

## **Chapter 7**

# **PHASE 3: TRIAL AND EVALUATION OF THE AUSTRALIAN QUALITY MATRIX OF CLINICAL CARE**

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### **PREFACE**

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The Resident Classification Scale (RCS) is the principal tool used in Australian nursing homes to determine levels of Commonwealth Government funding for residents. It also represents the only data collection instrument used by all providers in the aged care industry. For RCS purposes, residents are assessed on admission, annually thereafter, and as their condition changes. Individual resident care plans, developed following RCS assessment, are evaluated second monthly, and as conditions alter. Hence all residents in Australian nursing homes are reviewed at least six times every year. As Chapter 6 revealed, where possible the Australian Quality Matrix (AQM) adopted the RCS measurement criteria and implementation protocols, to minimise the additional work needed by proprietors to provide premium clinical care for residents. This chapter describes the results of its development, trial and evaluation in one 60 bed facility accommodating only high care residents in a major metropolitan centre.

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## SUMMARY OF MATRIX DEVELOPMENT

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As noted in Chapter 2, international best practice recognises that there are several distinct dimensions or domains of care in residential services for the aged. The AQM also acknowledges that any configuration of indicators into care domains must be arbitrary to some degree, because all aspects of a resident's life and care are interconnected. However to conform to international convention the AQM adopted four domains of care which included: resident health, personal care, resident lifestyle, and the care environment. The indicators were distributed between each of the domains, taking into account the Commonwealth Aged Care Standards, the RCS, and the 18 indicators identified by informants of this study during earlier stages of the project (see chapters 4 and 5). A summary of the matrix's development is included to enhance the reader's understanding of the tool being trialed and evaluated. Table 7.1 illustrates the distribution of indicators within their care domains, and it is followed by a short account of each.

### **AUSTRALIAN CARE DOMAIN 1 – RESIDENT HEALTH**

As Chapter 6 notes, resident health is one of the factors identified by the Aged Care Standards and Accreditation Agency as being of primary importance to the service nursing homes provide. Three of the indicators nominated by the informants in Chapter 4 conform with notions of achieving or maintaining resident health: pressure ulcer rates, rates of infection, and the use of multiple prescription drugs, described by Beers et al (1992) among others as poly pharmacy. The AQM

indicators are measured in terms of either their prevalence, or their incidence rates, using criteria that conform to those established by the Center for Health Systems Research and Analysis (CHSRA) at the University of Wisconsin and described initially in Chapter 6.

**Table 7.1 Australian Quality Matrix of clinical care**

<b>CARE DOMAIN</b>	<b>INDICATOR</b>	<b>MEASUREMENT CRITERIA</b>
1. Resident Health	1. Prevalence of Stage 1-4 pressure ulcers	Residents with pressure ulcers on most recent assessment ÷ All residents on most recent assessment
	2. Infections	Number of residents with infections from all sources ÷ All residents on most recent assessment
	3. Poly pharmacy	Number of residents who receive 9 or more medications each day on most recent assessment ÷ All residents on most recent assessment excluding those on 9 medications or more on previous assessment
2. Personal care	4. Incontinence	Number of residents who were incontinent on most recent assessment ÷ All residents on most recent assessment excluding those who are comatose, have IDCs or ostomys on most recent assessment
	5. Hydration	Number of dehydrated residents on most recent assessment ÷ All residents on most recent assessment
	6. Skin integrity (Prevalence of skin tears)	Number of residents with skin tears on most recent assessment ÷ All residents on most recent assessment
	7. Mobility	Number of residents requiring some or more assistance with mobility on most recent assessment ÷ All residents on most recent assessment excluding those who were mobility dependent on previous assessment
	8. Oral hygiene (Incidence of symptoms of dental/oral deterioration)	Number of residents who required dental/oral interventions between previous and most recent assessment ÷ All residents on most recent assessment

**Table 7.1 Australian Quality Matrix of clinical care continued**

<b>CARE DOMAIN</b>	<b>INDICATOR</b>	<b>MEASUREMENT CRITERIA</b>
2. Personal care cont.	9. Care of senses (Incidence of symptoms of visual or auditory deterioration)	Number of residents with symptoms of visual or auditory deterioration between previous and most recent assessment ÷ All residents on most recent assessment excluding those with maximal loss at previous assessment
3. Resident Lifestyle	10. Nutrition (Prevalence of weight loss)	Proportion of residents with weight loss of 5% or more in past 30 days or 10% or more in past 6 months ÷ All residents on most recent assessment
	11. Activities	Proportion of residents who participate in fewer than 2 activities per week on most recent assessment ÷ All residents on most recent assessment
	12. Complaints resolution	The number of formal complaints received between the previous and most recent assessment ÷ All residents on most recent assessment
	13. Spiritual well-being	Number of pastoral visits and services of worship between previous and most recent assessment ÷ All residents on most recent assessment
	14 Confined lifestyle difficulties	Number of residents with behavioural symptoms affecting others on most recent assessment ÷ All residents on most recent assessment
4. The Care Environment	15. Restraints	Number of residents who are restrained on a daily basis on most recent assessment ÷ All residents on most recent assessment
	16. Transfers (Prevalence of residents who fall)	Number of residents who had falls on most recent assessment ÷ All residents on most recent assessment
	17. Contact with the outside world	Number of residents with symptoms of depression on most recent assessment ÷ All residents on most recent assessment excluding those diagnosed with depression on previous assessment
	18. Family involvement	Number of new RCS claims for family support on most recent assessment ÷ All residents on most recent assessment excluding those claimed for on previous assessment

## **AUSTRALIAN CARE DOMAIN 2 – PERSONAL CARE**

In the Australian context, the provision of personal care comprises support for all the activities of daily living from the management of a resident's bowel or bladder activity to the care of their senses. Utilising the criteria identified by study informants, and in compliance with RCS characteristics, the AQM second care domain also incorporated hydration management, skin integrity, resident mobility, and oral hygiene, a total of six indicators in all. Their measurement descriptors have been developed using the terminology of the source documents.

