

The process of developing and validating national core competencies for diabetes educators

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Abstract

The National Core Competencies for Diabetes Educators were developed on behalf of the Australian Diabetes Educators Association between July 1994 and November 1995. This paper traces the development of the competencies including the rationale for undertaking the project, the process involved and the measures taken to ensure their relevance and validity. The limitations of applying the competency concept to health professionals are discussed. The paper also explores issues affecting professional bodies which attempt to define and document competencies and describes some of the obstacles which may be encountered during the process.

Diabetes is a major public health problem affecting 3 per cent to 4 per cent of all Australians (Glatthaar et al. 1985), at least 10 per cent of older people and up to 20 per cent of some Aboriginal communities (McGrath et al. 1991). The repercussions of undetected or poorly controlled diabetes represent a significant health burden for both the public health system and the individual with diabetes. For example, diabetes doubles the risk of premature death, is a major cause of cardiovascular and cerebrovascular disease, is the second commonest reason for commencing renal dialysis (Disney 1993) and is a major cause of lower limb amputation and blindness.

Non-pharmacological interventions constitute a major and integral component of diabetes management and are predominantly carried out by diabetes

educators. The practice of diabetes education requires a complex combination of clinical knowledge and skills, educational expertise, competence in counselling and behaviour modification techniques, as well as analytical and problem-solving ability, and familiarity with health promotion principles and strategies. Clinical procedures undertaken by diabetes educators may range from insulin dosage adjustment, or dietary assessment and prescription, to measurement of capillary blood glucose and assessment of visual acuity, peripheral vascular status and peripheral sensation. The diabetes educator must be able to interpret the results of laboratory assessment of glycaemic control and lipid balance and be able to advise the patient about methods for correcting abnormalities. In addition, the high prevalence of foot ulcers in people with diabetes requires the educator to be adept at foot assessment, understand the physiology of wound healing and be familiar with current recommendations for ulcer dressings.

The interdisciplinary specialty of diabetes education has developed over the past 25 years. During this time, its benefits to the patient have been widely documented and include increased efficacy of self-care and a reduction in hospital admissions and lower limb amputation. The Australian Diabetes Educators Association (ADEA) is the professional association for more than 800 diabetes specialist nurses, dietitians, podiatrists, psychologists and social workers. Additionally, a small number of endocrinologists are members of ADEA. However, these medical diabetes specialists also have their own professional association, the Australian Diabetes Society. Consequently, their membership of ADEA is more by way of support than a desire for active participation in its affairs.

Due to the foresight of its founders, ADEA has for many years operated an internal accreditation and re-accreditation mechanism for its members. To be accredited, an ADEA member must be a qualified health professional and must meet explicit criteria regarding post basic diabetes experience and training.

A willingness to deal with quality and accountability issues has resulted in ADEA publishing documents such as *The Role of the Diabetes Nurse Educator* (1989), *National Standards of Practice for Diabetes Educators* (1991), *Patient Education Guidelines for Diabetes Educators* (1992), *ADEA Accreditation Criteria for Diabetes Centres* (1994a) and *National Guidelines for Safe Practice for Diabetes Nurse Educators* (1994b). Current accountability issues affecting ADEA are the revision of criteria for individual accreditation of diabetes educators, the need to standardise training programs leading to accreditation, the establishment of the newly formed National Association of Diabetes Centres in conjunction with the Australian Diabetes Society, and the development and implementation of national core competencies for its members. This paper describes the rationale

for and the process of developing and validating ADEA competency standards, and the obstacles presented by the lack of literature documenting the experience of similar professional associations in this area.

The competency movement was introduced by the Commonwealth Government in partnership with the State and Territory Governments as part of the Training Reform Agenda which followed from initiatives such as the tripartite agreement between government, industry and unions under the Hawke Government. The National Office of Overseas Skills Recognition was established in 1989 with the brief of overseeing and providing assistance for competency development for the professions, incorporating measures to enable the accreditation of overseas skills. In 1990 the National Training Board was set up to perform a similar function in relation to industry and to provide assistance for the registration of vocational competencies with industry training boards. Andrews (1993) gives a potted history of the competency movement from a nursing perspective while Mendoza, Parker and Fresta (1994) give a similar overview from a health promotion viewpoint, and add an astute analysis of the limitations of applying competency-based training standards to the professions.

