Who is the nutrition workforce in the Western Cape?

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Abstract

Objectives: The aim of the present study was to determine the current nutrition staffing profile of the Integrated Nutrition Programme (INP) in Department of Health in the Western Cape, and establish whether it is adequate to meet the objectives of the INP.

Method: Self-administered questionnaires compiled in English were used as the main data collection instrument for nutrition staff in districts and at hospitals (n = 647). Eight individual questionnaires, one per staff category, were developed and utilised in the study.

Results: Foodservice workers were the largest group of nutrition personnel (n = 509; 79%), followed by dietitians (n = 64; 10%), managers (n = 31; 5%), auxiliary workers (n = 28; 4%), and administrative workers (n = 15; 2%). Sixty-two per cent of the nutrition workforce was located in urban areas and 38% in rural districts. Hospital and district dietitians experienced common problems, as well as specific differences. Regarding problems, both categories referred to limited resources, inadequate number of available posts, and lack of acknowledgement and support from administrative and supply chain management. District dietitians were also hampered by lack of space for consultations, poor referrals from doctors, insufficient posts for nutrition advisers, and difficulty in communicating with Xhosa-speaking patients. Hospital dietitians were hampered by insufficient interaction with district dietitians and lack of dietitians for specialised units. They also mentioned that poor salaries were affecting morale.

Conclusion: Recommendations such as additional posts for dietitians, improved conditions of service and salaries, increased advocacy for nutrition, and a number of human resources recommendations were made, and should be considered if the INP objectives are to be met.

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Introduction

The crisis in terms of adequate human health resources has been acknowledged throughout the world, in both developed and developing countries. In the 2006 World Health Report, the World Health Organization stated: "At the heart of each and every system, the workforce is central to advancing health".[1] In the context of the Millennium Development Goals (MDGs), human resources is seen to represent the most critical constraint in achieving targets. It is imperative for health planners and decision makers to identify which human resources are required to meet these international targets, and effectively deliver health services to the population.[2]

Presently, nutrition is a national and provincial priority, or is at least viewed as such, due to its beneficial impact on health and the burden of disease. Nutrition impacts positively on preventable diseases, as well as treatment of the high-priority disease groups, namely tuberculosis and HIV/AIDS. The MDGs, as well as the Growth and Development Plan from which provinces have developed their strategic and operational plans, have clear indicators that relate directly to nutrition diseases. In 2003, a study conducted by the University of the Western Cape investigated the challenges relating to the implementation of the policy of the Integrated Nutrition Programme (INP) in the Cape Metropole area. One of the key recommendations from this study was the need for an appropriate human resource plan for the implementation of the INP (Figure 1).[3,4]

A number of changes have taken place within health services since 2003, including the promulgation of the new National Health Act 61 of 2003, restructuring processes in the Western Cape province, and the development of a comprehensive service plan (CSP) for 2010. The CSP has been developed as a plan to implement the Western Cape's Healthcare 2010 strategy, and was approved in May 2007.[5] In order to plan appropriately for nutrition services, the INP in the Western Cape needs to review the status of its human resources as a first step towards developing a human resource plan to meet nutrition service needs, taking into account the provincial context, service platforms and approved CSP in the public health sector.

The core staff providing nutrition services and implementing the INP are dietitians, foodservice managers, foodservice workers and nutrition advisers and auxiliary services workers.[6] Dietitians in the Department of Health Services are placed in districts and sub-districts, and form part of primary healthcare outreach teams that are responsible for facility-based nutrition services, as well