## **AUSTRALIAN CARE DOMAIN 3 – RESIDENT LIFESTYLE**

Features of a resident's lifestyle, identified and defined by either study informants or the RCS, and incorporated into this care domain include: nutrition, activities and entertainment, complaint resolution, spiritual well-being and difficulties associated with a confined lifestyle. They comprise indicators 10–14 inclusive of the Australian Quality Matrix. It is recognised that eating and nutrition are as much about personal care as drinking, and that indicator 10 could have been placed in care domain 2. However, as Phase 2 results in Chapter 5 indicate, food issues, more than any other factor, are the subject of comment and complaint in resident committee meetings throughout the country, and they also featured strongly in responses from case study interviewees, described in Chapter 4. The role of nutrition in the lives of residents is influenced by a variety of factors outside the nature of the food to be consumed. The ambience in which it is eaten, the variety and choice of menus, and the presentation of the food itself are all important. However, more important than any other factor pertaining to nutrition,

according to study informants, is the ability to feed oneself, or the necessity for being fed. All of these matters will influence whether or not a resident loses weight over a month or half a year, the criteria by which this indicator is measured.

The other indicator of importance in the Australian context in care domain 3 is that of spiritual well-being. It features in Standard 3.8 of the 1997 Aged Care Standards, and was recognised as an issue of concern by case study informants. However, possibly due to the difficulty of measuring, spiritual well-being, or an indicator of this type, it rarely appears in international indices. It is possible that participation in pastoral visits or services of worship between one assessment period and another is one means of gauging the strength of this aspect of a resident's life style. However it is recognised that this restricted definition takes into account none of the myriad of other aspects of spirituality in the lives of some seniors in residential care.

#### **AUSTRALIAN CARE DOMAIN 4 – THE CARE ENVIRONMENT**

Care domain 4 deals with the resident's living environment, its geography, and those who inhabit it. Indicators were identified and defined according to Standards Agency, RCS or study informant criteria. There are four of these: the use of restraints, resident transfers, resident contact with the outside world, and family involvement in residents' lives. Again, a case could be made for the inclusion of issues about restraint in the lifestyle domain, but it was allocated to this position because it conforms most closely to Agency Standard 4.4, also called the Care Environment, in which the use of restraints is a feature. Resident transfers, their

mobility, and the prevalence of falls among residents are also addressed in this Standard, although in RCS terms they each have an item of their own on the scale, as does family involvement.

Another contestable indicator in this domain concerns resident contact with the outside world. This was the descriptor used by study informants during Phase 1 of the research. In terms of international practice it is an aspect of a resident's life that is seldom mentioned and, again, it is one which is difficult to quantify. Perhaps it could be measured in terms of exposure to non-staff personnel, although staff also represent a conduit to the outside world for residents who wish to exploit it. Furthermore, the descriptors adopted by the AQM – symptoms of depression – are also prevalent in seniors who reside in the community and, it may be assumed, have the potential to experience greater contact with society. However, as Chapter 2 demonstrated, for many older people admission to residential care is accompanied by episodes of depression, particularly during their transition period. Therefore it represented one means by which the AQM could determine the impact on seniors of the diminution in their exposure to the wider world. The ICD 9 classifications used by the AQM are those also adopted by CHSRA in supported accommodation. They are detailed in Appendix 2.

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## MATRIX EVALUATION

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The Documentation and Accountability Manual (1998) of the Commonwealth Department of Health and Aged Care identifies a range of criteria by which aged care services can be evaluated. In adapting them for the purposes of the AQM trial, the *Quality of Care for Nursing Home Residents*' project judged that the success or failure of the matrix could be tested answering eight questions:

1. Did the Matrix identify the quality clinical indicators it claimed to identify?
2. Is the facility progressing towards its long term goal of achieving premium care?
3. Has it accomplished any short term goals?
4. If there are stated deadlines for achieving goals, are they being met?
5. Were the goals that were set observable and measurable?
6. Have the facility's problems been totally or partially resolved?
7. Were any of the problems incorrectly stated in the first place?
8. Have any new problems arisen since the implementation of the matrix?

The project took into account the views of hundreds of aged care practitioners over a period of three years, in addition to the policy objectives of both government and industry sources and international practice, to identify and answer question 1. Consistent consideration and application of the matrix has the potential to identify other indicators over time. However, the application of the matrix to a current



service, and the ability to assemble information on all 18 indicators, suggests that each of the original indicators has relevance to contemporary aged care practices in Australia.

Question 2 concerns the facility's long term goal of achieving premium levels of care. In some indicators there was a diminution in incidence or prevalence rates, while in others there was an expansion, over the trial period. Later in this chapter, the results will be discussed indicator by indicator, and explanations offered for the variations in results between months. Question 3 raises the matter of short-term goals and in the discussion on indicator outcomes those that were achieved will be addressed.

