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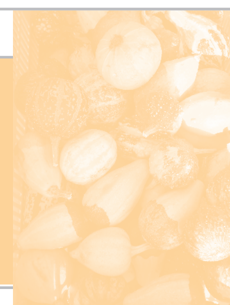
Verified standards of professional practice for South African dietetics professionals. Part 2: The indicators



SAJCN
2007, Vol. 20, No. 4

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Accountability is coming to be one of the most important trends in health care in the 21st century.[1] Further resource constraints compel dietitians to find new strategies that allow doing more with less. Three keys to the success of an organisation and profession were identified, namely excellence, innovation, and anticipation. Excellence is at the base of the list because it is essential for survival in the 21st century, therefore requiring superior therapeutic/clinical nutrition quality, superb service, and innovation. Quality of health care, including nutritional care, could be considered as a 'value', and should be identified and 'operationalised' for measurement.[2] This can be achieved through the measurement and evaluation of services according to professional standards. One of the key aspects in a Total Quality Management (TQM) culture is the establishment, maintenance and review of key quality standards.[3]

The standards of professional practice for dietetics professionals established in 1985 by the American Dietetic Association (ADA) were revised in 1997, and consist of general statements applicable to all areas of dietetic practice (Table I).[4] They form interdependent elements in a central process, and could be directed to the requirements of the scope of service provided.

Standards provide a clear definition of an agreed level of performance for practitioners, and offer a measure against which current practice can be compared.[5] They define desirable and achievable levels of performance that are not perceived as requirements but as broad statements describing minimum expectations of practice, while guidance for their achievement is given in the form of indicators.[6] The indicators are used in evaluating whether a standard has been achieved or not.[7]

Indicators (or criteria) are used to measure over time the performance of functions, structures, processes, and outcomes of organisations/individuals.[7,8] Indicators do not directly measure quality but serve as a screen to identify potential problem areas. When performance of an organisation or department related to an indicator appears out of line, investigation of performance in that defined area of practice is warranted. When developing indicators, it should therefore be kept in mind that indicators ought to provide the manager of the nutritional care service with data leading to quality improvement on a continuous basis. The attributes of indicators to accurately measure standards are presented in Table II.[7]

In Part 1 of this paper, it was reported that the ADA standards were verified in terms of their relevance and importance for utilising in South African (SA) hospitals in Gauteng and Mpumalanga and the military hospitals. In this section (Part 2), the second phase of the research study is reported, which consisted of the development and verification of indicators to be used in SA hospitals for measuring the standards of professional practice (reported in Part I).[9]

Development of indicators

Indicator statements, obtained from the literature, that were related to each of the six standards of professional practice for dietetics professionals, together with activities identified from the role of therapeutic dietitians as bearing risk to the patient or the hospital if they were performed poorly or not at all, were listed.[9] The selection of indicators for each standard statement was assessed for their appropriateness by a core group of 9 experienced hospital dietitians. The wording and terminology used for indicators were changed to adapt them to SA circumstances by the aforementioned core group of dietitians. Thus, face and content validity were controlled for. During the development process, attention was given to the attributes that indicators ought to have to accurately measure standards (Table II).[7] The indicators identified for each statement of the standards were subsequently verified in terms of their appropriateness in the SA hospital milieu. A 4-point Likert scale was used. Dietitians were requested to indicate whether they *strongly agree, agree, disagree* or *strongly disagree* with each of the indicator statements listed for a standard.

Table I.	Standards of professional practice for dietetics professionals[4]

Standard 1: Provision of services
Develops, implements, and promotes quality service based on client expectations and needs
Rationale:
Dietetics professionals provide, facilitate, and promote quality services based on client needs and expectations, current knowledge, and professional experience

Standard 2: Application of research
Effectively applies, participates in or generates research to enhance practice
Rationale:
Effective application, support, and generation of dietetics research in practice encourages continuous quality improvement and provides support for the benefit of the client

Standard 3: Communication and application of knowledge
Successful dietetics professionals apply knowledge and communicate effectively with others
Rationale:
Dietetics professionals work with and through others while using their unique knowledge of food, human nutrition, and management, and skills in providing services

Standard 4: Utilisation and management of resources
Uses resources effectively and efficiently in practice
Rationale:
Appropriate use of time, money, facilities, and human resources facilitates delivery of quality services