In the initial stages of this plan for micro-economic reform the National Training Board introduced the Australian Standards Framework to assist the adoption of a national system of competency-based standards for vocational training in industry, executive management and the professions. The framework identifies eight levels to cover a range of competencies in and across occupations, from workers performing tasks involving closely supervised motor skills to senior executives and professionals making autonomous use of a high level of theoretical and applied knowledge. The Australian Standards Framework is described in the *National Competency Standards Policy and Guidelines* (National Training Board 1991, pp 12–14). A second edition of this publication (1992) carried some amendments to the framework. The August 1993 edition of the National Training Board publication *Network* describes further refinements and its July 1995 edition announces the demise of the board and the transfer of its functions to the newly formed Standards and Curriculum Council under the umbrella of the Australian National Training Authority.

Essentially, competencies are a quality assurance tool aimed at ensuring uniformity of standards in products and services by focusing training and education in industry and the professions on defined levels of performance based on the Australian Standards Framework. The objective is for qualifications and training to be consistent across States. This will allow for fluid migration of workers around the country. Further, it will permit workers with overseas qualifications to be accredited against criteria which describe the required level

of competence to perform a specific task, or to function effectively in a particular role.

Many industries, both within and outside the health sector, are now covered by competency standards. In addition to industry, several health professions have developed competencies. Of particular relevance to diabetes educators are the National Competency Standards for Entry Level Dietitians (Dietitians Association of Australia 1993), the Competency Standards and Related Assessment Methods for the Australian Podiatry Council (Australian Podiatry Association 1994), and the National Competencies for the Registered and Enrolled Nurse published by the Australian Council of Nursing Incorporated (1993).

In mid-1994, in line with the documentation of competencies for the key disciplines involved in diabetes education, the ADEA National Council requested one of the authors (RC), who was then the convenor of the ADEA Quality Assurance Committee, to develop national core competencies for diabetes educators in order to:

- define the core competencies required of diabetes educators
- promote equity of access to uniform standards of education and care for people with diabetes
- provide an outcomes-oriented focus and guide for training to enter the specialty, and for continuing education within the specialty, to complement the existing, more process-oriented National Standards of Practice for Diabetes Educators
- describe standards of performance that can be expected of diabetes educators by consumers and employers
- promote increased professional credibility for diabetes educators and recognition of the vital role of education in achieving optimal diabetes outcomes.

Method

The method used to develop and document the competencies consisted of a stepwise process of enquiry and consultation as follows.

Step 1 Making initial enquiries

Initial enquiries aimed at exploring the background to the competency movement and ascertaining the recommended methodology for developing competencies commenced with approaches to the New South Wales Nurses' Association and the New South Wales College of Nursing. These organisations supplied information about relevant bodies which had already embarked on the development of competencies, gave general advice on the process and provided draft competency documents as exemplars.

Step 2 Accessing government publications

These preliminary enquiries led to the finding of several essential documents, notably the National Office of Overseas Skills Recognition Research Papers Numbers 1, 2, 7 and 8 (1990a, 1990b, 1992, 1993), which deal explicitly with competency development and assessment for the professions. They provide a history and overview, outline the bureaucracy which has been established to manage the competency movement, describe potential benefits and limitations, explain the Australian Standards Framework and give details of appropriate methodology.

Step 3 Introducing the concept to ADEA members

The 1994 Annual Report of the ADEA Quality Assurance Committee notified the membership that this initiative was being undertaken at the request of National Council. The report, issued to all members and discussed at ADEA's annual general meeting, provided a means of informing members about this initiative and the rationale for undertaking it.