A statement of deadlines, identified in question 4, was not deemed appropriate during the inaugural trial by the researcher, other than in the generic sense of aspiring to improve results by a series of minor interventions. These too are discussed in the next section on individual indicator results. Question 5 considers the observability and measurability of individual goals. As Chapter 3 describes in detail, the principal criterion for inclusion in the AQM was that each indicator be measurable. There is, therefore, no doubt that this question is answerable in the affirmative. Question 6 reflects on the resolution of facility problems. For this preliminary trial the answer is also affirmative, if the question itself is revised to inquire whether facility problems have been identified. The final two questions, about new problems, or the terms in which original problems were couched, do not

apply in the context of this first trial. However, they will be important in future applications of the matrix.

One other matter concerns the notion of continuous improvement identified in Chapter 2. As Green and Lewis (1986) claim, the process of evaluation almost always incorporates the continuous improvement cycle in one form or another. It is certainly important in the present context. The trial of the prototype afforded little opportunity to demonstrate continuous improvement in the Phase 3 home. However, because homes are only accredited for a finite period, the repeated accreditation process will ensure that the continuous improvement cycle plays a paramount role in the delivery of aged care services into the future. Therefore, any application of the AQM would need to be undertaken recognising that this is a fundamental characteristic of the industry itself, and achievements or outcomes evaluated in terms of the CI cycle.

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## **MATRIX TRIAL RESULTS**

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As the matrix represents a prototype, its trial and the evaluation of its efficacy was confined to one facility in a major metropolitan centre. The home itself accommodated 60 high care residents and, by the end of the trial, it had passed all 44 outcomes to achieve three years of Commonwealth accreditation. The trial had two principal purposes. First, it aimed to establish some base line information about each indicator, as it applied in the trial facility. The second purpose was to

use the matrix to identify potential strengths and weaknesses in the service provided in this particular home. Ultimately any application of the matrix would have subsidiary goals associated with the achievement of continuous improvement in each aspect of the service covered by individual indicators, and would incorporate time frames in which to demonstrate progress towards the achievement of such goals. However, this was not a practical option during its first application.

The trial commenced by totalling the number of episodes of each event or factor identified as a potential indicator during the three month period between November 1999 and January 2000. It had been proposed to utilise the preceding three months of data to form a 'control' mechanism, essential in a traditional case control study. However, data on all 18 indicators had not been collected by the Phase 3 home, and the notion of a case control study was abandoned in favour of a comparative study. In addition, for the purpose of the trial, Indicator 13 (Spiritual well-being) was defined as being the number of pastoral visits and services of worship provided in the home each month, although it is recognised that the use of a quantitative description in no way reflects the totality of issues encompassed in the notion 'spiritual well-being'. Further, with reference to Indicator 16 'prevalence of falls', each resident was considered independently of the number of falls they experienced. Therefore, for example, two falls suffered by the same resident in one month were counted as one event. The numbers of falls were totalled separately, however, to detect any trends. In a similar vein, the one

resident who has nine or more prescription drugs each day (Indicator 3, poly pharmacy) appeared only once each month for the three months.

Each of the 18 indicators was assessed using the RCS data assembled in the course of their normal duties by members of the care staff. Other statistics collected by the facility, such as the number of accidents and incidents reported each month, were also utilised where appropriate. Any gaps in the data, not identified in this manner, were obtained specifically by the researcher to ensure that the matrix trial would be complete. As indicated above, this is a conscience home that delivers high quality care, and so many of the raw figures are lower than might be expected in some other homes of a similar size around Australia. Table 7.2 reports the monthly totals by indicator and Table 7.3 provides an account of the indicator scores during the trial. The tables represent a summary of the outcomes during the trial period, and each result is discussed in detail to conclude the chapter. It should be noted that there were five deaths during the trial period, one each in November and December, and three in January. The implications of this for each indicator are also described in the account of the findings where it was considered relevant.

Utilising the proposed measurement criteria for each of the 18 indicators, Table 7.3 identifies an indicator score for each of the 18 items each month for the trial period, expressed as a percentage of the sample for the month. (The reader is reminded that each indicator is independent and that there is no total Matrix score, as there is, for example, in the RCS).

**Table 7.2 Matrix trial - Number of events**

<b>NO</b>	<b>INDICATOR</b>	<b>NOV 99</b>	<b>DEC 99</b>	<b>JAN 00</b>
1	Stage 1-4 pressure ulcers	Nil	2	4
2	Infections from all sources	1	Nil	2
3	Poly pharmacy	1	1	1
4	Incontinence (Number of incontinent residents excluding those with IDCs)	51	49	42
5	Hydration	4	5	6
6	Skin integrity - skin tears	2	3	3
7	Mobility	42	40	39
8	Oral hygiene - Episodes of dental/oral deterioration	Nil	1	2
9	Care of the senses – Episodes of visual or auditory deterioration	Nil	Nil	1
10	Nutrition – Episodes of weight loss	2	1	3
11	Activities	6	4	4
12	Formal complaints	2	1	1
13	Spiritual well-being	18	22	10
14	Confined lifestyle difficulties	10	7	12
15	Restraints (excluding bed rails)	14	10	12
16	Transfers, No. of residents who fell	5	3	4
17	Contact with the outside world	2	2	3
18	Family involvement	9	12	7

