and related regulations should therefore not only be available or accessible, but the nursing staff should show insight into the content thereof as applicable to the specific clinical practice in the unit. The nursing unit manager is therefore responsible for ensuring that nursing/midwifery care is practised within the professional-ethical framework of the

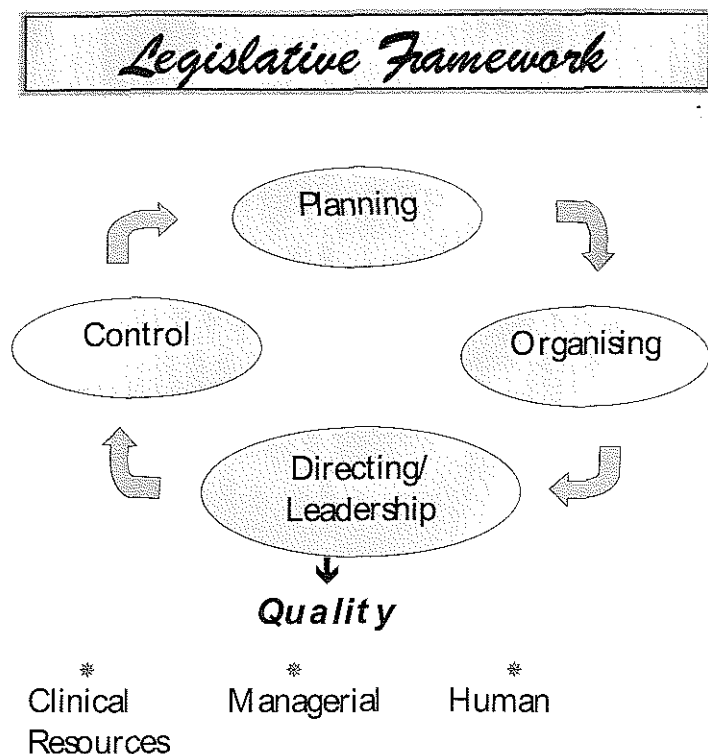
nursing profession (scope of practice, legislation and standards). The nursing/midwifery practitioner does not practice in isolation but is a member of the multi-professional and multi-disciplinary team that is responsible for mobilising appropriate resources in the interest of patient care (Government Notice, R387, as amended). The management style of the nursing unit manager is important and should be participative to foster the necessary ownership and transparency in the unit (Muller, 1998b:137-145; Mellish & Wannenburg, 1994:198-204). A comprehensive set of standards (policies and procedures) should be in place to direct quality clinical, managerial and educational practices in the clinical unit, guided by an appropriate philosophy with the applicable value clarification and belief statements (Muller, 1998b:147-151, 157-168).

The clinical/nursing unit should be well organised with adequate stocks, supplies and equipment to ensure safe and cost-effective clinical nursing/midwifery care. A well-organised unit also entails an organogram to display the lines of authority within the formalised unit management system, written job descriptions with duties, tasks and responsibilities clearly delineated. Division of work should be fair and in accordance with the policy of the health care organisation, with adherence to the labour rights of the nursing staff and the legislative framework of the country (Muller, 1998b:169-184; Mellish & Wannenburg, 1994:206-217; Andrews, 1996; Stevens, 1990). Directing and leadership by the nursing unit manager should not only reflect the principles of transformational and participative leadership, but should also facilitate harmony, team spirit and the motivation of staff in the unit with evidence of appropriate support to the nursing/midwifery staff (Muller, 1998b:185-199, 210-226). The principles of quality control should be displayed and practised by the nursing unit manager. This entails the development and implementation of appropriate risk management programmes, a quality improvement programme, a disaster programme for the unit, as well as responsible and accountable financial management (Muller, 1998b:227-262). The most difficult dimension of nursing/clinical unit management is the management of the staff in the unit. Human resource management should be compliant with the standards (policies and procedures) of the organisation and the legislative framework of the country. The nursing unit manager should also demonstrate the ability to respect the basic labour rights of the nursing/midwifery staff in the unit (Muller, 1998b:263-288, 299-352). When the clinical unit has been approved as a clinical facility for nursing education, the unit manager has an additional responsibility in creating a learning environment that is conducive to learning and ensuring that the clinical outcomes of the educational/ learning programme are met, in collaboration with the other role-players involved (Muller, 1998b:336-343; Mellish &

Wannenburg, 1994). This would also include a demonstration of willingness to practice evidence-based nursing/midwifery care as related to research in the unit (Muller, 1998b:334). A visual presentation of the conceptual framework is presented in figure one.