Standard 5: Quality in practice
Systematically evaluates the quality and effectiveness of practice and revises practice as needed to incorporate the results of evaluation
Rationale:
Quality practice requires regular performance evaluation and continuous improvement of services

Standard 6: Continued competence and professional accountability
Engages in life-long self-development to improve knowledge and skills that promote continued competence
Rationale:
Professional practice requires continuous acquisition of knowledge and skills that promote continued competence

Table II.	Attributes of indicators

- Indicators are quantitative measures
- Indicators address factors identified with quality of care
- Indicators are valid
- Indicators are meaningful
- Indicators flow from important aspects of care
- Indicators address key functions/activities that are most crucial to patient care

Methods

Design

This study comprises the second phase of a cross-sectional descriptive study in the quantitative domain carried out during 1999 - 2002. In the first phase, the ADA standards were verified after having obtained permission from the ADA for their use.[9,10]

Population and sample selection

All the dietitians (*N*=57) of different ranks employed at the Gauteng (*N*=20) and Mpumalanga (*N*=10) provincial hospitals and the 3 hospitals of the South African National Defence Force were included in the sample. Dietitians at the provincial head offices, who had an input in the management of the dietetics departments at the hospitals, especially on matters regarding policy making, were also included in the study group although they were not based at a hospital *per se.* The number of respondents declined from that in phase 1 due to dietitians having left the hospital or being on leave, study leave or maternity leave.

Ethics

The Ethics and Protocol Committee of the Faculty of Health Sciences, University of Pretoria, approved the protocol. Respondents completed informed consent and were assured of confidentiality.

Data collection and analysis

Data collection during phase 2 of the research study built onto the process of data collection during the first phase, which was reported in Part 1.[9] Data collection during phase 2 was by means of a structured self-administered questionnaire on the indicators per standard, that was sent to all dietitians employed at the participating hospitals.

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Table III. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for Standard 1: Provision of services

Indicators for Standard 1[4]	Appropriateness of indicators* *N* (%) Strongly agree	Agree	Sum of strongly agree and agree	Mode†
Standard 1: Provision of services	**62.16**	**34.08**	**96.31**	
1.1 Collaborates with patients/clients to assess needs, background and resources to establish mutual goals	**40 (70.18)**	16 (28.07)	**56 (98.25)**	3
1.2 Collaborates with other professionals as appropriate	38 (66.67)	19 (33.33)	**57 (100.00)**	3
1.3 Applies knowledge and skills to determine the most appropriate action plan	**43 (75.44)**	13 (22.81)	**56 (98.25)**	3
1.4 Implements quality practice by following policies, procedures, legislation, practice guidelines, professional guidelines	39 (68.42)	18 (31.58)	**57 (100.00)**	3
1.5 Fosters excellence and exhibits professionalism in practice	38 (66.67)	19 (33.33)	**57 (100.00)**	3
1.6 Continuously evaluates processes and outcomes	38 (66.67)	18 (31.58)	**56 (98.25)**	3
1.7 Advocates for the provision of food and nutrition services as part of public policy	31 (54.39)	24 (42.11)	**55 (96.49)**	3
1.8 Assesses design of nutritional care system and develops plan for meeting needs related to work flow and physical resources	33 (57.89)	22 (38.60)	**55 (96.49)**	3
1.9 Assesses staffing needs to effectively meet nutrition protocols and standards of care	29 (50.88)	26 (45.61)	**55 (96.49)**	3
1.10 Assesses financial needs of area and determines budget plan	32 (56.14)	20 (35.09)	**52 (92.23)**	3
1.11 Assesses needs of target populations and develops plan to achieve/maintain client satisfaction	34 (59.65)	17 (29.82)	**51 (89.47)**	3
1.12 Co-ordinates development and evaluates effectiveness of learning experiences for dietetic students	21 (36.84)	26 (45.61)	**47 (82.46)**	3
1.13 Identifies levels of priority for patient care and uses this information to optimise delivery of nutrition care	**40 (70.18)**	17 (29.82)	**57 (100.00)**	3
1.14 Assesses patient's/client's nutritional status, develops and implements nutritional care plan, and monitors and adjusts care plan as appropriate	**40 (70.18)**	17 (29.82)	**57 (100.00)**	3

*Frequencies ≥70 indicated in **bold**.
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

The researcher checked the data for completeness and did the coding for each indicator. Descriptive statistics were presented as frequencies, means and modes, using SAS Version 8.2.

