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# CENTRE FOR HEALTH PROGRAM EVALUATION

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## **How to Assess the Quality of Long Term Care**

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## ABSTRACT

This working paper reviews three methods of assessing the quality of long term care for the aged. The three methods are as follows. First, in criterion-guided assessment, a largely subjective assessment is made, using a set of guidelines as a framework for the assessment. These guidelines are a list of criteria which define the aspects of care which are important. Second, assessment may be made using structured assessment protocols which may include completion of written questionnaires. Structured assessment procedures concentrate on assessment of individuals living in the facility, or consist of a more general assessment of the 'personality' of the facility. Third, assessment may be based on selected key indicators which are assumed to reflect the level of quality of care found in other unmeasured areas as well, or they are used as markers for more intensive investigation. This method is a shorthand summary of the overall quality, and is used either alone or in conjunction with more detailed assessments.

These methods are reviewed here with particular reference to the method of assessing quality of long term care that is used by the Australian federal government. After reviewing the literature, the policy implications of the review, and future directions for research in this field are discussed.

# How to Assess the Quality of Long Term Care

## 1 Introduction

Donabedian (1966) referred to the arbitrariness of the definition of "good quality" care in health service delivery. In other words, the definition of quality is made operational, or put into practical terms, depending on the values and goals inherent in the current health system. Much of the research into quality assurance has aimed to objectify the process of assessing quality of care by developing measures of quality which avoid personal judgements as much as possible. The aim of this article is to review alternative methods of assessing the quality of long term care, with a view to comparing the merits and disadvantages of each system. The majority of long term care in Australia is provided for the aged, and it is the care of this group that this review will primarily address, although the principles involved are applicable to evaluation of any residential care program.

There are three main methods used to assess the quality of care in long term care for the aged. First, criterion-guided assessment can be made. This assessment relies on a set of criteria, standards, objectives or goals which are used to guide the judgement of an expert assessor. These guidelines are a list of criteria which define the aspects of care which are important. The assessment is largely subjective. As shown below, this approach is the one currently favoured by Australian government-run quality assurance programs. Second, assessment may be made using structured

assessment protocols or written questionnaires. Structured assessment procedures concentrate on assessment of individuals living in the facility, or consist of a more general assessment of the 'personality' of the facility. Third, assessment may be based on selected indicators which are assumed to reflect the general quality of care given. In contrast to the other two methods, this method is a shorthand summary of the overall quality, and is used either alone or in conjunction with more detailed assessments.

These three systems obviously imply different costs and different outputs, so that the primary user of each system varies. The main advocates of measurement of quality of care are health care providers, who require a measure which can be used in quality assurance and peer review; researchers, who require scientific measures that can withstand rigorous statistical analysis; and regulators, who need measures that are reliable, valid and cost effective to administer on a large scale. The objectives of these users necessarily overlap, but each has special requirements that need to be taken into account when designing instruments to measure quality of care. During the following review of methods of measuring quality of care, some comment will be made on the relative usefulness of each method for these three consumer groups. Finally, future directions for research in this field will be discussed.

## **2. CRITERION-GUIDED ASSESSMENT**

Any assessment of the quality of care will rely on personal judgement and decision making to a certain extent, guided by arbitrarily defined criteria which make up the definition of 'good quality' that is adopted. Defining a set of criteria which specify priorities for service provision makes sense from the point of view of quality regulators, since service providers can be encouraged to provide a standard of service that is consistent with other providers in the same system (see Zwick, 1983 and below). Criterion-guided assessment has been embraced both by governments and by professional associations as an efficient method of assessment of quality. The following discussion will describe the criteria used in quality of care evaluation programs in the United States, Great Britain and Australia, and comment briefly on some international comparisons. The aim here is to demonstrate that there is universal consensus in some areas on what should be included in criteria for quality of care, even though the process for regulating quality of care is different between countries.

Readers interested in further detail of international comparisons could consult Day & Klein (1987) and Phillips & Spector (1987).

There are five main steps in developing a procedure for regulating quality of care (Phillips & Spector, 1987):

- (1) Definition of the goals of health care;
- (2) Development of standards which describe specific components of the goals and are measurable;
- (3) Identification of a process for collecting information to enable judgements of compliance with the standards to be made;
- (4) Identification of thresholds or decision rules that determine the amount of deviation from a standard that is acceptable;
- (5) Development of an enforcement process that assures compliance with the standards.

International comparisons show that there is broad consensus about the composition of steps (1) and (2) above, while the detail of steps (3) to (5) varies depending on the degree of centralised control of regulation of quality. In the United States, steps (1) and (2) have been covered by a federally mandated set of criteria which are used by government monitors as guidelines in the procedure of assessing quality of care. These guidelines consist of over 500 standards. In fact, the standards are so numerous that the standards monitoring procedure which uses the criteria as its guideline has become a mixture between expert judgement guided by the criteria and reliance on other more objective methods of assessment, as will be discussed below. The same standards apply to all states of the U.S., for both intermediate care facilities, which are similar to Australian hostels, and skilled nursing facilities, which are similar to Australian nursing homes. Content is largely concerned with the structure and process of care.

It is interesting that the emphasis of the standards in each country has been shaped by the historical context surrounding their development. According to Day & Klein (1987), the American federal standards were introduced in the 1960's to supplement state licensure rules which generally aimed "to protect the public purse against fraud or graft" (p.313). Day & Klein described the regulatory

system designed around these standards as "shaped.. by the assumptions that nursing homes are an extension of hospitals (Butler 1979) and their function is to provide *medical* [my italics] care; that the protection of the public purse requires that they not be used by those who don't need such care; and that providers are supplying appropriate care at an appropriate price" (p.313).