Step 4 Exploring the issues with ADEA members

A pre-conference workshop entitled 'Documenting Competencies for Diabetes Educators: What are the Issues?' was conducted by one of the authors (RC) as part of the 1994 ADEA Annual Scientific Meeting. The workshop attracted 60 ADEA members from the full range of practice settings around Australia. It consisted of a plenary explanation of the competency movement and its relevance to the specialty, small group discussions on the issues and implications of documenting competency standards, and a final plenary discussion of the results of the small group sessions. The workshop resulted in consensus on the major issues and produced statements relating to each issue. These formed a guide for writing the competency standards and concurred well with the general literature. A summary of the workshop results is listed below.

Potential benefits included:

- increased credibility with peer professions, consumers and employers
- a mechanism for evaluation
- promulgation of uniform standards
- improved outcomes of services for people with diabetes
- recognition and unique identification to link to reimbursement.

Limitations were perceived as:

- difficulty in accommodating the different disciplines and large variation in practice settings found in the specialty
- a danger of the competencies being too narrow and prescriptive or so broad they might be meaningless
- inability of competencies to bridge the gap between theory and practice
- a potential for the competencies to be exclusive and elitist rather than inclusive.

The consultation process was recommended to include:

- ADEA members
- professional bodies associated with ADEA, for example, the Dietitians' Association of Australia, Australian Podiatry Council, State Nursing Colleges
- the Australian Diabetes Society
- lay organisations such as Diabetes Australia and the Juvenile Diabetes Foundation Australia.

Concerns centred on issues such as:

- how the competency standards would be implemented and used
- who would monitor them
- would they date
- who would evaluate, review and revise them, and how often
- how they might affect the existing accreditation mechanism.

Recommendations for potential use of the competency standards covered:

- performance appraisal
- job selection criteria
- external accreditation
- lobbying for funding for professional development and new positions.

Step 5 Collecting and reviewing the relevant literature

A Medline search in May 1995 revealed little information about competencies as we have come to understand this concept in Australia. Disappointingly, few of the health professional associations which have developed competencies over the past few years have published a description of the process. Relevant literature was primarily obtained through searching references from the competency documents of associated health disciplines, from publications on quality issues in diabetes care and from government publications.

Step 6 Surveying ADEA members' training and qualifications

To assist in determining an appropriate level for the competencies, a national survey of ADEA members was conducted by questionnaire in July 1995. The survey was anonymous and sought information about demographic details, qualifications and courses completed or being undertaken. A total of 751 questionnaires was sent and 307 (41 per cent) replies received. Notable findings were that 93 per cent of respondents were female, 80 per cent were nurses, 12 per cent dietitians, 4.7 per cent podiatrists, 1.3 per cent medical practitioners, 0.7 per cent psychologists, 0.3 per cent social workers and the remaining 0.7 per cent from other disciplines. This breakdown of disciplines closely reflects the overall membership of ADEA and remains proportionately stable according to the membership database maintained by the ADEA Secretariat (1996).

The mean (SD) duration of survey respondents' employment as a diabetes educator was 7.3 (5) years, 54 per cent were employed full time in diabetes and 75 per cent had completed a course related to diabetes education. In addition to the 8 per cent of respondents already holding a postgraduate qualification, 68 people (23 per cent) were currently undertaking further study. Of these, 11 were doing a certificate course, 18 a diploma, 24 a bachelor level degree, 10 a masters and 5 a PhD.

Step 7 Preparing draft competencies

For the purpose of documentation, the function of a diabetes educator was arbitrarily divided into five main units of competency to reflect the key elements of the educator's role: clinical, educational, health promotion, service management and professional accountability. In keeping with the National Training Board and the National Office of Overseas Skills Recognition formats, the competencies are expressed as:

- units of competency, that is, a broad description of the knowledge, skills, attributes and abilities needed to practise as a diabetes educator

- components or elements for each competency
- performance criteria for demonstrating competence in each element.