Results and discussion

Indicators for Standard 1: Provision of services. Indicators considered appropriate by the aforementioned core group of dietitians for Standard 1, dealing with the provision of services, are presented in Table III. Fourteen indicators were identified.

Response rates for *strongly agreed* of ≥70% (Table III) were reported by dietitians for 4 indicators, viz. indicators 1.1, 1.3, 1.13 and 1.14 while ≤50% dietitians *strongly agree* with indicator 1.12. The response rates for the summated frequencies of *strongly agree* and *agree* were ≥70% (mean 82.5 - 100%) for all 14 indicators. Dietitians indicated 100% agreement with the summated frequencies of *strongly agree* and *agree* for 5 indicators, viz. indicators 1.2, 1.4, 1.5, 1.13 and 1.14.

Indicators 1.7 - 1.10 deal with nutritional care as a system and the delivery of the nutritional care service, which is usually the responsibility of the dietitians performing the role of the manager of the nutritional care service. Quality staff and service proficiency is the result of a staff-centred manager who focuses on the needs of the staff while also considering the needs of the hospital.[7]

Assessing the needs of hospitalised patients as a group would be appropriate in planning for the provision of quality nutritional care aimed at satisfying patients' needs.[8]

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Table IV. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for Standard 2: Application of research

Indicators for Standard 2[4]	Appropriateness of indicators* *N* (%) Strongly agree	Agree	Sum of strongly agree and agree	Mode†
Standard 2: Application of research	**49.34**	**42.76**	**92.11**	
2.1 Locates and reviews research findings for their application to dietetics practice	28 (49.12)	26 (45.61)	**54 (94.74)**	3
2.2 Bases practice on sound scientific principles, research, and theory	31 (54.39)	26 (45.61)	**54 (94.74)**	3
2.3 Promotes research through alliances and collaboration with dietetics and other professionals and organisations	18 (31.58)	30 (52.63)	**48 (84.21)**	2
2.4 Contributes to the development of new knowledge and research in dietetics	29 (50.88)	21 (36.84)	**50 (87.72)**	3
2.5 Collects measurable data and documents outcomes within the practice setting	23 (40.35)	29 (50.88)	**52 (91.23)**	2
2.6 Shares research data and activities through various media	24 (42.11)	26 (45.61)	**50 (87.72)**	2
2.7 Applies newly acquired knowledge to area of work	39 (68.42)	16 (28.07)	**55 (96.49)**	3
2.8 Applies nutrition expertise to evaluation and selection of products and procedures	33 (57.89)	23 (40.35)	**56 (98.25)**	3

*Frequencies ≥70 indicated in **bold**.
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

Dietitians reported a mean of 89.5% (*N*=51) for the summated frequency of *strongly agree* and *agree* for the appropriateness of indicator 1.11 dealing with this aspect. The satisfaction of external customers, e.g. patients, should be considered in achieving effective TQM implementation.[10,11]

Less than 50% of dietitians *strongly agreed* with indicator number 1.12, which deals with the training of dietetic students (mean 36.8%; *N*=21). This indicator also received the lowest response rate for the summated frequency of *strongly agree* and *agree* for appropriateness (mean 82.5%; *N*=47). Not all dietitians in the study group were involved with the training of dietetic students, which might have affected their opinion of the appropriateness of the indicator. Dietitians have a professional obligation to help to prepare students and/or entry-level dietitians to become providers and leaders in the delivery of nutritional care by providing clinical instruction, which is essential to the emergence of a professional person.[7] Clinical instruction expands theoretical concepts of dietetic practice, and, through practice-oriented situations, allows the formation of sound judgement and accountability for the demonstration of professional skills.

Indicators for Standard 2: Application of research. Indicators considered appropriate by the mentioned core group of dietitians for Standard 2, dealing with the application of research, are presented in Table IV. Eight indicators were identified.