In contrast, British nursing homes are not seen as an extension of the hospital but as providers of a different kind of environment and care, and this is reflected in the standards defined in that country.

In fact, there are no *centralised* standards for nursing homes. In Britain, the regulatory system for nursing homes is governed by District Health Authorities (DHAs), who devise their own standards for their specific region, and there is no way of knowing whether the 192 DHAs are applying the same standards. In 1985 the National Association of Health Authorities, a non-government body, produced a set of model guidelines for the DHAs (National Association of Health Authorities, 1985). The standards have no statutory power, but rather are a "series of benchmarks against which each District Health Authority is invited to assess and set its own requirements" (National Association of Health Authorities, 1985). Unlike the United States or Australia, the British have no centralised concrete requirements for the structure, process or outcomes of care. There are some specific legal requirements for record keeping and frequency of inspections, but nothing more specific.

In Australia, prior to 1987, the assessment of quality of care in nursing homes and hostels was undertaken by state departments of health. Inspections of health facilities focussed on the structural inputs to care, and on compliance with state health regulations. Since 1987, the federal government has been involved as well in assessing the quality of care. Teams of federal government inspectors visit nursing homes and hostels to assess the quality of care, using as guidelines the seven objectives and 31 standards set out by the Commonwealth/State Working Party on Nursing Home Standards (1987). A similar set of standards was also developed for hostel care (see Appendix 1).

In general, strategies for the evaluation of programs include the use of structural, process and outcome criteria. Structural criteria focus on the adequacy of the program design and structure.



However, that is not necessarily related to the outcomes for the clients of the program. A well-structured program will not necessarily improve client outcomes. On the other hand, process criteria are more closely related to the outcome. Technical information about how care is administered can be used to evaluate a service, and by relating the quality of the process of care to previously demonstrated relationships between a particular process and outcome, good process of care can imply good outcome for the client.

Structural and process requirements are spelt out much more easily than outcome requirements, as can be seen by comparing the content of the standards composed for the three countries under review. The structural requirements for care are very similar in the three countries. For example, there are similarities in the detail of how the physical environment provided in a nursing home should be designed. There are requirements for fire precautions, minimum requirements for physical space for each resident, and specifications for staffing inputs, although the exact volume of staff needed differs between countries. The U.S., England and Australia all require that a registered nurse be in charge of nursing in the home, and that a qualified nurse be on duty at all times. Australia has the additional requirement of staff:patient ratio, which is not specified in the other countries.

There is a lot of emphasis in the American standards on nutrition requirements, and a standard that requires nursing homes to have a full-time qualified dietetic supervisor. In general, the American standards specify staff mix much more than either the U.K. or Australia. The Australian system has moved in the opposite direction to the American obsession with detail since its funding change to CAM and SAM, which allocate a certain amount of money to the home, which then provides whatever ancillary and health professionals it considers are necessary for its particular client mix. In the U.S., each home must also have a medical director, and each patient must be visited by a physician every 30 days for skilled care, every 60 days for intermediate level of care to re-certify that the level of care is appropriate. In England, it is left to the patients themselves and their carers to decide whether to call in a doctor. In Australia, the standards specify the right to medical care, and the right to be treated by a doctor of the resident's own choice, but there is no requirement that medical attention is provided regularly or that disability level is reviewed regularly.

When standards for the procedures and running of institutions are considered, the difference between England, the U.S. and Australia is that the American standards specify considerable detail in how to run a facility, while the English and Australian standards leave much of the detail of the day-to-day running to the discretion of the staff of the home. According to Day & Klein (1987), the British guidelines point out that "the environment should, as far as possible, be domestic in character, and enable patients to retain their individuality and self-respect". Further, they emphasise that "it is important that the organisation and the attitude of staff reflect the need for patients to achieve and maintain maximum independence" (p. 318). These are similar to the Australian standards for homelike environment and social independence which are phrased in terms of resident rights. However, the American requirements are spelled out in much greater detail, with detailed prescription of the social and rehabilitation services that must be available. Neither the British nor the American system have standards for outcome requirements. The Australian standards are called 'outcome standards', and the regulatory process emphasises outcome implications for the resident, but the standards are in fact more like structure or process requirements than outcome requirements (Phillips & Spector, 1987).

Therefore, while the British and Australian systems reflect a spirit of persuasion and education, the American standards imply much more control and monitoring of the day-to-day running of long term care facilities. The British standards are not as explicit in identifying residents' rights as are the American or Australian ones. The American standards are the most explicit in requiring set practices and inputs in long term care facilities. The Australian standards reflect a philosophy of care that is akin to the normalisation movement, which aimed "to establish and/or maintain personal behaviours and characteristics that are as culturally normative as possible" (Wolfensberger, 1972, p.28).

Unlike the United States, the Australian sets of standards emphasise resident rights and freedom of choice, rather than more basic requirements of adequate nutrition and housing. The concern in establishing these standards has been with not only providing for basic physical care, but also providing a social environment which resembles as closely as possible that enjoyed by independent

elderly living in the community. Thus the main characteristics of the Australian standards are their emphasis on resident rights, and their spirit of normalisation, unlike the American standards, which concentrate on nursing care and physical needs.