The ADEA competencies draw heavily on the ADEA National Standards of Practice, the National Competency Standards for Entry Level Dietitians and the Competency Standards and Related Assessment Methods for the Australian Podiatry Profession. They reflect the intent and to some degree the terminology expressed in the American Association of Diabetes Educators' Position Statement (1995) and the American Diabetes Association review criteria (1995). The Australian Council of Nursing Incorporated competencies were utilised but to a lesser degree as were the Competency Based Standards for Health Promotion in NSW (1994).

Step 8 Circulating the draft competencies to the ADEA membership

A draft of the competencies was circulated in August 1995 with an explanatory letter which invited written comment and included a warning that non-response would be interpreted as endorsement of the competencies as they stood in the draft. In addition to ADEA members, the circulation list included related professional organisations, the Australian Council of Health Care Standards, lay organisations and six consumers representing insulin-dependent and non-insulin-dependent diabetes, different age groups and both genders.

A total of 16 written responses were received. Of the 11 responses from individual members, two were congratulatory, one was an enquiry but did not suggest changes, three requested numerous changes, and the remaining five responses suggested very minor amendments. The four responses from organisations were all congratulatory, with two asking further clarification on minor points of wording. The consumers, who all had previous experience as consumer representatives for diabetes initiatives, did not respond. Despite the specific request for written comments, several telephone calls were received, mainly from individual members expressing satisfaction with the draft.

Step 9 Deciding how to deal with comments

Since the letter circulated with the draft competencies explicitly notified recipients that non-response would be taken as approval, a dilemma existed as to whether incorporating the suggestions received would break faith with those who had indicated tacit approval by not responding. This was resolved at the 1995 ADEA annual general meeting by members voting almost unanimously to accept and incorporate the minor amendments as suggested in the responses, subject to their approval by National Council and the Quality Assurance

Committee. This was further confirmed by members at the meeting indicating that they did not wish to have another draft of the competencies circulated.

Validation

Considerations of validity have been integral to the development of the ADEA competencies. The ADEA membership was aware of this initiative and had opportunity for input to influence both the content and course of the competency development from its inception. Regular reminders and progress reports have been included in quality assurance reports and State branch meeting agenda. The national survey of qualifications questionnaire and the draft competencies were both accompanied by letters explaining the rationale and process and encouraged input from the membership. The 1994 workshop provided a forum for expression of opinions and concerns of members as well as identifying issues and implications which concurred with information on key issues, and advantages and disadvantages derived from the literature, unpublished competency material and other sources.

The national survey of educators' qualifications served to ensure that the level of the Australian Standards Framework at which the competencies are pitched is appropriate to the specialty. Not surprisingly, since the Dietitians and Podiatry organisations and the Australian Council of Nursing Incorporated represent the primary professional associations for ADEA members, the philosophical underpinnings of their competencies are relevant to ADEA. Consequently, basing the ADEA competencies on those already developed by these associations and on the ADEA National Standards of Practice guaranteed a degree of validity. This is probably largely responsible for the ready acceptance of the draft competencies as evidenced by the small number of changes requested.

Discussion

The introduction of competency standards for diabetes educators has potential benefits for the three key stakeholders, as the following examples show.

For the profession, competencies:

- provide a basis for determining accreditation criteria
- guide professional education
- assist professional self-regulation
- provide a framework for identifying and developing different levels of accreditation for practitioners with varying levels of skills.

For the consumer, competencies:

- define and benchmark standards of care
- promote equity of access to uniform standards of care
- describe what consumers can expect of the service provider.

For the employer and referral sources, competencies:

- describe what is provided/available
- describe the standards of quality that can be expected
- provide a method of measuring/appraising staff performance.

While few would argue with these uses, there is a strong feeling among some that the competency movement has not achieved its aims, has created a complicated and costly bureaucracy, and is inappropriate to the professions (Mendoza, Parker & Fresta 1994). Defining competencies to document skills used in task-oriented procedures, such as those required in manufacturing industries, is reasonable and desirable. Also desirable are methods which promote accountability in health care. However, scepticism about the ability of competency standards to reflect abstract qualities and represent the cognitive complexities of the decision analysis processes engaged in daily by health professionals may well be justified. Documenting clinical performance indicators for clinical tasks is a straightforward procedure but defining indicators which reflect knowledge of how and when to apply clinical skills in a variety of situations and contexts is a different matter.