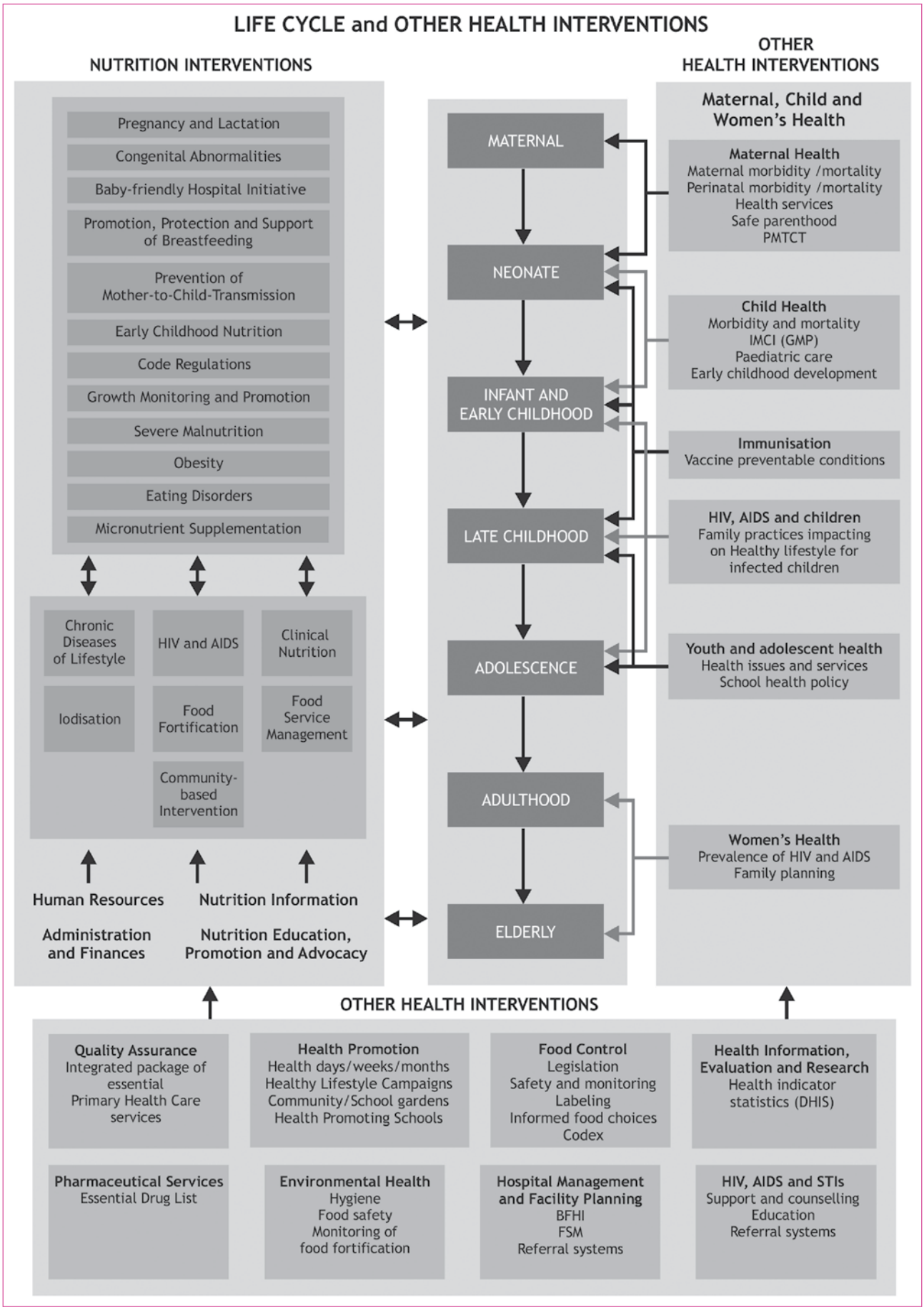

Figure 1: A framework for the Integrated Nutrition Programme[4]

as community-based services. Hospital dietitians are primarily responsible for the clinical nutrition services of in- and outpatients, and some are placed in foodservices. Nutrition advisers are placed at clinics and community health centres, and provide support to district dietitians, who are responsible for preventative and promotional nutrition interventions within the health facilities and the surrounding community. Foodservice managers and foodservice workers (foodservice aids and foodservice supervisors) provide food to clients in hospitals. There are currently no nutritionists in the Western Cape.

At present, there is no human resources strategic document for the nutrition workforce in the public health sector. The aim of this study was to provide evidence-based information which is of the utmost importance to policy formulation and to set forth an informed process to establish such a document, and ultimately strengthen the INP in terms of all the Western Cape's resources. The specific objective of the present study was to determine the current nutrition staffing profile of the INP in the Western Cape Department of Health, and establish whether it is adequate to reach the objectives of the INP.

Method

The study followed an observational and descriptive design, and aimed to describe the current staffing situation (staffing profile) in the Western Cape. The study was restricted to the Western Cape province, which is located at the south-western tip of South Africa. The total area of the Western Cape is 129 370 km^2, which equals 10.6% of the country. The province has six districts, namely the City of Cape Town, West Coast, Boland, Overberg, Eden and Central Karoo. The study population included all nutrition personnel (of all staff categories) employed by the Western Cape Department of Health. Organisationally, healthcare services in the Western Cape are divided into two main divisions (see Figure 2): tertiary, regional and emergency medical services; and district health services and programmes.

Tertiary, regional and emergency medical services include services provided by tertiary, secondary and specialised hospitals. District and sub-district health services (primary healthcare services) include services provided by clinics, community health centres, district hospitals and outreach services into the community. Nutrition services (including clinical dietetic service, foodservice management and preventative and promotional services) are provided in primary, secondary and tertiary care settings. Nutrition staff members are placed in these levels of care in respective districts and hospitals to deliver these services to clients.