In summary, there is some consensus on what structural components should be present for good quality of care to take place in long term care. Most sets of standards have concentrated on structural or process components of quality, but the emphasis on outcome for the resident has only been attempted in the Australian set of standards. The remainder of this paper will be concerned with whether this approach is the best one to take, whether its reliability and validity can be established, and whether two alternative approaches, standardised questionnaires and key indicators could be added or substituted to improve a system of quality assurance.

### 3. EVALUATING CRITERION-GUIDED ASSESSMENT

Zwick (1983) summarised the advantages and disadvantages of developing a set of health standards or criteria which can be used to guide national health policies. Advantages which he identified were:

- (i) [standards] help to ensure consistency among Federal health programs;
- (ii) improve relationships and coordination among national, State, and local agencies;
- (iii) focus attention of public and professional groups on the services deserving higher priority;
- (iv) further an understanding of neglected opportunities; and
- (v) improve accountability and efficiency in the use of costly resources." (p.417)

The disadvantages which he summarised were:

- (i) formal adoption of a given set of goals and standards can make innovation more difficult;
- (ii) too simplistic approaches may ignore or underestimate the great variations in conditions and practices throughout the country;
- (iii) national statements may encumber or divert local and state efforts;
- (iv) goals may be too general and ambiguous to be useful;
- (v) inadequate data can result in excessive attention to items that are measurable but of lesser importance than other issues;
- (vi) settings goals and standards can become an end in itself and divert attention from needed action" (p.418)

In the case of the adoption of the Australian standards by nursing homes and hostels, the standards have provided a focus for facilities to work on, especially in the private sector, where facilities are often isolated and working without much peer support. Their acceptability has been relatively high.

The most formal evaluation of the standards and the process of regulation that has taken place so far is the consultancy carried out by John Braithwaite and associates. According to Braithwaite et al (1990), a survey of nursing home Directors of Nursing found that for 28 of the 31 nursing home standards, over 97 percent of respondents (n = 410) had no doubts about the desirability of the standards.

The few standards that did not gain overwhelming support were those that were considered not appropriate for demented residents. For example, demented residents were not considered by some Directors of Nursing to be capable of being able to make informed decisions about their care plans. This finding confirms Zwick's point that goals may be too general. The Australian standards may be too general to apply to all the groups of residents found in long term care here. On the other hand, the spirit of normalisation which underpins the Australian standards makes it unlikely that a separate set of standards could be composed for dementing residents, and another set for alert residents.

On the whole, the Braithwaite survey found very high acceptance of the introduction of the standards. Certainly the evaluation of the standards monitoring process that has taken place so far has shown that on the whole there is mutual respect between the monitoring teams who use the standards to regulate quality and the nursing home and hostel proprietors who have to comply with the standards. Unlike the American system, where the disadvantage that Zwick noted of 'formal adoption of a given set of goals and standards can make innovation more difficult' would be more likely, the Australian system encourages innovation in the detail of care. However, one disadvantage that Zwick noted which may be relevant to the Australian standards is his comment that "inadequate data can result in excessive attention to items that are measurable but of lesser importance than other issues". Some of the Australian standards are easier to make operational than others. For example, attitudes to death and practices used to deal with dying residents would be difficult for government regulators to observe in their routine visits to the facilities. It may be that this standard is not given as much attention in the field as other more easily observable standards or other standards that are easier to talk about with staff. Following are some observations from the author's limited experience in the field with standards monitoring teams.

The following observations came from a pilot study of the feasibility of developing a questionnaire based on the Australian outcome standards. Pilot work was carried out in three states - Victoria, Tasmania and Queensland, and consisted of site visits, discussions with standards monitoring team members and distribution of a small survey to standards monitoring team members in Tasmania and

Queensland to document the most common sources of information used for evidence for each standard.

From discussion with standards monitoring team members and limited observation in the field, Australian teams appear to vary in their operationalisation of the standards, not surprisingly, since this is one of the main characteristics of criterion-guided assessment. While some team members used tailor-made written checklists to remind them of possible sources of evidence for each standard, others used the guidelines produced by the department, following them very closely to the point of quoting the guidelines in discussion with nursing home staff.

Feedback from monitoring team members indicated that residents were the best source of information for evidence about the standard of care, followed by direct observation of behaviour, process, setting etc., followed by documentation. However, this pattern varied considerably from one standard to the next. Documentation was relied on heavily for the health care objective, while homelike environment was assessed mainly through direct observation. Team members commented that homelike environment was the most difficult standard to objectify. It was not clear whether the heavy reliance on documentation for the health care objective was typical of all teams.

Teams were diligent in talking to as many people as possible about the standards, but time limitations meant that only a small number of people could be interviewed during a visit. Visitors were especially hard to catch. Obviously a questionnaire for visitors and staff who were not on shift during the visit of the team would be very helpful. Relatives and visitors could not be used to their full potential for information about the care.

Questions that teams used in collecting evidence for each standard varied, although there was a common pool of questions, particularly for residents (e.g. "What are you going to do now? What do you think of the nurses here? What about soap, who pays for that for you?"). Many of the questions seemed more related to structure or process of care than outcome, and teams observed continually had to translate these into outcome oriented faults for judging compliance with the standards.

The consensus approach, whereby more than one source of information is used to collect evidence about each standard is a good strategy, but field work suggests that staff and visitors could be used to greater advantage. Although Braithwaite et al (1990) found that observation was the most useful mode of information gathering (Figure 5.1, 1990), it seemed from this author's limited fieldwork that the mode of information collection varied from one standard to the next.