Examples of the difficulties inherent in documenting qualities and attributes in concrete terms are plentiful. In describing the history of health education, Ritchie (1991) discussed the gradual realisation on the part of health educators and health promotion practitioners that the provision of accurate information is not sufficient to change behaviour. The transition to an understanding that, to be effective, health education must also focus on motivation and the importance of creating a climate for change took many years. The cognitive and affective processes implicit in this change cannot be documented in measurable competency terms. Griffiths (1993, p 58) divided the educator's role into the categories of technical, analytical, appreciative, instrumental, personal and interpersonal skills. While the items listed under technical and analytical skills did reflect skills, many items under the heading of personal/interpersonal skills were attributes rather than skills, for example, positive attitude, creativity, tolerance to others. Further, in a study on the quality assurance of individual education, Colagiuri et al. (1994) demonstrated significant differences in the post-education knowledge scores of patients attending three diabetes educators

who were teaching to an agreed documented education protocol. There were no observable differences in patient characteristics to explain this effect. Obviously, within individual health professionals, there are dimensions of influence which relate to personal qualities and attributes which cannot be documented in a meaningfully measurable way.

The application of the educator's knowledge of diabetes pathophysiology, therapies and interventions necessitates a high level of cognition. The diabetes educator is frequently the unofficial case manager and the common channel of communication within the diabetes health care team. This function requires the judicious exercise of problem analysis and decision-making ability to ensure that the utilisation of health services is appropriate, is timed to optimise outcomes for the individual and promote cost-efficient use of resources. The educator is also frequently called on to act as the patient's advocate, a role which, again, does not readily lend itself to task-oriented description.

Obstacles encountered during the development process

The development and documentation of competency standards for the health professions is a complex task. Trying to understand the relationship of the myriad of bodies in the competency bureaucracy and unravelling the plethora of acronyms that signify them has been a humbling experience. A sound working knowledge of the bureaucracy is a prerequisite to obtaining financial support to develop competency-based standards. The National Office of Overseas Skills Recognition has awarded several health bodies grants between \$100 000 and \$200 000 to develop and validate competencies for their profession, but ADEA exemplifies many professional bodies which must rely on the voluntary efforts of members. Members who take on such tasks face unreasonable demands on their time and considerable responsibility in attempting to perform a specialised function outside their area of expertise. Further, if a professional association wishes to register competency standards, the allocation of assistance to do so appears to be decided on the basis of need as prioritised by the relevant Industry Training Board.

Other obstacles encountered included:

- lack of awareness on the part of ADEA members of the broader health scene and current general trends in vocational education
- non-response of stakeholders when requested for comments
- lack of publications on the process of competency development and their uses and limitations, leading to uncertainty and lack of models to follow

- difficulty in determining the relative merits of registering versus not registering competency standards for the health professions
- lack of information as to why many of the health professions have chosen not to register their competencies
- changes to infrastructure, leading to confusion about the bureaucracy supporting the competency movement
- inconsistencies in the information and definitions contained in the government competency literature
- difficulty determining clear pathways through which to proceed. The implications of taking a particular direction cannot be fully determined unless there is some certainty that all the details required for informed decision-making are known.

Conclusion

The process of developing and documenting competency standards for ADEA has been a long and arduous one. Nonetheless, despite recognition of the limitations and disadvantages of applying competency training principles to the professions, the exercise has been fruitful.

Present day health professionals work in an era of unprecedented pressure to comply with accountability requirements. The development and documentation of the ADEA competencies has provided the organisation with a flexible quality assurance tool which can serve as a framework and reference for many other initiatives such as developing different levels of accreditation for advanced practitioners, enrolled nurses or foot care assistants. However, the competency movement is relatively new and there is still debate about its value. Likewise, for individual organisations such as ADEA, the relative merits and deficits of adopting a system of national core competencies remain to be determined.