**Table 7.3 Indicator scores for the AQM during the trial**

<b>NO</b>	<b>INDICATOR</b>	<b>NOV 99</b>	<b>DEC 99</b>	<b>JAN 00</b>
1	Stage 1-4 pressure ulcers	Nil	3.3%	6.6%
2	Infections from all sources	1.6%	Nil	3.3%
3	Poly pharmacy	1.6%	1.6%	1.6%
4	Incontinence (Number of incontinent residents excluding those with IDCs)	88%	84%	71%
5	Hydration	6.6%	8.3%	10%
6	Skin integrity - skin tears	3.3%	5%	5%
7	Mobility	75%	71%	65%
8	Oral hygiene - Episodes of dental/oral deterioration	Nil	1.6%	3.3%
9	Care of the senses – Episodes of visual or auditory deterioration	Nil	Nil	1.6%
10	Nutrition – Episodes of weight loss	3.3%	1.6%	5%
11	Activities	10%	6.6%	6.6%
12	Formal complaints	3.3%	1.6%	1.6%
13	Spiritual well-being	30%	37%	16.6%
14	Confined lifestyle difficulties	16.6%	11.7%	20%
15	Restraints (excluding bed rails)	23%	16.6%	20%
16	Transfers, No. of residents who fell	8.3%	3.6%	6.6%
17	Contact with the outside world	3.4%	3.5%	5.4%
18	Family involvement	15%	20%	11.6%

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## **INDIVIDUAL INDICATOR RESULTS DURING THE MATRIX TRIAL**

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### **INDICATOR 1 STAGE 1-4 PRESSURE ULCERS**

During November there were no identifiable pressure ulcers among the 60 high care residents in the trial facility. The number rose to two and doubled to four over the next two months. While the trend is troublesome, the numbers remain relatively low. The facility is located in a subtropical climate, and it is not airconditioned. It is possible therefore that during the summer, increased perspiration associated with higher temperatures, combined with the disinclination by residents to move more frequently than is necessary, may have contributed to the increased friability of residents' skin. Furthermore, two of the four who developed pressure ulcers in January were not alive at the end of the trial, which implies that general systemic breakdown may have also been an influential factor in this phenomenon. The facility would be advised to review its pressure care routines during the summer, and the possible purchase of portable air conditioners included in forthcoming budgets, as two interventions able to act as preventative agents to minimise this potential trend.

### **INDICATOR 2 INFECTIONS FROM ALL SOURCES**

One resident had a diagnosed urinary tract infection in November, none in December, and two in January. There were no other infections reported during the trial. The numbers are too small to draw any conclusions or identify a trend.

### **INDICATOR 3 POLY PHARMACY**

Only one of the 60 residents received nine or more medications each day throughout the entire trial period. This resident is a long term occupant of this facility, and in receipt of monthly medication reviews by both his General Practitioner and the Chief Pharmacist associated with the home. The small response suggests that the use of multiple medications is not a problem in this home. Further, that the pharmaceutical service also reviews all recipients of any prescription medication on a monthly or three monthly basis implies the facility's policies and procedures already in place ensure this aspect of care is at or near a premium level.

### **INDICATOR 4 INCONTINENCE**

A diminishing trend in incontinence is apparent over the trial period, with the number of at least partially incontinent residents falling from 88% to 71% during the three months. Caution is expressed at this apparent improvement, however. As noted above, several residents died during the trial, the majority of whom were incontinent in their final days or weeks. Many of the new residents were mobile, cognitively intact, and generally less frail than their predecessors, and therefore less likely to exhibit symptoms of incontinence. While there is always room to improve continence management techniques, it would not be possible to detect trends from this particular set of circumstances.



## **INDICATOR 5 HYDRATION**

As Appendix 2 reveals, the definition of dehydration adopted by the AQM and derived initially from the CHSRA model was one in which resident 'output exceeded intake'. All residents for whom there was any potential danger of developing symptoms of dehydration were placed on fluid balance charts for periods of up to three days as part of the trial. Among those being assessed in this manner, four were found to have greater output than intake during November. Interventions of various sorts were adopted to ensure that these individuals were not thirsty or suffering similar symptoms. New residents and those who were susceptible to dehydration, such as being on prescription diuretics, were reviewed in the same manner in December and January. Five were found to be dehydrated in December and six in January. Undoubtedly, the summer months will have influenced this outcome. Nevertheless, the facility would be advised to review its hydration management practices, with the inclusion of simple strategies such as the use of a 'drinks nurse', who has specific responsibility for all resident fluid intake, or other similar arrangements.

## **INDICATOR 6 SKIN INTEGRITY**

Principal among all the manifestations of compromised skin integrity is the presence of tears in the skin, and it is for that reason they were chosen as the means of measuring the quality of skin care. In the trial home, the most common cause of skin tears were those that arose as a consequence of falls, and they are discussed separately in Indicator 16. Other aspects of compromised skin integrity

include the presence of rashes, fungal infections and, obviously, pressure ulcers, which were considered in Indicator 1.

With regard to non-fall skin tears, these appear as a consequence of a variety of activities including transfers between bed and chair, resident restlessness, in addition to the general friability of aging skin. All of these causes can be eliminated with the cautious execution of the cares associated with the activities of daily living. For example, adhering to a specifically designed manual handling regimen, the use of lubricants, massage, and washing skin that has been contaminated with urine, among many others, would be helpful.

During the three months of the matrix trial, there were two new non-fall skin tears reported in November, three in December, and three in January. As with the infections, the numbers are too small to demonstrate a trend. Again, the reader is reminded that there were several deaths during the trial, and residents at the end of their lives are more likely to have reduced circulation and other characteristics associated with multi system failures leading to increased friability of skin and the potential for it to be easily damaged.