#### **4. IDENTIFICATION OF THRESHOLDS**

The fourth step in developing a procedure for regulating quality of care, as noted above, was the identification of thresholds or decision rules for deciding when compliance with the standard is achieved. This step is hard to achieve when either the standards are not concrete or the information collected as evidence is not quantifiable. In Australia, this step has evolved into a process of expert judgement by standards monitoring team members who assign the facility a rating of met, action required, or urgent action required for each of the 31 standards. While this sounds like it has the potential to produce a combined score which could describe the total quality of care for a facility, and so make identification of a threshold for acceptable quality a simple decision, in practice such an aggregate score would not reflect the subtlety of judgements taking place. From discussions with standards monitoring team members, the three categories that they use for describing compliance with each standard (met, action required, urgent action required) are not strictly equivalent to an interval scale, in that 'met' does not reflect the same standard of care from one standard to the next. Furthermore, the three points are not equi-distant: met and action required may be closer together than urgent action required and action required.

These points are particularly important when comparisons are attempted between scores for nursing homes. This is where the criterion-guided assessment approach begins to fall down, in the area of comparison between facilities. When assessment of the quality of care moves away from criterion-referenced judgements (comparison with standards) into *norm-referenced* judgements (comparison with other facilities), a more quantitative description of quality is required.

In the U.S.A., norm-referenced assessment is beginning to be incorporated into the quality

regulation system which has up until recently relied solely on criterion-referenced judgements. This approach will be discussed in more detail below in the section on key indicators. Problems with reliability of expert judgements have meant that more structured measurement procedures are now being used to supplement the expert clinical judgement of monitoring teams. Structured measurement scales are now used to assess the facility's physical environment and quality of life. Quality of care is now evaluated using a uniform minimum data set (Morris et al, 1990) and standardised instructions as the basis of the assessment. Structured protocols for sections of the standards monitoring process have also been developed, for the Closed Record Review, the Individual and Group Residents Rights Interviews, and the Dietary Services System Assessment (Department of Health and Human Services, 1991). The protocols are not applicable to our Australian standards, but they do provide support for the notion of combining expert judgement with standardised questionnaires in the standards monitoring process. The following section will review standardised questionnaires to determine whether any could be used to measure the goals and standards of Australian long term care.

## **5. STRUCTURED QUESTIONNAIRES FOR ASSESSING QUALITY OF CARE<sup>1</sup>**

The second approach to measuring quality of care is to use a structured questionnaire which yields an assessment of the standard of quality. This approach does not use reference to a set of criteria or standards. Judgement about what items should be included comes from the author of the scale. As a result, a large number of scales have been devised to assess quality of care in the absence of proper validation of the underlying constructs, and the correlation between the scales remains low. However, there are limits to what can be included in the definition of quality of care, and there is some overlap in constructs between the scales. Rather than presenting these scales merely as a catalogue, this review attempted to categorise scales according to which of the seven goals set out by the Australian government for long term care were addressed. This had the dual purpose of providing a framework for the review and at the same time indicating whether any of the

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<sup>1</sup>Part of this section was presented to the National Evaluation Conference, Adelaide 1991, and appears in the Proceedings of that conference (see Phillips, 1991b in reference list).



questionnaires that are available

could be used to supplement the expert judgement of standards monitoring teams, in a similar way to the approach being developed in the United States.

Three literature searches were undertaken to cover the medical, nursing and psychology literature on quality of health care and its evaluation. Literature data bases used were Medline on CDROM (National Library of Medicine Compact Cambridge, American Medical Association), CINAHL (Cumulative Index to Nursing and Allied Health Literature, CINAHL Information Systems, California) and Psychological Abstracts (SilverPlatter Information Incorporated, American Psychological Association). Literature searches were undertaken for the period 1991-1975. Key words used were quality of health care, the aged, environment, evaluation, measures and scales. The following summary outlines the major characteristics of the literature and covers the most commonly used instruments cited in the literature.

Most of the literature on assessing quality of care was found in the five year period since 1987, and most studies were carried out in the U.S.A. In reviewing the literature, scales were assessed for item content, the extent of coverage of the seven objectives and 31 outcome standards, and whether the quality dimensions measured were mainly structural, procedural or outcome dimensions. Two other variables that distinguished the scales found were first, the level of aggregation: that is whether each resident is described individually with the scale and then the data aggregated to form an overall picture of the quality of care (resident focussed assessment), or various dimensions of the environment are described for the whole setting, and the environment assumed to be similar for all the residents (setting focussed assessment). Second, scales also varied according to who completes the scale: nursing staff, auxiliary staff, outside observers or residents.

While it was relatively clear in criteria developed above whether structure, process or outcome was being assessed, many of the scales developed in the literature have evaluated a mixture of the three dimensions. Only one scale attempted anything like the triangulation approach favoured by the standards monitoring teams, whereby more than one source of information is used (the Multiphasic Environmental Assessment Procedure, see below). Few scales acknowledged the residents as a source of information, and no scales used residents' advocates as a source of information. Scales

from the nursing literature use the observation of the nurse carer as the basis for the assessment of the quality of care, while in the psychology literature there is a small body of literature on perception of quality of care by the recipients. The literature on satisfaction with services more adequately covers some of the standards which can be assessed by resident interview (Davis & Hobbs, 1989).

The next section gives a brief description of some of the scales in terms of whether they measure the seven objectives of the outcome standards for Australian nursing homes, and then an overview of the suitability of these scales and how they could be improved upon in further research. Table 1 provides a summary of the following two sections.