Response rates for *strongly agree* of ≥70% were reported for none of the indicators (Table IV). The highest response for *strongly agree* was for indicator number 2.7 dealing with the application of newly acquired knowledge in the work situation (mean 68.4%; *N*=39). Response rates of ≥50% were reported by dietitians for *strongly agree* for 4 indicators (indicators number 2.2, 2.4, 2.7 and 2.8). The response rates for the summated frequency of *strongly agree* and *agree* were ≥70% (mean 84.2 - 98.3%) for all 8 indicators, although there was not 100% agreement with any one of the indicators. The highest response rate for the summated frequency of *strongly agree* and *agree* was for indicator number 2.8 dealing with the application of nutrition expertise to the evaluation and selection of products and procedures (mean 98.3%; *N*=56). The lowest response rate reported for *strongly agree* with an indicator was for indicator 2.3 dealing with the promotion of research through alliances and collaboration with dietetics and other professionals and organisations, which was the same indicator for which the lowest response rate for the summated frequency of *strongly agree* and *agree* was obtained. Dietitians generally did not *strongly agree* with indicators requiring their participation in research activities (indicators 2.3, 2.5 and 2.6).

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Participation in research is important for dietetic practice as it strengthens the credibility as well as the knowledge base of the profession.[12] Research is also necessary for formulating evidence-based practice guidelines and is important in setting public policy related to nutrition, health and food issues. Despite the increased emphasis on professional development and training in research by dietetic students, few USA dietitians are participating in outcomes research activities.[13] It appears that dietitians in Gauteng, Mpumalanga and the SANDF were also not willing to participate in research activities. If dietitians want to be leaders in nutrition, and not only followers, it will be necessary for them to become involved in research themselves.[14]

Indicators for Standard 3: Communication and application of knowledge. Indicators considered appropriate by the aforementioned core group of dietitians for Standard 3, dealing with communication and the application of knowledge, are presented in Table V. Sixteen indicators were identified.

Response rates of ≥70% for *strongly agree* were reported by dietitians for 2 indicators, viz. 3.5 and 3.7, while ≤50% dietitians reported that they *strongly agreed* with 3 indicators, viz. 3.4, 3.9 and 3.15 (Table V). The response rates for the sum of *strongly agree* and *agree* were ≥70% (mean 87.7 - 100%) for all 16 indicators. Dietitians indicated 100% agreement with the summated frequency of *strongly agree* and *agree* of 6 indicators, viz. 3.1, 3.2, 3.3, 3.5, 3.8 and 3.10.

Few dietitians in the study group working in SA hospitals were involved with the provision of nutritional care services to groups of people in the community setting (i.e. outside the hospital environment) and this might have influenced some dietitians' opinion as to the appropriateness of indicators related to community involvement by hospital dietitians. This view might have influenced some dietitians regarding indicator 3.15, dealing with the development of pertinent nutrition-related programmes for the community, for which ≤50% dietitians reported that they *strongly agree* (mean 43.9%; *N*=25). Dietitians also reported the lowest agreement for the summated frequency of *strongly agree* and *agree* for this indicator (mean 87.7%; *N*=50).

Dietetics professionals are the leading sources of food and nutrition information, and are obliged to provide the public with the most up-to-date and accurate information (Standard 3).[15] Communication is the cornerstone of leadership that fosters a common bond of interdependence and mutual trust.[16] Providing nutritional education implies that dietitians have knowledge of their area of work and the ability to integrate their knowledge, that they will communicate sound scientific principles, and that the education they give is based on patients'/clients' needs. The effectiveness of both nutrition services and personnel is often judged by the quality of verbal and written documentation.[17] Documentation also establishes a record of the nutrition care process and may occur throughout the stages of providing nutritional care, which is important for linking assessment findings with goals and intervention strategies.[17] It is also used to determine quality of care and to measure and evaluate nutritional care and its outcomes. If dietitians do not apply and share their knowledge with patients/clients and other health professionals, quality nutritional care and effective services cannot be provided.

Indicators for Standard 4: Utilisation and management of resources. Indicators considered appropriate by the aforementioned core group of dietitians for Standard 4, dealing with utilisation and management of resources, are presented in Table VI. Nineteen indicators were identified.

No response rates of ≥70% for *strongly agree* were reported by dietitians for any of the indicators, while ≤50% dietitians reported that they *strongly agreed* with 7 indicators, viz. 4.3, 4.4, 4.7, 4.8, 4.14, 4.17 and 4.19 (Table VI). The response rates for the sum of *strongly agree* and *agree* were ≥70% for 18 of the 19 indicators. Dietitians did not report 100% agreement with the summated frequency of *strongly agree* and *agree* for any of the indicators.