#### **INDICATOR 7 MOBILITY**

As Table 7.1 indicates, the AQM calculates compromised mobility with the numerator consisting of the number of residents requiring some or more assistance with mobility on most recent assessment, and the denominator being all residents on most recent assessment, excluding those who were mobility dependent on

previous assessment. In November 1999 four of the 60 residents could be described as being completely mobility dependent, in the sense that they were bed-bound and required care staff to achieve all of their repositioning, transfers, and other relocation requirements. Of the remaining 56 residents, 42 (75%) required some assistance with mobility. In December 40 required some assistance. By January, one additional resident was completely dependent on staff to execute all of their movements but, due to the admission of new residents, there were only 39 (65%) who required some or more assistance, excluding those who were assessed as being completely dependent in previous assessments.

#### **INDICATOR 8 ORAL HYGIENE**

There were no new episodes of dental/oral deterioration in November, one in December and two in January, during the matrix trial. They were measured by the need to visit the dentist, or the presence of newly diagnosed gingivitis. In all cases the matters pertained to natural rather than artificial teeth, as no one was assessed for new dentures during the summer. There were no new diagnoses of other diseases of the mouth such as candida.

It should be noted that a formal review of oral hygiene was not conducted automatically in the Phase 3 home on a regular basis. Rather, *ad hoc* reporting by those who deliver daily care was the usual practice. When the limitations associated with such an approach were highlighted, the DON agreed to introduce an annual dental inspection conducted in the home by a local dentists, providing

residents were willing to pay for the additional service. By July 2000 almost a third of residents or their representatives (n=19) had agreed to participate.

#### **INDICATOR 9 CARE OF SENSES**

Chapter 6 indicated the reasons why the only senses to be reviewed in this indicator were sight and hearing. There were no new episodes of visual or auditory deterioration reported during November and December 1999 and only one in January. This took the form of the biennial ophthalmic review of the eyes of one resident still able to read but dependent on spectacles. The numbers were too small to be indicative of anything or even to show any trends. However, that there was a policy in place for all residents to be assessed on a regular basis demonstrates that the facility is well prepared to deal with changes in resident conditions. Other techniques for managing this indicator include regular progress reports by personnel such as the diversional therapist or other care staff exposed to residents likely to demonstrate sensory deterioration on a frequent basis.

#### **INDICATOR 10 NUTRITION**

As noted in Table 7.1 this indicator is evidenced in terms of weight loss of either 5% over one month or 10% over six months. There were two residents with weight loss in November, only one in December (possibly as a consequence of Christmas), and three in January. Two of the three in January were among those residents who died before the end of the trial.

## **INDICATOR 11 ACTIVITIES**

In the trial home, the diversion therapy team develop individualised activities plans for all residents willing to participate in them. Those who decline to participate are given the option to change their minds on a daily basis. For some, their regimen may include a daily program, and for others, alternate days. Sessions may be offered in the morning, afternoon or evening, and are available seven days a week. Activities are either group events, such as games, or individual events such as aromatherapy. Records are kept of attendances at all sessions, and reviews of resident/relative satisfaction about the activities program are conducted each month. In November, 10% (n=6) of all residents attended fewer than two activities each week, and in December and January a total of four residents in each month participated less frequently than twice each week. Once again, the trial demonstrated that, in terms of the activities program, residents in the trial home receive very high quality care, and it is hard to suggest what additional initiatives might be undertaken to achieve optimal care.

## **INDICATOR 12 COMPLAINTS**

There were two formal complaints in November and one each in December and January. As Chapter 6 showed, this indicator is confined to those matters about which there are sufficiently strong feelings to document the issue. Complaints in this context do not include 'grumbles' about the quality of the personal laundry service, for example, unless they have been written down. The resolution of one complaint involved the participation of the Department of Health and Aged Care Complaints Unit. However, as it had been received anonymously, the extent to

which it could be rectified was limited. The home has a Comments and Complaints protocol, which is displayed widely throughout the facility and also included in the Residents Handbook and the Staff Handbook. For that reason, many informal disputes can be resolved readily, without resorting to formal mediation or other strategies.

### **INDICATOR 13 SPIRITUAL WELL-BEING**

Issues surrounding this indicator have been canvassed widely in the discussion on care domain 3 in Chapter 6, and the weaknesses in it identified. In the absence of a more comprehensive but measurable definition, for the purposes of the trial the achievement of spiritual well-being was reviewed in terms of the number of pastoral visits and services of worship for residents over the three months. There were 18 events of this nature in November, 22 in December, and 10 in January. Clergy and other pastoral care workers are required to announce their presence, and seek permission to visit residents every time they enter the facility. In addition, there is a regular schedule of services of worship displayed in the recreation room and other public places. So it did not require exceptional effort to keep a total of these activities, although it is one of the few indicators not covered directly by the RCS.

### **INDICATOR 14 CONFINED LIFESTYLE DIFFICULTIES**

As noted in Chapter 6, this indicator is defined in terms of behavioural symptoms exhibited by residents which affect others. In using these criteria, the indicator conforms to that developed by the CHSRA at the University of Wisconsin.