References

American Association of Diabetes Educators 1995, 'Position Statement: Individualisation of diabetes education and management', *The Diabetes Educator*, vol 21, no 2, pp 105–6.

American Diabetes Association 1995, 'National standards for diabetes self-management education programs and American Diabetes Association review criteria', *Diabetes Care*, vol 18, no 5, pp 737–41.

- Andrews J 1993, 'A brief overview of the competency standards development movement in Australia', *The Lamp*, Dec/Jan, vol 50, no 11, pp 28–9.
- Australian Diabetes Educators Association 1989, *The Role of the Diabetes Nurse Educator*, Deakin, Canberra.
- Australian Diabetes Educators Association 1991, *National Standards of Practice for Diabetes Educators*, Deakin, Canberra.
- Australian Diabetes Educators Association 1992, *Patient Education Guidelines for Diabetes Educators*, Deakin, Canberra.
- Australian Diabetes Educators Association 1994a, *ADEA Accreditation Criteria for Diabetes Centres*, Deakin, Canberra.
- Australian Diabetes Educators Association 1994b, *National Guidelines for Safe Practice for Diabetes Nurse Educators*, Deakin, Canberra.
- Australian Diabetes Educators Association Membership Database 1996, Australian Diabetes Educators Association Secretariat, Canberra.
- Australian Podiatry Council 1994, *Competency Standards and Related Assessment Methods for the Australian Podiatry Association: Summary report*, Hawthorn, Victoria.
- Australian Nursing Council Incorporated 1993, *National Competencies for the Registered and Enrolled Nurse in Recommended Domains*, Turner, Canberra.
- Colagiuri R, Colagiuri S, De Blieck C & Naidu V 1994, 'Quality assurance of individual patient education', *The Diabetes Educator*, vol 20, no 6, pp 521–5.
- Dietitians Association of Australia 1993, *National Competency Standards for Entry Level Dietitians*, O'Connor, Canberra.
- Disney APS (ed) 1993, *16th Report of the Australian and New Zealand Dialysis and Transplantation Registry (ANZDATA)*, The Queen Elizabeth Hospital, Woodville, South Australia.
- Glatthaar C, Welborn TA, Stenhouse NS et al. 1985, 'Diabetes and impaired glucose tolerance: A prevalence estimate based on the Busselton 1981 survey', *Medical Journal of Australia*, vol 143, pp 436–40.
- Griffiths RA 1993, 'A framework for quality assurance by professional organisations', *Australian Clinical Review*, vol 13, pp 55–61.

McGrath M, Collins V, Zimmet P & Dowse G 1991, 'Lifestyle disorders in Australian Aborigines: Diabetes and cardiovascular risk factors: A review', *International Diabetes Institute*, for ATSI Better Health Program.

Mendoza J, Parker E & Fresta J 1994, 'If the suit doesn't fit why wear it? Competency-based training and health promotion', *Health Promotion Journal of Australia*, vol 4, no 2, pp 9–14.

National Office of Overseas Skills Recognition 1990a, 'Establishing competency-based standards in the professions', Research Paper No 1, Australian Government Publishing Service, Canberra.

National Office of Overseas Skills Recognition 1990b, 'Competency-based assessment in the professions', Research Paper No 2, Australian Government Publishing Service, Canberra.

National Office of Overseas Skills Recognition 1992, 'A guide to the development of competency standards for the professions', Research Paper No 7, Australian Government Publishing Service, Canberra.

National Office of Overseas Skills Recognition 1993, 'The development of competency-based assessment strategies for the professions', Research Paper No 8, Australian Government Publishing Service, Canberra.

National Training Board 1991, *National Competency Standards Policy and Guidelines*, Canberra.

National Training Board Network No 11, August 1993, National Training Board, Canberra.

National Training Board Network No 17, June 1995, National Training Board, Canberra.

New South Wales Health Department 1994, *Competency Based Standards for Health Promotion in NSW*, August.

Ritchie J 1991, 'From health education to education for health in Australia: An historical perspective', *Health Promotion International*, vol 6, pp 157–63.