Indicators identified as appropriate to Standard 4 mostly deal with the managerial aspects of clinical nutritional care. Many of the indicators are the responsibility of dietitians in charge of nutritional care services. The few dietitians in the study group who had the responsibility of managing the clinical nutrition component of the nutritional care service might have influenced results. This could have been a reason why response rates for *strongly agree* varied between 50% and 60% for 11 of the indicators, and ≤50% for 7 indicators. The highest response rate for *strongly agree* was for indicator 4.6 dealing with developing menus for patient food service, including normal and therapeutic diets (mean 64.9%; *N*=37). In SA hospitals, food service managers have the responsibility of developing the menus for normal diets at most hospitals. Dietitians, due to their training and knowledge of medical nutrition therapy and appropriate diet regimens, irrespective of their rank and position in the hierarchical structure, have the responsibility of developing menus for therapeutic diets, which could have resulted in the higher response rate reported for this indicator. The lowest response that was reported for *strongly agree* was for indicator number 4.17 dealing with identifying resources of revenue and developing revenue-generating programmes. This indicator also received a ≤70% response rate for the summated frequency of *strongly agree* and *agree* (mean 66.7%; *N*=38). This activity is, together with assessing financial needs and determining budgetary needs as well as managing the budget for the area

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Table V. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for Standard 3: Communication and the application of knowledge

Indicators for Standard 3[4]	Appropriateness of indicators* *N* (%) Strongly agree	Agree	Sum of strongly agree and agree	Mode†
Standard 3: Communication and the application of knowledge	**61.51**	**35.53**	**97.15**	
3.1 Has knowledge related to specific area(s) of professional service	39 (68.42)	18 (31.58)	**57 (100.00)**	3
3.2 Communicates sound scientific principles, research, and theory with professionals, personnel, students, or clients/patients	38 (66.67)	18 (31.58)	**57 (100.00)**	3
3.3 Integrates knowledge of food and human nutrition with knowledge of health, social sciences, communication, and management theory	35 (61.40)	22 (38.60)	**57 (100.00)**	3
3.4 Documents interpretation of relevant information and results of the communication	28 (49.12)	26 (45.61)	**54 (94.74)**	3
3.5 Shares knowledge and information with patients/clients	**41 (71.93)**	16 (28.07)	**57 (100.00)**	3
3.6 Helps students and patients/clients apply knowledge and skills	38 (66.67)	18 (31.58)	**56 (98.25)**	3
3.7 Seeks out information to provide effective services	**42 (73.68)**	14 (24.56)	**56 (98.25)**	3
3.8 Co-ordinates patient/client care with the health care team	38 (66.67)	19 (33.33)	**57 (100.00)**	3
3.9 Co-ordinates nutrition-related organisational committees	23 (40.35)	29 (50.88)	**52 (91.23)**	2
3.10 Assesses client's/patient's nutrition-related educational needs, develops and implements nutrition education plan, and monitors and adjusts education plan as appropriate	36 (63.16)	21 (36.84)	**57 (100.00)**	3
3.11 Documents nutrition-related client/patient care data in the nutritional care record and/or patient medical record	39 (68.42)	17 (29.82)	**56 (98.25)**	3
3.12 Maintains information exchange with health care professionals and hospital staff	39 (68.42)	16 (28.07)	**55 (96.49)**	3
3.13 Uses skills and knowledge of human behaviour in maintaining positive interpersonal relations and team interactions	34 (59.65)	21 (36.84)	**55 (96.49)**	3
3.14 Provides nutrition expertise and/or education to staff in clinical dietetics, management, food service, the health care team, and other disciplines	34 (59.65)	22 (38.60)	**56 (98.25)**	3
3.15 Develops pertinent nutrition-related programmes for the community	25 (43.86)	25 (43.86)	**50 (87.72)**	2
3.16 Provides written and oral nutrition education presentations for hospital and community	32 (56.14)	22 (38.60)	**54 (94.74)**	3

*Frequencies ≥70 indicated in **bold.**
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

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Table VI. Frequency (%) of dietitians' opinion (N=57) on the appropriateness of indicators for Standard 4: Utilisation and management of resources