Appendix 2 details the symptoms encompassed by this definition. During the trial period ten residents exhibited one or more of these symptoms in November, seven in December and 12 in January. The fall in the number of episodes in December may be attributable to residents being discharged temporarily for short periods over the Christmas holidays; otherwise it seems that there is a degree of stability in the numbers for this indicator, in the trial home. This high number warrants further attention, and the following questions need to be answered. Is it the same group of people experiencing the difficulties month after month? Are there clinical reasons to account for the problems and if so, what interventions need to be taken. Are there structural reasons? For example, would a new location with a different outlook overcome the problem and would the challenges associated with a room change justify the actions? It is an indicator in which a specific solution will need to be found for each individual resident. Whatever the reasons, the numbers indicate that the home should give greater attention to this aspect of its service.

#### **INDICATOR 15 RESTRAINTS**

Excluding the use of bed rails, which represents a form of restraint as defined by the (then) Department of Health and Family Services (1997), 14 residents required the use of other restraining devices such as lap sashes in November, 10 in December and 12 in January. Two of those using restraints in November had died by the end of the trial period, and one had become bed fast. At the trial facility, the protocol associated with the use of restraints is as follows: all residents for whom the use of a restraint may be contemplated must be subject to a falls risk assessment. Twelve categories of concern are reviewed, of which the resident must

be at high risk in six or more, before the potential use of a restraint is contemplated. In addition, the resident him or her self or their representative must sign a form authorising the use of specified restraint devices, such as a lap sash or tray table. The use of a device must also be sanctioned by the resident's medical advisor. Further, release times per hour of restraint must be specified, and staff are obliged to sign a restraint management form when they complete their periods of restraint-free supervision of individual residents. All of these conditions must be met before the use of a restraining device is implemented. Given that during November, 23% of residents were restrained, and at the end of the trial 20% of residents were still restrained, the matrix has identified this area as being one in which there is considerable room for improvement, despite a comprehensive protocol for restraint management being in place.

#### **INDICATOR 16 RESIDENT TRANSFERS AND THE PREVALENCE OF RESIDENTS WHO FALL**

There were 10 episodes of resident falls reported in November involving five residents, seven in December involving three residents and nine in January involving four residents. One of the residents, 'Mr. W', actually contributed four falls to this total of 26 and, when the annual total of falls for the year April 1999 until March 2000 was considered, 'Mr. W' had contributed 20% of them. In addition, five of the ten in November resulted in a serious injury, which varied from skin tears warranting steri-strip treatment, to a fractured neck of femur in one of the elderly women, necessitating hospitalisation and surgery. Of the seven in December, three resulted in serious skin tears, and there were also three injuries



associated with the nine falls in January. Mr. W received skin tears in two of his four falls. The home may be advised to review its resident transfer strategies to minimise the possibility of resident falls because there was an average of over two falls each week, throughout the trial period. Furthermore, the supervision of residents may also warrant further investigation because approximately one third of the falls (n=8) occurred when residents were unattended in their own rooms or elsewhere in unsupervised situations.

#### **INDICATOR 17 CONTACT WITH THE OUTSIDE WORLD**

This indicator was discussed at length when care domain 4 was considered. It is defined in terms of the number of residents with symptoms of depression on most recent assessment, excluding those who had been diagnosed with depression on the previous assessment. Appendix 2 details the ICD 9 codes associated with this definition. (The reader will recall that periods of assessment are conducted at second monthly intervals in accordance with the requirements of care plan review described in the *Documentation and Accountability Manual* (1998) of the Commonwealth Government.)

In November, one of the 60 residents had been diagnosed previously with depression (although there were several other residents with symptoms of this condition who were not formally diagnosed). Two residents received a formal diagnosis, which complied with one or more of the ICD 9 criteria during that month. In December these two contributed to the total that were excluded from the next assessment period, and two additional residents were identified by their

medical advisers. One of the original residents died during January but this left a total of 56 residents in the denominator when calculating the January results. Three residents were identified by their medical advisers as having newly acquired depression during the final month of the trial. As this represents a threefold increase in the indicator compared with the numbers prior to the trial, the possibility that the trial itself influenced the outcomes must be considered. By alerting the GPs to the possible presence of depression among their patients and, as a consequence, including it in their formal diagnoses, the month-by-month totals might have been skewed.

#### **INDICATOR 18 FAMILY INVOLVEMENT**

It was noted in Chapter 6 that there are points awarded on the Resident Classification Scale for the time and attention given to residents' family members. This might include providing support, explanations about their loved one's care, counselling, and similar tasks. This could be undertaken by registered nurses or any other members of staff. In November, there were nine episodes of contact with family members registered on RCS assessments, 12 new episodes in December, and seven in January. RCS points are awarded according to the amount of time or the degree of support that is required, and the levels will vary with changes in resident condition, the personalities of the relatives, and a variety of other factors. That degree of specialisation has not been incorporated into the original version of the AQM; however, a case may be made to modify the matrix if the subject proves to be more demanding than first anticipated.

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### PHASE 3 LIMITATIONS

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There were two fundamental limitations associated with the implementation of Phase 3 of the project. The first arose as a consequence of the opportunity to trial the prototype in only one home. Notwithstanding that the home had been drawn at random from facilities in the study sample, the inclusion criteria were sufficiently rigorous to ensure that the Phase 3 home may not have been representative of the industry as a whole. Furthermore, while two other facilities also met these criteria, the lengthy and intensive nature of the trial process itself, coupled with the need for the researcher to be present in the trial homes on a very regular if not daily basis, meant that it would not have been possible to undertake more than one period of evaluation at a time during the three year project.

The second limitation is also a reflection of the time in which the project was conducted. It is acknowledged that three months is a very short period in which to trial and evaluate a tool as complex as the Australian Quality Matrix. At the onset of the investigation, a total of six of the 36 months of the study was allocated to the implementation of each of the Phases, with a further six months to write up each of the outcomes. As Figure 3.1 in Chapter 3 reveals, the study conformed to this protocol with some minor modifications.