## **6. SETTING FOCUSED INSTRUMENTS**

Following the description of the "total institution" environment by Goffman (1961), King & Raynes (1968) developed a sixteen item scale to describe aspects of the institutional environment, particularly in hospitals for children. The scale measured rigidity of routine, block treatment, depersonalisation and social distance between staff and inmates, and was intended to help in the evaluation of management practices. These factors are related to the freedom of choice objective and perhaps dignity and privacy. Being designed for hospitals for intellectually disabled, no attempt was made to incorporate the views of the residents.

Pincus (1968) used the Home for the Aged Description Questionnaire to study the environment in nursing homes. Four dimensions were measured: public/private (the ability of residents to maintain a personal domain); structured/unstructured (rules and discipline, or the degree of flexibility in policies); resource sparse/resource rich; and isolated/integrated (interaction with the community at large). Thirty-six items are used to generate a score on each dimension, and the scale can be used either by staff or residents. The privacy objective is addressed by this scale, and part of the freedom of choice objective.

The Adult Day Care Assessment Procedure is another scale that describes the environment (Conrad & Guttman, 1991). The scale was clearer than many others in its distinction between

structure and process measurement. Structure items refer to the resources that are available, for example the structural features of the facility and physical features. The process items involve staff-client interactions, for example planning and management of client care, therapies and education. There are also five social environment scales, covering individual attention, social involvement, morale, promotion of independence and communication. However, there was no coverage of the objectives related to residents' rights, independence and freedom of choice.

The most promising instrument to describe the quality of long term care in similar terms to the outcome standards was the Multiphasic Environmental Assessment Procedure (MEAP; Moos & Lemke, 1984). The MEAP consists of five parts which describe quantitatively various aspects of the environment. The five parts are as follows. First, the physical and architectural checklist describes the availability of physical facilities, including availability of staff facilities. Second, Policy and Program information describes policies for such things as behavioural requirements imposed on residents, admission policies, the balance between individual freedom and institutional order and stability, and availability of services and activities for residents. Third, Resident and Staff information is a description of the residents and staff in sociodemographic terms. This includes a description of the staff mix, and level of activities engaged in by residents, which is dependent on the functional capacity of the residents. The fourth part is the Sheltered Care Environment Scale, which measures the social environment of the facility or the 'personality' of the institution. This includes usual patterns of behaviour and the nature of staff:residents relations. The fifth part is a subjective rating scale which measures the observer's perception of the physical attractiveness of the facility, the environmental 'diversity' or how interesting the environment is, resident functioning or the appearance, activity level and interactions of residents, and staff functioning, or quality of interaction between staff and residents and staff relationships.

From this brief description, the MEAP mainly concentrates on the structural and process components of quality of care. There is very little assessment of the outcomes of quality, in principle the central aim of the outcome standards. The advantages of the MEAP for use in research settings are its quantitative nature, and its scales on the social environment. However, some aspects of the MEAP are unsuitable for use in Australian nursing homes, because the level of

functional dependency here is much higher than that catered for by the MEAP. For example, in the Policy and Program Information Form, many of the subscales are more suitable for a hostel type resident than for nursing home residents (e.g. "Is there a curfew?"). Thus the MEAP can be adapted more easily to hostels and other settings designed for independent elderly.

The only Australian scale to measure quality of care in a setting focussed format is that developed for the consultancy carried out by Rhys-Hearn for CDCSH, on the effect of staffing levels and patient dependency on quality of care (Department of Community Services, 1986). The Q2 scale was divided into an interview with staff members, direct observation and general overall opinions. Components were Patient Care (care plans and records; continence and location change; food, meals, drinks; hygiene; medications), Activities and Therapy (variety of activities; frequency of activities; community activities; therapy - availability; therapy - access), Staff and Policies (staff education/facilities; flexibility of routines/policies; security; maintenance and safety factors; accident and injury), Environment (standalone; access and amenities). Observations concentrated on the structure, particularly the physical environment, with some assessment of the process of care as well. Lastly, the overall opinion of the assessor was sought. Although many items cover the objectives in part, the instrument as a whole does not totally cover the 31 standards. The outcome orientation of the 'outcome standards' was not addressed by the instrument, and interviews with residents' advocates were not attempted.

Finally, documentation of the standards monitoring visits includes a published report for each nursing home, but without the formal standardisation of items and responses found in the above scales. Each standard is given a rating of "met", "action required" and "urgent action required". From a research point of view, the ratings of the SMTs are not sufficient for a detailed comparison between nursing homes or across time. Each standard has the same weight, so that if ratings of standards were combined to form a score for each objective, some objective scores would be based on more evidence than others. Alternatively, if a score out of 31 (31 standards met) were used as a continuous measure, two homes with the same score could conceivably have quite different profiles of care.

## 7. RESIDENT FOCUSED INSTRUMENTS

A number of quality of care instruments have been developed in the nursing literature. Most of these scales have been developed for acute hospital care or home care, and are patient focussed rather than providing an overall assessment for the setting. They generally refer to the measurement of the nursing process rather than structural or outcome measures. None cover all the 31 outcome standards used in Australia, or all seven objectives.