Nutrition staff categories are classified in the *Human Resource Framework for Nutrition,* developed by the national Department of Health. The following categories of nutrition workers are listed there as the core personnel who are expected to implement the INP:[4]

- Dietitians: hospital, community and community service dietitians;
- Nutritionists;
- Mid-level workers (assistant nutritionists: nutrition advisers, community liaison officers and specialised auxiliary service workers);
- Foodservice managers;
- Foodservice supervisors;
- Foodservice aids;
- Nutrition managers and coordinators.

Staff members categorised as nutrition personnel in all relevant categories were included in the study, i.e. dietitians, nutritionists, nutrition advisers, community liaison officers, auxiliary service workers, foodservice managers, foodservice supervisors, foodservice aids and nutrition managers and coordinators working for the Western Cape Department of Health. All nutrition personnel based in the Western Cape were included in this census. All health districts, sub-districts and hospitals in the province were included in the sample as per the CSP,[7] including health districts (n = 6), sub-districts (n = 32), district hospitals (n = 33), secondary hospitals (n = 6), tertiary hospitals (n = 3), and specialised, psychiatric and tuberculosis hospitals (n = 12). These healthcare facilities reflect the different levels of care, i.e. primary (Level 1), secondary (Level 2) and tertiary (Level 3). Nutrition personnel working in the private sector, industries and academic institutions were excluded from the survey.

In order to have representation of all levels of care in the province, nutrition services in the different settings were clustered in four

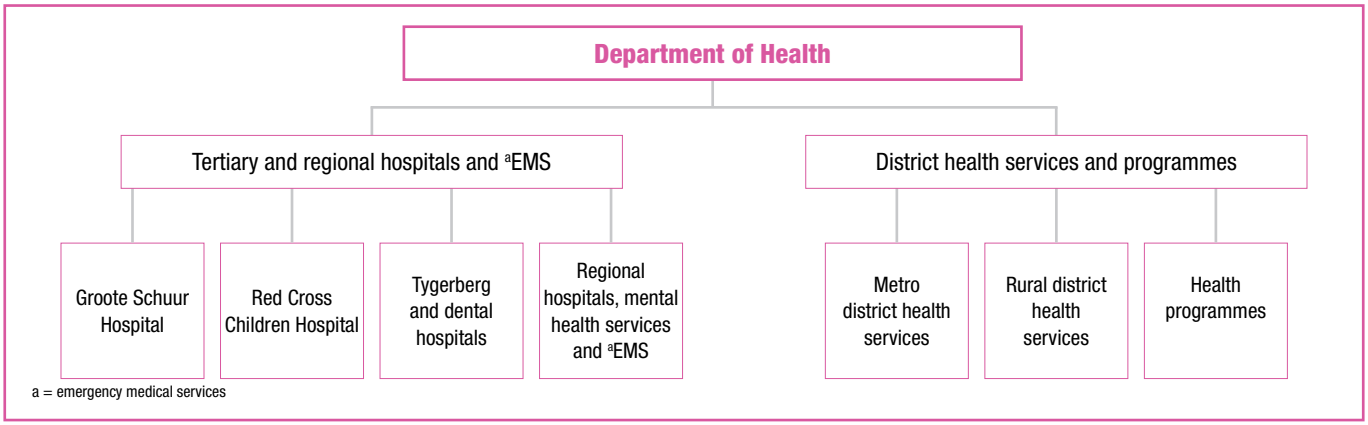

Figure 2: Segment organisational structure of the Western Cape Department of Health

categories, namely:

- District health services and programmes;
- Secondary hospital services;
- Tertiary hospital services;
- Specialised, psychiatric and tuberculosis hospital services.

A targeted sampling approach was applied by developing master lists of the respective nutrition, dietetic, and foodservice units and their personnel within the geographical districts and hospitals at the different levels of care.

Self-administered questionnaires (validated for face and content) in English were used as the main data collection instrument for districts and hospitals. Standardised questionnaires were developed. These were based on existing provincial human resource frameworks, skills audit questionnaires, code of remuneration guidelines[8,9] and national nutrition skills audit questionnaires.[10-14] Eight individual questionnaires, one per staff category (i.e. INP managers, district dietitians, hospital dietetic unit managers, hospital dietitians, foodservice managers, foodservice workers, auxiliary workers and administrative workers) were developed. These were divided into sections to capture the following information: demographics, formal qualifications and experience, generic competency and skills, specific competencies and skills, time spent on the INP service, infrastructure, challenges and proposed solutions.

For the purposes of the data analysis and presentation, the data from completed questionnaires were analysed and presented by the personnel categories first, and then by individual categories of the personnel profiles.