However, during the period October 1999 to July 2000 the vast majority of nursing homes in Australia, including the Phase 3 home, were in the midst of preparing for accreditation. At the request of the facility, the period of residency of the researcher was confined to four months, which had the effect of limiting the time available to conduct the trial. Further, it is not appropriate (or even possible) to simply enter a facility and start counting episodes of each indicator. Preliminary visits for reasons of courtesy, and information sessions in preparation for the project proper, are a fundamental component of research which involved this level of intimacy. Therefore, it required a minimum period in advance of the commencement of the trial in which to familiarise the staff and residents with the project. Even if a second facility was willing to have the researcher conduct a second trial following the conclusion of the first, the period available within the project's overall time frame to do so would have been too restricted to be of significant value. In addition, while they were not approached on the issue, it is possible that matters pertaining to accreditation, which preoccupied the Phase 3 home, would have been of equal concern to the other two in the study sample eligible to participate. As a consequence of this experience, as Chapter 8 will indicate, it is proposed that further trials of longer duration be undertaken in multiple centres in all states and territories, to confirm the validity and reliability of the Australian Quality Matrix to the nation's aged care industry.

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## SYNOPSIS

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As noted at the outset, the Australian Quality Matrix of clinical care was designed to highlight weaknesses in individual areas of care provided within facilities, suggest remedies, and to provide material for cross facility comparisons. Scores for each indicator, and the quality of clinical care provided from the home overall can be calculated, as indicated in Tables 7.2 and 7.3. Matters that remain to be addressed in further research include methods of taking into account the contributions made to the totals in each assessment period by individuals with specific weaknesses, such as Mr. W's propensity to fall, or someone else's gradual systemic failure, which lead ultimately to death. Further, the entire matrix must be tested in a variety of homes, including those with poor outcomes, to ensure that it has validity and reliability across the nation's aged care industry as a whole.

## Chapter 8

### CONCLUSION

The philosophical antecedents that informed the *Quality of Care for Nursing Home Residents*' project were drawn from many sources. Throughout history, theoreticians and practitioners alike have been interested in ageing, sometimes for disreputable reasons such as searching for agents that would rejuvenate the old. Fortuitously, some with more noble aspirations have documented their thoughts. For example, Edmund Burke (1910:93) observed that 'society is a partnership ... between those who are living, those who are dead, and those who are to be born'. Such a partnership may be presumed to imply an intergenerational contract of mutual obligation.

The modern era of aged care could be regarded as starting with Nascher (1914). He coined the term 'geriatrics' to address systematically the investigation of changes in bodily structure and function, as well as an interest in pathological degeneration as people age. Late 20<sup>th</sup> century philosophers such as Giddens (1998) look to non-physiological parameters to investigate issues of ageing. He among others, including Cassel et al (1999, 1992), considered matters such as resource rationing in the delivery of aged care, and retirement 'ghettos' for the well aged, and viewed them with consternation. From an Australian perspective, Kendig and Browning (1997) noted that '... the contributions made by older people to society far outweigh their burden'. The project admitted to an obligation among current care providers to meet the

needs of the present generation of seniors. It also hoped that future care providers would approach their role with magnanimity. One means by which these responsibilities may be fulfilled is in the development and application of a set of standards designed specifically to deliver premium levels of care to residents in Australian nursing homes.

In practical terms, the project accepted the challenge posed by Braithwaite et al. (1993) that standards monitoring, and consequently quality of care, could be advantaged with a more comprehensive collection of data. Further, it recognised that the existing system, in the form of the resident classification scale with its second monthly assessments of residents' care and conditions, already represented a thorough standards monitoring process. All that was required was its extended application for use as a system of continuous quality improvement, taking advantage of information already collected but only being used as a funding mechanism. The development of the Australian Quality Matrix answered the 1993 challenge, and its establishment was guided by the principle that its implementation makes the minimum possible additional demands on the heavy workload of aged care practitioners in the delivery of clinical care.

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### **THE RESEARCH QUESTION ANSWERED**

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Chapters 1 and 2 hypothesised that the quality of care for residents in Australian nursing homes would be improved by the application of standards designed specifically for residents with high level care needs. Chapters 3, 4 and

5 described in detail the means by which the indicators themselves were identified, and Chapter 6 documented their incorporation into a tool for achieving continuous quality improvement in clinical care. Chapter 7 recorded the trial and evaluation of the prototype tool and identified a variety of strengths and weaknesses in the service provided by the Phase 3 home, thereby affording it an opportunity to improve the quality of the care it delivered.

### **CARE IMPROVEMENTS IDENTIFIED BY THE AQM TRIAL**

To demonstrate that the application of the Australian Quality Matrix identified areas of care, which warranted improvement, the indicators were reviewed one at a time, and the results discussed. The AQM trial identified a weakness in the manner in which the Phase 3 home met Australian indicator 1, 'stage 1-4 pressure ulcers'. While small, there was a seasonal increase in the number of residents with pressure ulcers over the trial period. A variety of solutions were suggested to improve this situation.

Monitoring Australian indicator 2, 'infections from all sources', the AQM highlighted the competence of the Phase 3 home in dealing with this aspect of clinical care. The same claim could also be made for Australian indicator 3 in which only one resident was the recipient of 'nine or more medications on a daily basis'. The trial ascertained that the home provided a monthly or quarterly review of all pharmaceutical regimens in use in the home. This represented another example of the delivery of premium level care.