The Quality Patient Care Scale (Wandelt & Ager, 1974) was developed to measure the "care expected of a first-level staff nurse" in nurse-patient interactions. It has 68 items which are arranged under six subsections: Psychosocial Individual - actions directed toward meeting the psychosocial needs of individual patients; Psychosocial Group - actions directed toward meeting the psychosocial needs of patients as members of a group; Physical -the physical needs of patients; General - either psychosocial or physical needs of the patient or both at the same time; Communication; and Professional implications - care given to patients reflects initiative and responsibility indicative of professional expectations. Other scales are the Slater Nursing Competencies Rating Scale, the Quality Patient Care Scale, and The Nursing Audit (Wandelt & Phaneuf, 1972). There is also the Rush Medicus System (Jelinek et al, 1974, 1976), and versions of it in the form of MONITOR (Goldstone et al, 1983), which is designed to assess quality of nursing care in acute medical and surgical wards, and psychiatric MONITOR, for psychiatric institutions (Bentley & Boojawon, 1990). Peters (1989) described the Community Health Intensity Rating Scale, which had four domains and 15 community health parameters.

Most of these scales measure nursing process. One exception is the Instrument of Health Status Measures (Horn & Swain, 1987), which was a conscious attempt to describe patient outcome that was the result of the nursing care process. The instrument covered 539 items that describe the patients' physical and emotional status, and the extent of their knowledge and ability to perform self-care.

Few of the above scales take advantage of the nursing home residents as a source of information about the quality of care, although resident satisfaction is recognised as an important outcome of

care (Strasen, 1988; White, 1970). A scale which measured residents' perception of their care is the Stresses in Institutional Care Scale (Stein et al, 1985). The scale has five factors which measure relocation/orientation stress, severance anxiety, needs for tender loving care, medical concerns and needs for individual space. The scale can be used either to measure anticipated or actual stress. Davis & Hobbs (1989) described an Outpatient Satisfaction Questionnaire, which covered access to care, the physical environment and some aspects of care such as privacy and dignity. Some of the items in that questionnaire could be used with residential care as well. Another scale that could have some items applicable to nursing home residents is the SERVQUAL (Parasuraman et al, 1988), which was devised to measure the difference between what a service should offer and what it does offer, as perceived by the recipients of the service. The Sheltered Care Environment Scale section of the MEAP (Moos & Lemke, 1984) can be administered to residents, but some of the questions refer to activities only undertaken by a more independent group than is generally found in Australian nursing homes. None of the scales reviewed so far take into account the needs of cognitively impaired residents.

## **8. OVERVIEW**

An attempt was made to summarise the suitability of each scale for describing the outcome standards. In Table 1, an asterisk denotes that the objective was at least partly covered by some items in the scale. In some cases, the extent of coverage was difficult to assess because the underlying concepts were slightly different to the objectives as stated formally in *Living in a Nursing Home* (CDCSH, 1987). Thus although some scales seem to fare quite well in Table 1, in practice it would not be possible to disaggregate the scale and rebuild it in terms of the outcome standards in order to identify a particular home's performance separately on each outcome standard.

None of the scales produced so far take into account the multi-level nature of nursing home comparisons. Setting-focussed scales which describe the nursing home environment as a whole do not take into account individual perceptions of the quality of care. However, data collected at an individual level as in resident-focussed instruments can be biased when aggregated to reflect aspects of the quality of care at the nursing home level, unless appropriate statistical analyses cater for the multi-level nature of the data (see Burstein, 1980).

As noted by Donabedian (1966) and Davis (1991), the value laden nature of quality of care means that attempts at operationalization of the concept will continue to produce diverse measures. Studies involving comparison of several different measures of quality of care have found small and insignificant correlations between the various instruments. This suggests that all the instruments are not measuring the same dimensions of quality of care. For example, Robb (1984) cautioned that the various quality of care scales have low correlations with each other, not surprisingly given the breadth of concepts covered by the scales. Ventura et al (1980) also demonstrated that the Qual-Pacs and the Rush-Medicus systems were not correlated. It is unlikely that a compilation of existing scales would cover the objectives of our outcome standards as efficiently as a tailor-made instrument.

In summary, the main advantages of using standardised questionnaires for assessing quality of care are that they enable a quantified threshold to be set for deciding whether quality found is acceptable or not, and they make it easier to compare the quality of care across facilities. They are probably more reliable than criterion-guided assessment. Furthermore, they are not generally reliant on the opinion of an expert or on expert judgement, so that others can also be involved in the assessment of quality.

The disadvantage of standardised questionnaires used in the absence of a set of criteria or standards is that the construct validity of the instrument may be low. Low intercorrelations between instruments, and patchy coverage of the Australian outcome standards as illustrated in Table 1 indicate that many different concepts may be being measured by the one instrument. The ideal situation is to have agreed standards and goals for the health system and standardised instruments that operationalise those standards specifically.

## **9. KEY INDICATORS TO ASSESS QUALITY OF CARE**

The final approach to be reviewed is that of using trace indicators for assessing quality of care. In this approach, key aspects of care are chosen which are thought to reflect the total quality of care



given, or they can be used as markers for further investigation. The concept of health indicators has been used in epidemiology to describe population health status, with the initial emphasis on mortality indices (e.g. maternal deaths inquiry in England in 1967, Department of Health and Social Security, 1972). Subsequent suggestions have included using social indicators and composite health indicators (Culyer, 1983), and mental health indicators (Jenkins, 1990).