The five personnel categories were:

- Managers, including dietetic unit heads, INP and foodservice managers;
- Dietitians, including community service, district- and sub-district-based dietitians, and hospital-based dietitians;
- Auxiliary services officers, including nutrition advisers classified as auxiliary services officers and health promoters;
- Foodservice workers, including foodservice supervisors and foodservice aids;
- Administrative officers, including clerks and financial officers working within nutrition components.

Quantitative data collection methods were primarily used. These included coding sheets per facility, questionnaires for the individual staff category, and the official personnel database (Persal®) of the Department of Health. Questionnaires were constructed according to the variability of services, settings and job outputs. Data were entered twice, then cleaned and verified as appropriate by checking each individual data entry against the questionnaire. Data were grouped in the respective categories, districts and sub-districts in order to ensure confidentiality. Data elements that were similar for all groups were combined. The collected data from this study were compared with the available Persal® database. Analyses were done by using data analysis software Statistica 8 (Statsoft Inc 2008, www.statsoft.com). Descriptive statistical methods were utilised. All analyses were carried out with a significance level of 5%. Cost comparisons based on salary levels were made for the actual situation and CSP. Areas in which human resource management could be improved were identified through recommendations. The study was approved by the Human Research Committee, Faculty of Health Sciences, Stellenbosch University (N07/10/219), and the research committee within the Department of Health (reference 19/18/RP93/2007, 17 January 2008).

Results

The human resource study data were collected between April-June 2008 throughout the Western Cape province. A maximum of 756 personnel in the respective personnel categories were available for inclusion in the sample, of which 647 responded (see Table I). A response rate of 86% was achieved. The non-responses were due to personnel being on leave (n = 27), personnel refusing to participate (n = 4), personnel not providing a reason (n = 64), contract personnel (n = 8) and vacant posts (n = 6).

The foodservice workers were the largest group of personnel (79%, n = 509), followed by dietitians (10%, n = 64), managers (5%, n = 31), auxiliary workers (4%, n = 28) and administrative workers (2%, n = 15). Sixty-two per cent (n = 404) of the nutrition workforce in the sample were located in the urban district and 38% (n = 243) in rural districts (see Figure 3).

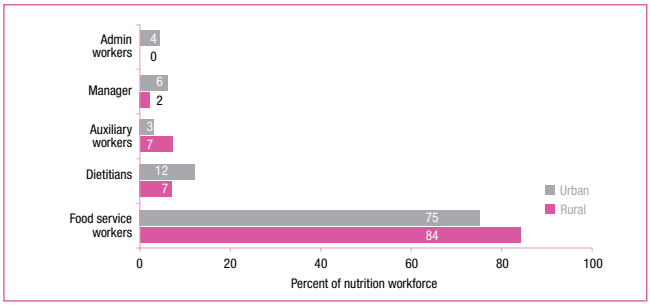

Figure 3: Percentage and categories of the nutrition workforce in the Western Cape

Table I: Distribution of nutrition personnel categories in urban and rural districts in the Western Cape

	Personnel category (n (%))					
District	**Administration workers**	**Managers**	**Auxiliary services officers**	**Dietitians**	**Foodservice workers**	**[a]Total**
Urban	15 (2)	25 (6)	11 (3)	47 (12)	306 (75)	404 (100)
Rural	0 (0)	6 (2)	17 (7)	17 (7)	203 (84)	243 (100)
Total	**15 (2)**	**31 (5)**	**28 (4)**	**64 (10)**	**509 (79)**	**647 (100)**

a = chi-square test for urban and rural differences; p-value = 0.0001)

The majority of the nutrition workforce was female, and in the case of dietitians, the majority were younger than 40 years (see Table II). Of the district dietitians, 47% were in the Metropole region, 19% in the Southern Cape and the Karoo, 16% in the West Coast and the winelands, and 19% in the Boland and the Overberg rural regions. Of these, 62% were younger than 30 years. Of the hospital dietitians, all were located in the Metropole region, and 47% were younger than 40 years.

All dietitians and INP managers had a minimum NQF level 8 qualification (at the time of the study the qualification was an NQF 7; it has subsequently been changed to NQF 8), and were registered with the Health Professions Council of South Africa (HPCSA). Only a few dietitians had attended the INP induction course and some of the other critical INP courses, e.g. micronutrient control and growth monitoring.