RESULTS

Figure 1: Visual Representation of the conceptual framework: Standards for nursing unit management in South Africa



The results are presented in relation to the final standards and the validation results.

a) Standards for clinical/nursing unit management in South Africa

Fifteen clinical/nursing unit management standards, with the subsequent criteria, were formulated:

1. **The clinical unit is managed in accordance with the strategic plan of the health care service, according to the following criteria:**
 - 1.1 The nursing staff shows insight into the strategic plan of the health care organisation and nursing service.
 - 1.2 The clinical unit has a written philosophy reflecting belief statements on at least the patient, health/illness, nursing/midwifery care, nursing personnel and education, applied to the specific clinical unit.
 - 1.3 The clinical unit has written objectives that are

specifically related to the clinical unit, realistic/achievable and measurable.

2. **Nursing/midwifery care takes place within the legislative/professional-ethical framework of the nursing profession, according to the following criteria:**

- 2.1 The latest Nursing Act (with amendments) is available.
- 2.2 The Acts/Omissions and Scope of Practice Regulations are available.
- 2.3 The other nursing regulations, applicable to the specific unit, are available.
- 2.4 The Health Care Act is available.
- 2.5 The Human Tissue Act and Blood Regulations are available.
- 2.6 The Medicine and Substances Act is available.
- 2.7 The Health and Safety Act is available.
- 2.8 Other legislation, applicable to the specific health care unit, is available.
- 2.9 The nursing staff shows insight into the legislation and various regulations.
- 2.10 Nursing/midwifery is practised within the professional-ethical framework of the nursing profession (scope of practice, legislation and standards):
 - 2.10.1 The unit manager ensures that the principles of scientifically based nursing/midwifery care are practised.
 - 2.10.2 The nursing/midwifery record system is accurate, complete and complies with the legal requirements.

3. **The unit manager facilitates multi-professional and multi-disciplinary teamwork and networking in the interest of patient care in the clinical unit:**

- 3.1 There is a system to ensure timeous and appropriate referral to members of the health team.
- 3.2 There is a system to facilitate the mobilisation and accessing of the appropriate resources in the interest of patient care and health promotion.
- 3.3 There is a system to ensure the management, co-ordination, completion and facilitation of all programmes of health care provided for the patient in a cost-effective manner in the interest of patient and health care.

4. **The nursing unit manager practises participative management in the unit by means of:**

- 4.1 Interactive decision-making and problem-solving;
- 4.2 Management-related empowerment of nursing staff;
- 4.3 The facilitation of shared ownership and accountability;
- 4.4 Appropriate decision-making systems and committees are in place to ensure consultation

and transparency.

5. There are written, appropriate, legally valid and updated policies and procedures in the clinical unit on at least the following (applicable to the specific clinical unit):

- 5.1 Relevant high frequency nursing/midwifery interactions;
- 5.2 Relevant high risk/problem-prone nursing/midwifery interactions;
- 5.3 Management and administration of medication (scheduled and unscheduled);
- 5.4 Ordering of stocks and supplies;
- 5.5 Maintenance and replacement of equipment;
- 5.6 The nursing staff shows insight in the policies and procedures with evidence of timeous and accurate execution thereof.

6. Adequate stock, supplies and equipment are available to ensure safe nursing/midwifery care:

- 6.1 There is a formal and scientific procedure in place for determining the needs (stock, supplies and equipment) of the unit.
- 6.2 Ordering of stocks, supplies and equipment takes place in a formalised/well-planned manner (monthly, weekly, daily, etc.).