	Appropriateness of indicators* N (%)			
Indicators for Standard 4[4]	**Strongly agree**	**Agree**	**Sum of strongly agree and agree**	**Mode†**
Standard 4: Utilisation and management of resources	**50.14**	**39.43**	**89.54**	
4.1 Uses a systematic approach to maintain and manage professional resources successfully	29 (50.88)	25 (43.86)	**54 (94.74)**	3
4.2 Uses measurable resources such as personnel, money, equipment, guidelines, protocols, reference materials, and time in the provision of dietetic services	33 (57.89)	21 (36.84)	**54 (94.74)**	3
4.3 Analyses safety, effectiveness, and cost in planning and delivering services	27 (47.37)	25 (43.86)	**52 (92.23)**	3
4.4 Justifies use of resources by documenting adherence to plan, continuous quality improvement, and desired outcomes	27 (47.37)	24 (42.11)	**51 (89.47)**	3
4.5 Educates and helps patients/clients and others to identify and secure appropriate and available resources and services	29 (50.88)	22 (38.60)	**51 (89.47)**	3
4.6 Develops menus for patient food service, including normal and therapeutic menus	37 (64.91)	17 (29.82)	**52 (92.23)**	3
4.7 Directs daily and long-term operations for area of responsibility	28 (49.12)	25 (43.86)	**53 (92.98)**	3
4.8 Identifies employee market and selects employees to meet staffing and scheduling needs	23 (40.35)	23 (40.35)	**46 (80.70)**	2
4.9 Informs staff of pertinent information regarding organisation, department, and area of responsibility	32 (56.14)	20 (35.09)	**52 (92.23)**	3
4.10 Schedules employees in areas of responsibility	32 (56.14)	17 (29.82)	**49 (85.96)**	3
4.11 Supervises daily activities of employees	29 (50.88)	20 (35.09)	**49 (85.96)**	3
4.12 Maintains employee relations in compliance with labour regulations and employment equity act	31 (54.39)	20 (35.09)	**51 (89.47)**	3
4.13 Manages subsystems of the food service operation for normal and therapeutic diets	30 (52.63)	23 (40.35)	**53 (92.98)**	3
4.14 Conveys operational management information regarding area of responsibility to superiors	26 (45.61)	27 (47.37)	**53 (92.98)**	2
4.15 Develops and manages various budgets for area of responsibility	29 (50.88)	24 (42.11)	**53 (92.98)**	3
4.16 Controls cost for area of responsibility by effective and efficient management of resources	31 (54.39)	24 (42.11)	**55 (96.49)**	3
4.17 Identifies resources of revenue and develops revenue-generating programmes	17 (29.82)	21 (36.84)	38 (66.67)	2
4.18 Prepares required reports and documentation from records and statistics maintained for area of responsibility	32 (56.14)	20 (35.09)	**52 (91.23)**	3
4.19 Manages learning experiences for dietetic students	21 (36.84)	29 (50.88)	**50 (87.72)**	2

*Frequencies ≥70 indicated in **bold.**
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

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of responsibility, considered to encompass one of the major elements of financial responsibilities for managers.[8] The implications of lack of responsibility for this duty by dietitians may be that the skills and knowledge required for these duties were lacking or that the management of financial resources in clinical nutrition is not perceived as important. Both these implications could have serious consequences for dietitians as cost-effectiveness continues to determine how services in the hospital are prioritised.[8]

Indicators for Standard 5: Quality in practice. Indicators considered appropriate for Standard 5, dealing with quality in practice, are presented in Table VII. Twenty-two indicators were identified.

Response rates of ≥70% for *strongly agree* were reported for none of the indicators (Table VII). The highest response rate reported for *strongly agree* was for indicator number 5.9 dealing with developing and maintaining nutrition-related standards of care for patients/clients (mean 63.2%; *N*=36). Response rates of ≤50% were reported by dietitians for *strongly agree* with 8 indicators (5.2, 5.3, 5.4, 5.5, 5.12, 5.20, 5.21 and 5.22). The response rates for the summation of *strongly agree* and *agree* were ≥70% (mean 86.0 - 98.3%) for all 22 indicators, although there was not 100% agreement with any one of the indicators. The highest response rate for the summated frequencies of *strongly agree* and *agree* was for indicator number 5.9 which deals with developing and maintaining nutrition-related standards of care for patients/clients (mean 98.25%; *N*=56).

The lowest response rates reported for *strongly agree* with indicators were those for indicators 5.20 and 5.21 dealing with managing and evaluating quality assurance data for the area of responsibility (mean 40.4%; *N*=23). The lowest response rate reported for the summated frequencies of *strongly agree* and *agree* was reported for indicator number 5.21 as well (mean 86.0%; *N*=49).