Table II: Demographics of the nutrition workforce in the Western Cape

Demographics	Qualifications and experience
Integrated Nutrition Programme managers	
N = 5 (100% response rate). All dietitians: 2 at the provincial office and 3 at the regional offices. Sixty per cent (n = 3) were younger than 40 years; 60% white, 40% other ethnicity.	All had a qualification of [a]NQF level 7 (now 8). All were registered with the [b]HPCSA. Experience of 1-15 years; 80% had not attended the [c]INP induction course. The majority had attended all other prescribed INP courses; 60% had not attended courses in the past year.
District dietitians	
N = 32 out of 35, all female (91% response). Forty-seven per cent in the Metropole region, 19% in Southern Cape and Karoo, 16% in West Coast and the winelands, 19% in Boland and the Overberg. Sixty-two per cent were younger than 30 years; 59% white, 6% Asian, 34% coloured.	All had a qualification of [a]NQF level 7 (now 8). All were registered with the HPCSA. Fifty-three per cent had less than 5 years' experience, and 47% were in their positions for less than 1 year. The majority (56%) had completed an INP induction course; the majority had not attended s course on nutrition surveillance and baby-friendly initiative.
Dietetic unit managers	
N = 2 out of 3, all female. Both older than 40 years and placed in tertiary hospitals. One white; 1 coloured.	Both had a qualification of [a]NQF level 7 (now 8). Both were registered with the HPCSA. Both had more than 15 years' experience, and attended courses in nutrition, [d]HIV, Sinjani training, supervision, mentoring and office management.
Hospital dietitians	
N = 32 out of 38 respondents; 1 male only (84% response). All in Metropole region. Forty-seven per cent younger than 40 years, 59% white, 16% Asian, 25% coloured.	All had a qualification of [a]NQF level 7 (now 8). All registered with the HPCSA. Thirty-eight per cent had less than 5-9 years' experience, 9% had more than 15 years' experience, and 35% were in their positions for less than 1 year. Ninety-four per cent had not attended the INP induction course, 87% had not completed training in micronutrient control and growth monitoring and promotion.
Foodservice managers	
N = 24 out of 46; 21 female and 3 male (52% response). Eighty-three per cent placed in Metropole, 4% in Southern Cape and Karoo, 4% in West Coast and the winelands, and 2% in Boland and Overberg; 54% were younger than 40 years.	The majority (63%) were at NQF level 5 (diplomas and certificates); 87% were not registered with the HPCSA. Twenty-one of the managers had less than 5 years' experience, and 25% had less than 1 year's experience. Ninety-six per cent of the managers had not attended the INP induction course. However, 67% had attended the foodservice policy training.
Foodservice workers (non-professional)	
N = 509 out of 578 (88% response rate); n = 385 female and 124 male. Sixty per cent in Metropole, 13% in Southern Cape and the Karoo,11% in West Coast and the winelands, 15% in Boland and the Overberg. Majority older than 35 years (83%); 6% white; 19% black; 75% coloured.	None were registered with the HPCSA; 23% had school grade 5/6, 35% had grade 9, 17% had grade 10, 20% had grade 11/12, and 5% certificates or diplomas after grade 12. Ninety-seven per cent had not attended the INP induction course, but 45% had completed the foodservice policy training. More than half (53%) had not attended courses in the past year.
Auxiliary workers	
N = 28 out of 36 (78% response); 1 male only; 82% older than 40 years. Thirty-nine per cent in Metropole, 61% in Southern Cape and the Karoo; 7% white, 14% black, 78% coloured.	None were professionally registered with the HPCSA; 28% had grade 8, 11% grade 11; 50% grade 12, 11% had diplomas or certificates. Fifty-four per cent had attended the INP induction course, and 61% had completed the prescribed 2-year nutrition adviser training, but 64% had not attended courses in the past year.
Administrative workers	
N = 15 (12 female, 3 male) 100% response; 60% younger than 40 years. Thirteen per cent in the provincial office, 87% in the Metropole; 15% white, 20% black, 73% coloured.	None were professionally registered with the HPCSA; 13% had grade 10; 60% grade 12, and 13% had higher degrees or diplomas. The majority (> 80%) had not completed the prescribed training for administrative workers.

a = At the time of the study, the qualification was an NQF 7. It has subsequently been changed to an NQF 8; b = Health Professions Council of South Africa; c = Integrated Nutrition Programme; d = human immunodeficiency virus

The majority of foodservice managers had an NQF level 5 qualification. They were not registered with the HPCSA, and many had less than five years' working experience. A large number of these foodservice managers had not attended the INP induction course (94%), although 67% had attended the foodservice policy training. Foodservice workers formed the largest component of the workforce. None were registered with the HPCSA, since to date, there is no category within which they can register. Only 20% had a grade 11 or 12 certificate. The majority had not attended an INP course or the foodservice policy course.

Table III indicates the members of the nutrition workforce who rated themselves as being highly or sufficiently skilled in certain competencies. The majority of foodservice managers rated themselves as skilled, but least so in budget and financial management. INP managers rated themselves lowest on finances and dietetic quality control. Hospital dietitians rated themselves as least skilled on total parenteral nutrition and diversity management, while district dietitians also rated themselves least on diversity management.