7. The clinical unit is well organised:

- 7.1 The nursing service organogram is displayed.
- 7.2 There is a written unit organogram.
- 7.3 The general responsibilities, duties and tasks of nursing/midwifery and other staff are available in writing by means of job descriptions and duty lists.
- 7.4 There is a formalised system in operation for the assignment of daily responsibilities/delegation of duties and nursing/midwifery care.
- 7.5 The nursing/midwifery care assignment method(s) is appropriate to facilitate quality nursing/midwifery care in the unit (e.g. functional, team, case, and primary assignment)
- 7.6 The general routine in the clinical unit is formalised by means of specific time scheduling of certain routine interactions.
- 7.7 Delegation of responsibilities, duties and tasks are in accordance with the general principles of delegation.
- 7.8 The division of work is fair and based upon the abilities (knowledge, skills and values) of the staff and their need for personal and professional development.
- 7.9 The scheduling of shifts (off duties) in the unit is based on the needs of patients and staff and according to a written policy in the unit and nursing service.
- 7.10 The co-ordination of work and projects is logical and orderly with appropriate unit meetings taking place to adequately address problems related to quality, cost-effectiveness and

personnel management.

- 7.11 There is a formalised communication system in the unit.

8. Directing and leadership in the clinical unit is appropriate and adequate:

- 8.1 The unit manager and supervisors practise the general principles of leadership.
- 8.2 The unit manager and supervisors display and practise a participative and situational/contingency leadership style.
- 8.3 Harmony in the unit is facilitated with evidence of a motivational and team building strategy for the nursing staff in the unit to facilitate quality of work life/job satisfaction amongst the staff.
- 8.4 There is evidence of appropriate support for the management of ethical problems by the nursing staff.

9. There is evidence of appropriate control in the clinical unit:

- 9.1 There is a system to manage professional conduct and accountability by nursing staff in the unit.
- 9.2 There is a formal risk management programme for patients in place.
- 9.3 There is a formalised infection control programme/system in place.
- 9.4 The nursing staff shows insight into Health and Safety legislation.
- 9.5 The nursing staff participates in the nursing service/health organisation's health and safety programme.
- 9.6 A therapeutic environment in the clinical unit is maintained (risk management, hygiene, hazards).

10. There is a disaster plan in the clinical unit with at least the following:

- 10.1 Availability of or access to the health care organisation's external and internal disaster plan;
- 10.2 The floor plan of the clinical unit is displayed, indicating emergency exits;
- 10.3 Description of the specific role of the unit in the disaster plan of the health care organisation;
- 10.4 Appropriate action cards for the nursing staff;
- 10.5 Evacuation procedure of the unit;
- 10.6 Fire prevention and control system;
- 10.7 Adherence to the patient safety and security programme of the health service;
- 10.8 Staff shows insight into the disaster plan with evidence of rehearsal.

11. There is a formalised clinical unit-based quality improvement programme (QIP) according to at least the following:

- 11.1 There is a written patient profile analysis.
- 11.2 There is a written staff profile analysis.
- 11.3 There are written unit-based QIP objectives