Indicators 5.2 to 5.5 deal with evaluating the performance of the nutritional care system. It could be that dietitians perceived these indicators as reflecting the performance of individual dietitians instead of the nutritional care service. It has been reported that individuals working in the health care environment are reluctant in evaluating performance.[3]

A response rate of ≤50% for *strongly agree* was reported for indicator 5.12 dealing with managing staff development for professionals and dietetic support personnel in area of responsibility (mean 45.6%; *N*=26). When reporting on the risk involved with activities, a mean of 54.76% dietitians indicated risk for providing job descriptions, and a mean of 67.9% dietitians for training of staff.[10] Clinical dietetic managers must apply effectively the principles of personnel management, of which staff development is one of the aspects requiring their attention. Staff development represents an investment in human potential and should be a responsibility of the dietitians in charge of the nutritional care service.[7] It might be that dietitians managing the nutritional care service were insensible of the importance of staff development in the improvement of cost-effectiveness and the quality of patient care. It might also be that current management practices applied in the government institutions involved do not empower dietitians in charge of nutritional care services to fulfil this responsibility effectively.

Indicators for Standard 6: Continued competence and professional accountability. Indicators considered appropriate for Standard 6, dealing with continued competence and professional accountability, are presented in Table VIII. Six indicators were identified.

Response rates of ≥70% for *strongly agree* were reported for none of the indicators. The highest response rate reported for *strongly agree* was for indicator 6.6 dealing with maintaining credentials including dietetic registration (mean 66.7%)(Table VIII). The response rate for the summated frequency of *strongly agree* and *agree* was ≥70% (mean 94.7 - 100%) for all 6 indicators, and there was 100% agreement with indicator 6.4 dealing with documentation of professional development activities. Dietitians need a high level of knowledge and skill to apply the correct medical nutrition treatment therapies to patients. Dietitians, being the primary providers of nutritional care in hospitals, should therefore keep up to date with the latest developments in nutrition and medical nutrition therapy through continued professional development for maintenance of competence and professional growth.[7]

Appropriateness of indicators. The mean frequencies of dietitians' opinion on the appropriateness of indicators for the 6 standards of professional practice for dietetics professionals are summarised in Table IX. The summated response rate for *strongly agree* and *agree* for all 6 standards was at least 89.5% (varying between 89.5% and 97.2%).

Conclusion

Therapeutic/clinical dietitians working at the Gauteng/Mpumalanga provincial hospitals and the military hospitals considered the indicators appropriate for use in the hospitals where they were employed. The reported findings cannot be generalised to the whole of SA, but the indicators could be considered verified for use in these hospitals. The indicators were developed to reflect the performance of dietitians in their professional role, which includes activities related to quality nutritional care based on the nutritional care process and model.[10,17] Aspects related to both the structure and process of care are obviated in the

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Table VII. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for Standard 5: Quality in practice

Indicators for Standard 5[4]	Appropriateness of indicators* *N* (%)			
	Strongly agree	Agree	Sum of strongly agree and agree	Mode†
Standard 5: Quality in practice	**50.96**	**40.59**	**91.57**	
5.1 Identifies performance improvement criteria to monitor effectiveness and efficiency of services	29 (50.88)	24 (42.11)	**53 (92.98)**	3
5.2 Identifies expected outcomes	27 (47.37)	28 (49.12)	**55 (96.94)**	2
5.3 Documents outcomes of services provided	26 (45.61)	28 (49.12)	**54 (94.74)**	2
5.4 Compares actual performance to expected outcomes	26 (45.61)	25 (43.86)	**51 (89.47)**	3
5.5 Documents action taken when discrepancies exist between actual performance and expected outcomes	28 (49.12)	22 (38.60)	**50 (87.72)**	3
5.6 Continuously evaluates and refines services based on measured outcomes	29 (50.88)	24 (42.11)	**53 (92.98)**	3
5.7 Ensures that all policies, procedures, and standards are in compliance with regulatory bodies and governmental standards	29 (50.88)	22 (38.60)	**51 (89.47)**	3
5.8 Develops job descriptions, work schedules, and standards of performance for professional staff and dietetics support personnel	34 (59.65)	18 (31.58)	**52 (91.23)**	3
5.9 Develops and maintains nutrition-related standards of care for patients/clients	36 (63.16)	20 (35.09)	**56 (98.25)**	3
5.10. Implements and enforces policies and procedures for area of responsibility	30 (52.63)	24 (42.11)	**54 (94.74)**	3
5.11 Maintains updated policies, procedures and standards for area of responsibility	29 (50.88)	24 (42.11)	**53 (92.98)**	3
5.12 Manages staff development for professionals and dietetic support personnel in area of responsibility	26 (45.61)	25 (43.86)	**51 (89.47)**	3
5.13 Evaluates and documents personnel performance according to established standards	30 (52.63)	21 (36.84)	**51 (89.47)**	3
5.14 Identifies non-compliant employee behaviour and takes appropriate action	32 (56.14)	18 (31.58)	**50 (87.72)**	3
5.15 Identifies, documents, and recommends employees for promotions and transfer	31 (54.39)	20 (35.09)	**51 (89.47)**	3
5.16 Maintains personnel records for employees in area of responsibility	30 (52.63)	24 (42.11)	**54 (94.74)**	3
5.17 Manages in-service education for area of responsibility	31 (54.39)	20 (35.09)	**51 (89.47)**	3
5.18 Develops and/or maintains organisationally approved diet manuals/protocols/standards of care	32 (56.14)	22 (38.60)	**54 (94.74)**	3
5.19 Assesses patient menus for nutritional adequacy, compliance with diet manual and regulations	34 (59.65)	20 (35.09)	**54 (94.74)**	3
5.20 Manages quality assurance data for area of responsibility	23 (40.35)	27 (47.37)	**50 (87.72)**	2
5.21 Evaluates quality assurance data for area of responsibility	23 (40.35)	26 (45.61)	**49 (85.96)**	2
5.22 Reports results of quality assurance activities in area of responsibility	24 (42.11)	27 (47.37)	**51 (89.47)**	2