Diversity management scored lowest in terms of sufficiently skilled competencies for foodservice workers, auxiliary workers and administrative workers (see Table IV). Foodservice workers also rated themselves as being less skilled in conflict resolution and ordering stock internally. Administrative workers rated themselves lowest on technical proficiency in administration.

Table IV: High or sufficient level of own skills as rated by non-professional nutrition workforce

	Foodservice workers	Auxiliary workers	Administrative workers
	n = 488 (%)	n = 28 (%)	n = 15 (%)
Customer focus and responsiveness	214 (49)	21 (84)	12 (80)
Diversity management	168 (40)	16 (69)	4 (27)
Conflict resolution	236 (54)	20 (74)	11 (73)
Self-management	301 (66)	22 (88)	13 (87)
Understanding the department's mandate	242 (53)	21 (81)	9 (60)
Knowledge on hygiene	401 (85)		
Food portion and distribution	404 (87)		
Internal ordering of stock	202 (49)		
Following a cleaning programme	622 (88)		
Nutrition assessment of communities		26 (94)	
Advisory service to institutions		19 (68)	
Nutrition education to groups		28 (100)	
Nutrition promotion		25 (89)	
Nutrition screening		27 (96)	
Technical proficiency in administration			6 (43)
Creative thinking			13 (87)
Understanding memos			14 (93)
Performing structured routine tasks			14 (94)
Basic literacy			13 (87)

Table III: High or sufficient level of own skills as rated by nutrition professionals

	Integrated Nutrition Programme managers	District dietitians	Unit dietetic managers	Hospital dietitians	Foodservice managers
	n = 5 (%)	n = 32 (%)	n = 2 (%)	n = 32 (%)	n = 24 (%)
Applied strategic thinking	5 (100)	31 (96)	2 (100)	30 (94)	24 (100)
Budget and financial management	4 (80)		2 (100)		19 (79)
Diversity management	4 (80)	23 (43)	2 (100)	20 (62)	20 (83)
Managing human resources					22 (91)
Planning and organising	5 (100)		2 (100)		23 (96)
Problem solving and decision making	5 (100)		2 (100)		23 (94)
Planning nutrition programmes for communities	5 (100)	28 (90)			
Training of all healthcare workers	4 (80)				
Guidance to junior colleagues	5 (100)		2 (100)		21 (88)
Implementation of programmes and financial control	3 (60)	23 (79)			23 (96)
Technical dietetic quality control	2 (40)				
Project management		25 (78)			
Advisory service to institutions		28 (88)			
Control and management of therapeutic nutrition		22 (69)	2 (100)	32 (100)	
Total parenteral nutrition			0 (0)	13 (43)	
Clinical nutrition knowledge			1 (50)	26 (82)	
Nutritional assessment				31 (97)	
Monitoring of patients				29 (91)	

Table V: Key challenges and solutions proposed by dietitians at district and hospital level

District dietitians	Hospital dietitians
Key challenges	**Key challenges**
Limited resources.	Limited resources.
Training courses identified, but not available.	Insufficient interaction with district (community) dietitians.
No space for consultations.	Not enough experienced dietitians in specialised units.
Poor referrals from doctors.	Poor salaries affecting morale and motivation.
High turnover of dietetic staff.	Inappropriate feeder sets on tender.
Lack of acknowledgement of nutrition and dietetics.	Lack of acknowledgement of nutrition and dietetics by staff.
Lack of support from administrative and supply chain management.	Lack of support from administrative and supply chain management.
Inadequate number of dietetics posts for the workload, leading to poor service delivery.	Inadequate number of dietetics posts for the workload, leading to poor service delivery.
Not enough posts for nutrition advisers.	Management of stock of the nutrition supplementation programme.
	Dedicated dietetic unit manager to coordinate service in the facility.
Key solutions proposed	**Key solutions proposed**
Xhosa courses.	Increased number of posts for dietitians.
Vehicles dedicated to nutrition units.	Dedicated unit heads to support dietitians.
Dedicated [a]INP managers to support dietitians.	Provision of basic resources.
Provision of basic resources.	Increased advocacy for nutrition.
Increased advocacy for nutrition.	Improved conditions of service and salaries.
Improved conditions of service and salaries.	Appointment of permanent staff.
Standardisation of orientation and induction for dietitians, including administrative procedures.	Appointment of experienced personnel in specialised units.
Allocation of foodservice managers to districts to support foodservice management.	