- related to the patient profile and subsequent interactions.
- 11.4 There are written unit-based standards (clinical and management) related to the QIP objectives and appropriate for the unit.
 - 11.5 There are appropriate and related monitoring and evaluation systems in place to ensure trustworthy evidence-based nursing/midwifery practice.
 - 11.6 There is a written feedback and reporting system.
 - 11.7 There is a remedial action system in place to improve the quality of nursing/midwifery care in the unit.
 - 11.8 Negative incidents are monitored and appropriately managed.
- 12. The unit manager is accountable for financial management within the unit:**
- 12.1 The unit manager participates in/is responsible for the management of the nursing unit budget.
 - 12.2 There is a cost containment and utilisation review programme in the unit.
 - 12.3 There is a formalised equipment control system in place (inventory, continuous maintenance programme, lending system, replacement system).
 - 12.4 There is a formalised stock/supplies control system in place.
- 13. Nursing personnel management is according to the Labour Relations Act and other appropriate legislation:**
- 13.1 The nursing staff are appropriately registered or enrolled with the South African Nursing Council.
 - 13.2 There is a formal system in place to verify the credentials (registration/enrolment status, knowledge, skills and experience) of the full-time, part-time and sessional/agency staff.
 - 13.3 The unit manager participates in the nursing personnel selection process/system.
 - 13.4 There is a scientific system for determination of nursing staff needs (staff establishment).
 - 13.5 There is a written induction programme for new staff with evidence of the execution thereof.
 - 13.6 There is a written orientation programme for new staff with evidence of the execution thereof.
 - 13.7 There is evidence of appropriate in-service education of staff on at least the following:
 - 13.7.1 Specialised clinical nursing/midwifery care (relevant to unit)
 - 13.7.2 Resuscitation/emergency care
 - 13.7.3 Relevant high risk/problem-prone nursing/midwifery interactions
 - 13.7.4 Risk/health and safety management
 - 13.7.5 Management of professional-ethical nursing/midwifery issues
 - 13.7.6 General professional conduct
 - 13.8 Conflict management is appropriately exercised.
 - 13.9 There is evidence of fair labour practices:
 - 13.9.1 There is evidence of compliance with current human resource legislation.
 - 13.9.2 A formal written grievance procedure is in place with evidence of adherence thereto.
 - 13.9.3 A formal written disciplinary procedure is in place with evidence of the execution thereof.
 - 13.9.4 There is a formalised and trustworthy personnel evaluation/performance appraisal system in place.
 - 13.9.5 There is a formalised occupational health and safety programme for nursing/midwifery staff in the unit with evidence of the execution of the health service's occupational health and safety programme.
 - 13.9.6 There is evidence of the monitoring of nursing personnel productivity, turnover and absenteeism in the unit.
 - 13.9.7 There is evidence of appropriate career planning of nursing/midwifery staff
 - 13.9.8 Participation of nursing/midwifery staff in specialised professional interest groups is encouraged.
 - 13.9.9 Independent and life long learning of nursing staff is encouraged with evidence of support of formal continuing education.
- 14. There is evidence of quality nursing/ midwifery education**
- 14.1 The appropriate SANC programme, regulation(s) and directive(s) are available and accessible to all the nursing staff.
 - 14.2 There is access to a copy of the approved SANC educational programme (curriculum) of the particular Nursing Education Institution(s).
 - 14.3 The unit manager is responsible for the execution of the clinical educational programme in accordance with the Nursing Education Institution's guidelines, prescriptions, clinical workbook and clinical register requirements.
 - 14.4 The unit manager, together with the clinical preceptor(s), is responsible for continual clinical evaluation.
 - 14.5 The unit manager, together with the clinical preceptor(s), is responsible and accountable for evidence-based achievement (by the student) of the relevant clinical outcomes.
 - 14.6 The unit manager actively participates as a member of the relevant educational team.
 - 14.7 The unit manager creates a learning and teaching environment that is conducive to quality nursing/midwifery care and education.
 - 14.8 The unit manager executes the relevant Nursing Education Institution's programme policies and agreement(s).

- 14.9 The unit manager adheres to the ethical principles in the endorsement of completed clinical nursing/midwifery care, activities and procedures required for the educational programme.
15. There is evidence of research in the nursing unit:
- 15.1 There is a valid/updated resource file in the unit applicable to the specialised type of nursing/midwifery care.
- 15.2 Nursing staff participates in multi-professional health research.
- 15.3 Nursing staff demonstrates insight into latest research findings and recommendations applicable to the specialised nursing/midwifery care.
- 15.4 Nursing staff shows insight into available external research resources (applicable research journals, research forums, etc.)

Evaluation instrument

The standards are presented in a final evaluation format and were initially based on a five-point sliding scale, from 0-5. A score of five would mean that the criterion is fully compliant with no improvement necessary - a top class situation. If the criterion was not in place at all, a score of zero is allocated. A sliding score/mark was allocated in accordance with the degree of compliance with a particular criterion. The students found this type of scoring easy and user-friendly. This scoring system was, however, changed to be in line with the national health care accreditation system which was based on a three point discrete ordinal scale: Non Compliance (NC) with no marks, Partial Compliance (PC) with 0,5 marks and Compliant (C) with 1,0 mark. The total number of criteria that have been evaluated (the standard and criteria that are not applicable are deducted from the final total) are added together, as well as the score obtained by the unit and calculated to percentage. Commendations are recorded, as well as recommendations for improvement. The first standard is reflected as part of the instrument in figure two.