The ultimate assessment of quality of care is using outcome indicators, which can show the immediate effect of the program. Outcome evaluation is now considered to be the most important part of program evaluation when focusing on the geriatric population (Wan & Ferraro, 1991). This indicators approach has been taken in New York with the development of the sentinel health events system, in which negative outcome indicators are monitored and used as markers for initiating more extensive inquiry. Other states in the U.S. have since expressed interest in incorporating the indicators approach into their existing regulatory systems. For example, Rhode Island State Department of Health have investigated the possibility of using variables from the Patient Care and Services Survey (PaCS) as key indicators to monitor quality of care in their nursing homes (see Phillips, 1991a). The PaCS data set was collected on every medicaid patient and a proportion of Medicare and private patients, providing a rich data source on the health status of approximately 8,000 nursing home residents every year. As an initial demonstration, indicators were chosen to be most relevant to severely dependent residents and in areas that needed extra effort to raise the level of quality of care. Five key indicators reported in Phillips (1991a) were prevalence of contractures, in-house-acquired decubiti, use of restraints, lack of participation in an activities program, and nasogastric tube feeds. The population prevalence of these indicators was adjusted according to the case mix and size of each nursing home. The measure of quality was the difference between the case-mix-adjusted prevalence and the prevalence observed in the home by state surveyors.

Although the indicators discussed in Phillips (1991a) were most relevant to very dependent residents, the same system could have been used to monitor quality of care for more independent residents as well, since many other key indicators of the quality of care could have been extracted from these data. For example, process indicators (as opposed to the outcome indicators discussed above) which could be derived directly from PaCS items could have been:

- (i) residents who are incontinent but not participating in a bowel or bladder retraining program;
- (ii) independent (as assessed on the Katz Activities of Daily Living Scale) residents whose grooming and personal hygiene were not satisfactory;
- (iii) independent residents who did not exhibit appropriate observable behaviour, and do not have mental status evaluations performed and documented;
- (iv) residents who require assistance in dressing but grooming and personal hygiene are not satisfactory.

The key indicators approach has not been exploited in Australia in monitoring quality of care yet. One advantage of this system in Rhode Island was the efficient use of a data set already being collected for financial purposes. Here in Australia there is as yet no routine system for collecting outcome data on an individual resident basis that could be exploited in this way, so the level of detail reached in the U.S. with their PaCS system cannot be attained here. However, there may be a case for implementing a similar system of identifying key negative outcomes that could be extracted from data that is already collected by the federal government.

The great advantage of using key indicators is their efficiency in using existing information for more than one purpose. A number of existing data sets were identified which have the potential to be treated as sources of indicators of quality of care (see Table 2). Harvey (1991) has reported on the use of Pharmaceutical Benefits Scheme data to investigate polypharmacy among long term care residents. It may be possible to use these data to identify outlier facilities which have higher than average use of drugs when adjusted for case mix. Financial return data on the number of residents could also be used to identify facilities which have higher than expected levels of discharged residents, perhaps indicating inappropriate admission procedures. Both of these suggestions would be used as markers for further investigation of the quality of care. There is also great potential to make some gross comparisons of the quality of care in institutions by comparing quality of care assessments produced by standards monitoring teams with indicators found in these other data sets.

For

example, one would expect some correlation between the number of standards judged as 'met' by the standards monitoring teams and level of polypharmacy in the facility, as recorded in the Pharmaceutical Benefits Scheme data. If there is a correlation, then that would be a good argument for using a case-mix adjusted index of drug use in each facility as one indicator of the quality of care. The data on distribution of standards met by nursing homes and hostels in Australia could be used in a key indicators approach by examining outliers on particular standards, or by targeting particular facilities which do not meet a large proportion of the standards for further investigation of the quality of care. Staff turnover is also an indicator of quality of care (Phillips, Spector & Takada, 1988) that has not received much attention.

## **10. DISCUSSION: POLICY IMPLICATIONS AND FURTHER RESEARCH**

This final section will discuss, firstly, what practical implications this review could have for the regulators of quality of long term care in Australia, and secondly, at a more abstract level, further directions for research in the field of quality of care.

Referring to the five steps in developing a procedure for regulating quality of care as outlined in Section III above (p. 3), the standards that have been developed as a framework for assessing quality of care in Australia are an important step forward in developing the first two steps of an Australian system for evaluating and regulating quality. As was seen in the review of standards used in other countries, Australia's long term care standards cover similar content to those of Britain and the U.S. Our standards sit between the other two countries in their prescription of process of care, while their emphasis on resident rights is very progressive. However, why only have 'outcome standards', not structure or process standards as well? In some cases the label sits uncomfortably on the standard, some of which are more related to structure and process criteria than to outcome. Acknowledging this in the statement of the standards would give structural and process criteria the importance that they deserve in a comprehensive evaluation of quality, and open up the potential to develop proper outcome measures in steps three and four of the framework referred to at the beginning of this paper (p. 3). At the moment it seems as though structure and process have been discarded in favour of 'outcome', but all three components need to

be included in a comprehensive assessment of quality. As Bauman (1987) noted, each approach taken alone is not a valid indicator of quality, rather each is a component of a chain of causal connections.

While the outcome standards are a major step forward in defining quality of care, further progress can be made in quantifying the standards. It is possible to do this using psychometric techniques, as has been done in the past developing standardised questionnaires reviewed above. It is obvious from this discussion that each method of assessing quality of care has merit, and it is suggested here that a comprehensive system of evaluation of services provided for older adults could incorporate aspects of all three methods of assessing quality of care. Thus, the regulation procedure could be advanced even further by incorporating a standardised questionnaire format for some of the standards which are difficult to observe on a site visit. The advantages for standards monitoring team members would be that extra information could be obtained from people unable to be contacted on the day of the visit, for example by distributing a questionnaire to facility visitors before the official visit. Institution staff could also use parts of a standard instrument to check on their own quality of care, linking their own quality assurance processes into the standards monitoring process, thereby improving participation in the quality assessment process. Furthermore, attitudes (particularly to the residents' rights e.g. right to die with dignity) and health preferences may be more effectively covered in a written questionnaire that is completed by a number of staff, rather than by interview only with a handful of staff or the Director of Nursing.