a = Integrated Nutrition Programme

Table VI: Percentage of time spent on the Integrated Nutrition Programme

Integrated Nutrition Programme focus areas and support systems	INP managers	District dietitians	Unit dietetic managers	Hospital dietitians	Foodservice managers	Foodservice workers	Auxiliary workers	Admin workers
Disease-specific nutrition support, treatment and counselling	0-35	10-80	10-20	0-100	0-40	0	3-40	0
Maternal nutrition	0-5	1-15	0	0-20	0	0	10-40	0
Infant and young child feeding	0-30	2-40	0-10	0-70	5-10	0	7-44	0
Youth and adolescent nutrition	0-10	0-30	0-10	0-20	0	0	3-15	0
Micronutrient malnutrition control	0-20	0-10	0-5	0-20	0	0	1-10	0
Foodservice management	0-35	0-15	0-5	0-100	[a]25-85	0	1-10	27
Community-based nutrition interventions	3 spent 0%	0-15	0	0-20	2	0	2-50	7
Nutrition education, promotion and advocacy	0-30	1-20	0-10	0-30	5-20	0	3-50	0
Support systems: human resources	2-20	0-15	15-45	0-30	10-35	0	8-20	0
Nutrition information	0-20	0-14	0-5	0-10	10	0	1-30	0
Administration and finance	5-60	0-19	20-45	0-80	10-30	0	5-10	60

[a]Fourteen spent 100% on foodservice management, and the rest divided their time between other focus areas and support systems, and spent 25-85% on foodservice management.

Hospital and district dietitians experienced common problems and also specific differences (see Table V). Dietitians from both these categories mention limited resources, inadequate number of available posts, and lack of acknowledgement and support from administrative and supply chain management. However, district dietitians were also hampered by lack of space for consultations and poor referrals from doctors. They also mentioned that there were insufficient posts for nutrition advisers. Hospital dietitians were hampered by insufficient interaction with district dietitians and lack of dietitians for specialised units. They also mentioned that poor salaries were affecting morale. Both groups recommended additional posts for dietitians, improved conditions of service and

salaries and increased advocacy for nutrition. District dietitians expressed the need to learn Xhosa in order to offer a better service to their Xhosa-speaking patients.

The percentage of time that different nutritional workers spend on the INP focus areas is presented in Table VI.

Foodservice management was mostly undertaken by foodservice managers, and to a lesser degree by INP managers and hospital dietitians. Disease-specific support was a high priority in most work categories. Nutrition education and health promotion were the highest priorities for the auxiliary workers, while all managers reported on human resources, administration and finances. It was interesting to note that community-based interventions scored highest among auxiliary workers, and lower among district dietitians.

Discussion

This study reported on a number of key issues regarding the nutrition workforce in the Western Cape province, namely the composition of staff, training and induction, available skills, and the key challenges and solutions proposed by them. The latter are essential to inform CSP of the Western Cape, and the implementation of the district health system. The key emphasis of human resource planning or strategy is to have the right staff in the right place with the skills and competencies that would be required to provide the desired outcomes.[7]

This survey has demonstrated that there are a relatively small number of dietitians (n = 81) in the Western Cape who are required to implement nutrition interventions prescribed by the INP. In terms of the population of the Western Cape (n = 5 356 900), this amounts to 66 000 people per dietitian (n = 81). When adding the auxiliary nutrition workers (n = 31), this changes to 45 785 people per nutrition worker.[15] Clearly, this situation is not reasonable in terms of providing a preventative and curative nutrition service. However, it must be recognised that due to the unavailability of nutrition workers, in some instances, nurses are the only health professionals to implement nutrition-related protocols such as growth monitoring, promotion and support, integrated management of childhood illness, nutrition counselling at antiretroviral drug sites, vitamin A supplementation, nutrition supplementation, and breastfeeding promotion and support. The demand for services in the Western Cape continues to exceed the extent to which services can be provided by the available resources. This not only includes financial resources, infrastructure, goods and services, but also human resources. The need for the latter is likely to increase due to the current burden of disease, coupled with the migration of clients from neighbouring provinces, especially the Eastern Cape, who will use the facilities and impact on the resources of the province.

Nationally, targets have been set to increase the number of dietitians and nutritionists by 2010.The CSP in the Western Cape is a sound initial effort to address staffing needs to implement nutrition programmes, and provide nutrition services across the service platform. The policy framework of the CSP is defined, but other than generalists, it is not clear what the role of the different cadres of nutrition workers will be. It can be assumed with a fair degree of certainty that the demand for nutrition services will escalate following the expansion of services at community and Level 1 care, together with the expected increased burden of disease and the contribution of nutrition support in disease prevention and treatment. However, the approaches utilised in determining the nutrition human resource needs in the CSP, i.e. needs-based, utilisation-based, population-based and workload indicators, has not been effectively tested.[2,5,16] Nonetheless, it needs to be realised that despite realistic targets for human resources in terms of dietitians required (in the CSP), posts are not yet available to accommodate these targets.