Evaluation strategies

When evaluating the nursing unit's compliance with the standards, a variety of evaluation strategies are utilised, as described by Muller (1998:247-248):

- direct observation and questioning: e.g. to determine the staff's insight into the strategic plan, acts and regulations, etc.;
- document analysis and auditing: e.g. the philosophy, objectives, policies, procedures, quality improvement programme, etc.;
- peer group evaluation: professional debate e.g. on leadership behaviour, the principles of participative management, etc.; and
- interviews with patients, nurse/midwives

Figure 2: Standard with evaluation instrument

Standard and criteria	NC	PC	C
1. 1. The clinical unit is managed in accordance with the strategic plan of the health care service, according to the following criteria:			
1.1 The nursing staff show insight into the strategic plan of the health care organisation and nursing service			
1.2 The clinical unit has a written philosophy reflecting belief statements on at least the patient, health/illness, nursing/midwifery care, nursing personnel and education, applied to the specific clinical unit			
1.3 The clinical unit has written objectives that are specifically related to the clinical unit, realistic/achievable and measurable			

Scale description:

NC = Non Compliance (0)

PC = Partial Compliance (0,5)

C = Compliance (1,0)

working in the unit and with other members of the health team.

A particular standard could be evaluated by means of four different evaluation strategies, for example the standard on participative management would include all four of the above evaluation strategies to determine compliance thereof. The results on the quality of nursing unit management will be given in a follow-up article.

b) Results: Validity and reliability of the standards and instrument

The Pearson's correlation coefficients between appraisers' dimension scores and their global assessment were 0.91 for the first dimension (relevance and appropriateness), 0.97 for the second dimension (clarity) and 0.81 for the third dimensions (representativeness of the standards and criteria). All coefficients were highly significant (P value < 0.0001), providing evidence of content validity. However, it should be noted that the student appraisers made their global validation of standards and evaluation of the quality of nursing unit management after completing a course in Nursing Dynamics (of which nursing unit management is a module) and after having completed the practical examination in nursing unit management. A difference between the CVI results of the students and nursing unit managers could therefore be expected. The nursing unit managers did not always understand the meaning and content of the standards and were also of the opinion that some of them were not implemented in practice which lowered the content validity index in the dimension: representativeness. All the dimensions had good internal consistency (Cronbach's 0.74-0.98) and excellent intraclass/ rater agreements (see table two) except for participative management and research with narrow confidence intervals.

The results of the Content Validity Index are reflected in table one. The CVI scores in the dimension representativeness (as reflected in real practice) are lower than the CVI's related to relevance and clarity. As the nursing unit managers had not necessarily received formal education in Nursing Unit Management (as part of Nursing Dynamics), they did not always understand the meaning and content of the standards and relevant criteria, resulting in the lowering of the CVI score in the dimension: clarity. The most problematic areas are the implementation of quality improvement programmes in the nursing units, financial management, as well as the representativeness of the research responsibilities. It is important to note that this article does not deal with the evaluation of the quality of nursing unit management - these results reflect the perceptions of the appraisers.

A comparison between the results of the perception survey and those of the quality survey in relation to the scores obtained, are shown in table two. As there is a high correlation between these results, the validity (both content and construct validity) is confirmed, showing also that a perception survey is reliable. The problematic areas appear to be the standards and relevant criteria on financial management, quality improvement programmes and research. The criterion on harmony and a motivational strategy (see standard 8.3) obtained very low scores in the quality survey. Successive verification of the validity of the instrument across time needs to be conducted. Further construct validity tests by means of Analysis of Variance should also be conducted to determine the relationship between the criteria in a particular standard.

CONCLUSION AND RECOMMENDATIONS

Standards for nursing unit management in South Africa were developed with both content and construct/criterion-related validity evidence. These standards are utilised as a learning tool by students following the BCur-degree or the Diploma in Medical and Surgical Nursing Science offered by the University. The standard on education was included after validation by the South African Nursing Council (as standard number fourteen) and was not exposed to validity or reliability testing. It is also concluded that a perception survey is reliable, due to the high correlation of the CVI and quality results on each standard. Both content and construct validity was confirmed, except on the standard relating to research in the unit.

The following recommendations are made:

- Further validity studies (construct validity by means of ANOVA factor analysis and verification of results) of the standards/instrument on a national basis;
- Utilisation of the standards and instrument as part of a nursing service's quality improvement

programme to determine the quality of nursing unit management in South Africa;

- A national study to determine the quality of nursing unit management in South Africa;
- Utilisation of these standards and instrument for accreditation purposes by Nursing Education Institutions when the units are to be utilised for learning opportunities for both basic and post-basic nursing/midwifery programmes;
- Continual professional development of the nursing unit managers on their managerial functions and responsibilities focusing on the financial, quality improvement and research responsibilities, as well as on the facilitation of harmony in the units by means of team building strategies.

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