*Frequencies ≥70 indicated in **bold.**
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

Table VIII. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for Standard 6: Continued competence and professional accountability

Indicators for Standard 6[4]	Appropriateness of indicators* N (%) Strongly agree	Agree	Sum of strongly agree and agree	Mode†
Standard 6: Continued competence and professional accountability	**57.60**	**38.89**	**96.49**	
6.1 Conducts self-assessment at regular intervals to identify professional strengths and weaknesses	33 (57.89)	21 (36.84)	**54 (94.74)**	3
6.2 Identifies needs for professional development and mentors others	31 (54.39)	24 (42.11)	**55 (96.49)**	3
6.3 Develops and implements a plan for professional growth	32 (56.14)	22 (38.60)	**54 (94.74)**	3
6.4 Documents professional development activities	31 (54.39)	26 (45.61)	**57 (100.00)**	3
6.5 Supports the application of research findings to professional practice	32 (56.14)	23 (40.35)	**55 (96.49)**	3
6.6 Maintains credentials including dietetic registration	38 (66.67)	17 (29.82)	**55 (96.49)**	3

*Frequencies (70 indicated in **bold.**
†Ratings: 0 = cannot judge, 1= disagree, 2 = agree, 3 = strongly agree.

Table IX. Frequency (%) of dietitians' opinion (*N*=57) on the appropriateness of indicators for standards of professional practice for dietetics professionals

Standards of professional practice for dietetics professionals	Mean frequency for appropriateness of indicators related to standards*† Strongly agree	Agree	Sum of strongly agree and agree
Standard 1: Provision of services	**62.16**	34.08	**96.31**
Standard 2: Application of research	49.34	42.76	**92.11**
Standard 3: Communication and the application of knowledge	**61.51**	35.53	**97.15**
Standard 4: Utilisation and management of resources	50.14	39.43	**89.54**
Standard 5: Quality in practice	50.96	40.59	**91.57**
Standard 6: Continued competence and professional accountability	57.60	38.89	**96.49**

*Frequencies ≥70% indicated in **bold.**
†Mean frequency for appropriateness based on indicators related to standards.

indicators, which include dietitians' organisational responsibilities, e.g. the administration of the nutritional care service as part of the health care system, collaboration with other health professionals in the hospital, and the utilisation of resources. Dietitians, as professionals, also have professional responsibilities to fulfil in their workplace, viz. participation in education (dietitians and dietetic students), ethics, collaboration with other health care professionals on a professional level, and research. All these aspects are addressed by the indicators.

Standards of professional practice for dietetics professionals together with the indicators provide data on the professional performance of dietitians. Other quality measures should be developed to further assist dietitians in providing quality practice, e.g. standards of care for disease conditions based on the nutritional care process, protocols and policy documents.[3,4]

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