Is it possible to measure the outcome of care for individual residents without having a set of standards that are translated into an individual-focussed assessment? The standards monitoring procedure acknowledges this point implicitly, since quality inspectors combine both individual interview and assessment at the facility level in their subjective assessment procedure. A standardised questionnaire could supplement this triangulation approach by collecting information at the individual level and providing a quantitative measure of quality at the facility level.

The question of whether outcome, process or structure of care is being measured in the regulation procedures of all three countries reviewed above needs further thought. Outcome

refers to what happens to the resident as a result of the service: whether the person receiving the service improved or did not deteriorate as much as would be expected without the service. Did the service make a difference to the health of the resident? Outcomes may be most straightforward to measure in an indicators approach.

All three approaches to assessing the quality of care can contribute to answering this question, by providing both objective and subjective measures of quality. Wan & Ferraro (1991) suggested that alternative strategies of evaluation need to be considered when assessing the impacts of health care programs on older adults, and it seems that until a method of establishing clearly the link between structure, process and outcome becomes available, a system which combines a number of approaches at evaluation will give the greatest reliability of results.

Finally, considering directions for future research, the cost consequences of care have not been considered in the context of Australian long term care services. Donabedian (1987) noted that improvement in quality is associated with a cost. But beyond a certain point, further improvements in the structural and process components of quality will not yield a proportional improvement in outcome for the resident.

This is an area where further research could investigate the relationship between input and outcome and examine the cost effectiveness of the regulation system being developed in Australia. On the whole, the long term care services provided in Australia are very good, so that implementation of an elaborate regulation system may not be producing vast improvement in the level of quality of care in services many of which may be near the 'ceiling' of quality able to be provided with their level of resources. At this stage this is only conjecture though, and the area is one in which some careful modelling of the relationship between input, cost and outcome could be very useful in planning further development of regulation and provision of services. For example, is it really cost effective in producing improvement in quality of care, to monitor consistently good facilities using the same or similar systems to those used to monitor care in facilities known to provide only marginal care? It may be that implementing qualitatively different monitoring procedures for the two extremes of the continuum of care is more cost effective than using the same system.

A system of 'self-evaluation', perhaps using key indicators or a standardised self-administered questionnaire, plus random audit checks, could be used for facilities with good track records, while unknown and poor facilities could be monitored using a more intensive combination of assessment procedures. The cost of such flexibility in the monitoring system could be assessed against the resultant improvement in outcome for residents.

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**Table 1**

Some instruments to measure quality of care, with an asterisk denoting that some items in the scale cover at least part of the objective of the outcome standards.

Scale	Reference	1. Health	2. Independence	3. Freedom	4. Homelike Environment	5. Dignity & Privacy	6. Variety of Experiences	7. Safety
Institutional Environment	King & Raynes (1968)			*		*		
Home for the Aged Description Questionnaire	Pincus et al (1968)					*		
Slater/OQual Pacs/ Mech version	Wandelt ager (1974)	*		*	*		*	*
Rush-Medicus	Hausman et al (1976)	*				*		*
Multiphasic Environmental Assessment Procedure	Moos & Lemke (1984)		*	*	*	8	*	*
Stresses Institutional Care	Stein et al (1985)	*	*					
Q2 Scale	Rhys-Hearn (1985)	*		*		*		*
Instrument of Health Status Measures	Horn & Swain (1987)							
Outpatient Satisfaction Questionnaire	Davis & Hobbs (1989)	*			*	*		
Qualcare	L Phillips et al (1990)	*			*			
ADCAP	Conrad & Guttman	*			*		*	*

**TABLE 2**

Key indicators of quality of care for nursing home and hostel residential care in Australia. Outcome indicators would be adjusted for case mix in each facility.

DATA SOURCE	SUGGESTED NEGATIVE OUTCOME INDICATORS
Pharmaceutical Benefits Scheme	Polypharmacy Index
NH10 financial return forms	Discharge Rate
	Mortality Rate
Standards Monitoring Team Reports	No. standards with 'urgent action required'

## APPENDIX 1

### Australian Federal Government Standards for Nursing Homes and Hostels

Briefly, the seven objectives under which the 31 standards for nursing homes are subsumed are:

- (i) Residents' health will be maintained at the optimum level possible.
- (ii) Residents will be enabled to achieve a maximum degree of independence as members of society.
- (iii) Each resident's right to exercise freedom of choice will be recognised and respected whenever this does not infringe on the rights of other people.
- (iv) The design, furnishing and routines of the nursing home will resemble an individual's home as far as reasonably possible.
- (v) The dignity and privacy of nursing home residents will be respected.
- (vi) Residents will be encouraged and enabled to participate in a wide variety of experiences appropriate to their interests and needs.
- (vii) The nursing home environment and practices will ensure the safety of residents, visitors and staff.

The five objectives under which there are altogether 25 standards for hostel residents can be summarised as follows:

- (i) Each resident is to have active control of his or her own life.
- (ii) The care needs of each resident to be identified and met.
- (iii) The dignity and privacy of each resident is to be respected.
- (iv) Each resident should exercise maximum social independence.
- (v) Residents must have opportunity to participate in the variety of activities and experiences of interest to them.
- (vi) A hostel is to provide a home-like environment for the comfort, safety and well-being of the residents.