In this study, the largest proportion of the nutrition workforce was foodservice workers placed in hospitals to deliver food to clients. The CSP has determined targets for foodservice workers, but has not taken into account the type of foodservice system, which will determine the service need and workload. The increasing need, specifically in district hospitals, has been identified by the workforce as a priority in terms of the challenges faced and solutions needed in the work environment.

The management and administrative workers were found to be a small number, and administrative workers within nutrition units were only available in the Metropole. The study found that auxiliary workers were still functioning as nutrition advisers in the Metropole and the Southern Cape and the Karoo districts. The posts in the other two regions have been changed to accommodate generalists, and all nutrition adviser posts were reclassified from specialised auxiliary service workers to generalists, with no structure and career path determined. The role that mid-level workers, i.e. assistant nutritionists, play in service delivery has been recognised nationally in draft documents, but the lack of finality and standardisation of their deployment has led to variable approaches in districts, causing low staff morale and frustration in this group of nutrition workers.[17]

The home language and ethnicity of the nutrition workforce was significantly different across the province in terms of geographical distribution, as well as in personnel categories. However, 74% (n = 481) of the workforce was found to be Afrikaans-speaking. The differences found in this study have a potential impact on the quality of service and the management of diversity. The distribution of languages can also have an effect on service delivery, as the clients serviced in the province are diverse. The workforce has been found to be predominantly female in all categories, and in both the rural and urban districts. The study also found that the workforce was significantly larger in the urban Metropole district.

The study found that in all categories of staff, the key courses identified for nutrition were poorly attended. In part, this may be due to the fact that facility-based dietitians do not always see themselves as being part of the INP. These courses should be providing the basis for the practice and implementation of the INP. In terms of training, the findings were similar to those of the national nutrition skills audit and review of programme implementation that was carried out in 2003.[3,13] The study identified training needs, areas of poor competency, and

interventions required for the implementation of Healthcare 2010 programmes among all categories of staff. The areas of low skill and those requiring intervention for Healthcare 2010, as identified by INP managers, were budget and financial management, technical dietetic quality control, management, time management, exposure to the tertiary service environment and a focus on key priorities. District dietitians indicated low skills in therapeutic nutrition and diversity management, and required further training on business planning and financial management. Interventions identified for Healthcare 2010 were training in Xhosa, an increase in the number of posts, and the improvement of resources and distribution of staff.

Recommendations

On the basis of the findings of the present study, the following recommendations are made:[18]

- The results should be used to develop strategies for the immediate, medium and long term to address key issues raised by the various categories of nutrition staff.
- The areas that were identified for training and developing competence should be addressed through the development of training curricula and plans to enhance workplace skills.
- The lack of therapeutic nutrition should be addressed through the available resources in the Western Cape.
- The situation analysis information should be used at national and provincial levels for nutrition service planning, programme implementation and development of nutrition service projection models.
- The established nutrition workforce database should be updated regularly.
- Specific facility profiles of the nutrition workers should be compiled and used for planning and intervention at facility, sub-district and district levels.
- The strategic framework (Healthcare 2010), restructuring, and implementation of the district health services, primary health care and CSP has implications for the dietetic profession, nutritionists, and assistant nutritionists as mid-level workers. The roles of the different categories of nutrition workers should be evaluated (specifically that of mid-level workers) and the possibility of a specialist mid-level worker further investigated to inform policy and improve service coverage in the Western Cape Department of Health.
- The minimum qualifications of managers, and especially foodservice managers, should be reviewed and resultant discrepancies, addressed. This is an issue that influences career pathing, and should be addressed by the Department of Health Qualifications Committee.
- In the long term, the resource inputs (financial, human and goods), and the value attached to achieving the desired outcome of reducing malnutrition, should be assessed.
- The need for standardisation must be addressed, regarding line function and support systems for personnel.
- Plans should be developed to recruit and retain staff. Issues regarding equity, language, distribution, salaries, job title or rank and qualifications, should also be addressed. Inclusion of a career path for dietitians is important.
- Minimum norms and standards should be set to address the variations in orientation and induction, training programmes and qualifications of nutrition workers.
- The career path of lower ranks of personnel levels, in particular, should be addressed, and personnel should be encouraged to attend accredited skills development programmes to enable them to progress in the organisation. This strategy could contribute to the improvement of personnel qualifications.
- The results of this study should be applied to provide evidence-based information for the development of the Western Cape Department of Health's human resource plan and the integration of nutrition into the plan.

Conclusion

In conclusion, it would appear that the current nutrition workforce in the Western Cape does not meet the needs of the INP, and much needed improvements would contribute significantly to its more effective implementation.

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