During the application of the AQM prototype, an improvement was detectable in Australian indicator 4 statistics, 'the rate of incontinence', among the home's population. While commendable in itself, Chapter 7 detailed a range of reasons why this improvement could be attributable to factors other than incontinence management. However, the value of the matrix in identifying the trend was undeniable. Australian indicator 5 addresses 'hydration management'. Here too potential weaknesses in the Phase 3 home service were identified as a consequence of the application of the matrix. Approximately 10% of residents were discovered to be dehydrated in each month of the trial. Several strategies for overcoming this situation were recommended.

The AMQ detected that the Phase 3 home provided a very high standard of care in regard to indicator 6, 'skin integrity'. The number of episodes of this indicator reported each month was so small that a trend could not be detected. With regard to indicator 7, 'compromised mobility', a diminishing number of residents in this position were reported during the three months of the trial. However, as with improved rates of continence, the causes of this apparent progress were due, at least in part, to reasons other than enhanced quality of care. For example, newly admitted residents were more mobile than those they replaced. This, therefore, is another area that the AQM identified as warranting further investigation by the Phase 3 home.

The trial also identified a weakness in the delivery of 'oral and dental care', Australian indicator 8. As a consequence, the home expanded its service in this area, an increase welcomed by almost a third of the residents or their

representatives. They agreed to participate in an annual dental review conducted by an outside dentist, despite the fact that there were additional charges involved.

In contrast to dental care, the AQM identified that 'care of the senses' (indicator 9) was being provided at near optimal levels by the Phase 3 home. Indicator 10, the 'prevalence of weight loss among residents', was also identified by the AQM trial as being at extremely low levels. Therefore the home was worthy of commendation for the manner in which it met all facets of the nutritional needs of its residents.

The AQM recognised that the Phase 3 home offered an exemplary diversional therapy 'program of activities' (indicator 11). Over 150 hours of group or personal pursuits are delivered each week by a team of six personnel with differing areas of interest and expertise. The trial also demonstrated that the home delivered excellent care in the area covered by indicator 12, procedures for dealing with 'comments and complaints'. Approximately one formal complaint a month was recorded during the trial period, and a comprehensive written and practical protocol was also in place to resolve any disputes that did arise.

Australian indicator 13 comprises 'spiritual well-being'. The difficulty in defining, let alone measuring this indicator, was canvassed at length in every chapter in which the matter arose. The merits of including it at all in the AQM were also discussed. However, it appears in the Commonwealth standards. It

was also raised by a variety of study informants with regard to everyday care, and also with reference to issues pertaining to cultural sensitivity, which include aspects of spirituality. Therefore it was decided to retain the indicator in the matrix.

As Chapter 7 explained, for the purpose of the trial, spiritual well-being was measured in terms of the number of pastoral visits and services of worship available to residents during the three months. Over the period there were 50 events of this type, the equivalent of one every second day. Therefore the matrix was able to determine that within the limitations of the definition, the Phase 3 home paid more than adequate attention to the spiritual needs of its residents.

The AQM demonstrated that within the trial home, up to 20% of residents exhibited some of the symptoms associated with 'confined lifestyle difficulties', indicator 14. This apparently high number may be attributable to a variety of factors, but until the home undertakes a major investigation, the answers will be purely speculative. The home was encouraged to review its policies in regard to this aspect of care.

Another area of concern in the Phase 3 home identified by the AQM during its first trial concerns the 'use of restraints', indicator 15. As Chapter 7 documented, despite a comprehensive protocol for restraint management, 20% of residents were subject to at least some form of restraining device for several hours each day of the three month trial. This situation was identified by the

application of the AQM, and may have gone undetected in its absence, because the care recorded about individual residents is stored in their separate files. Without a reason for aggregating the information, the high proportion of residents who are restrained may not have been detected.

Yet another weakness in the care provided by the Phase 3 home was also detected with the application of the AQM. During the trial 26 falls were reported (indicator 16), 11 of which resulted in some degree of physical trauma varying from skin tears needing steri-strips to a fractured femur requiring surgery. As a consequence the home was advised to review its resident transfer strategies, and its resident supervision protocols.

Finally, the investigation of the home's ability to facilitate 'residents' contact with the outside world' (indicator 17), and the 'involvement of family and friends' in the life of the residents in the home (indicator 18), identified the high degree of competence with which the Phase 3 home managed these two indicators of care. These achievements may not have been catalogued had it not been for the application of the matrix. Further, while willingly applauding the accomplishments, it is important to recognise that the attainment and maintenance of quality care is a continuous process, and the Phase 3 home should not 'rest on its laurels' but aspire to ever higher benchmarks.

The above summary illustrates that the application of standards designed specifically for residents with high level care needs improved the quality of care for those in one particular Australian nursing home by identifying the

strengths and weaknesses of the services it delivers. This afforded the proprietor an opportunity to build on existing high quality features and at the same time detect areas in which the service could be enhanced. As Chapter 7 indicated, a variety of solutions to the weaknesses were also offered, some of which were implemented at or soon after the conclusion of the trial. Utilising the continuous improvement cycle detailed in Chapter 2, subsequent assessment periods would enable the effectiveness of interventions introduced to rectify identified weaknesses to be reviewed.

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## **STRATEGIES FOR THE IMPLEMENTATION OF THE AQM**

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Chapter 6 noted that RCS data are reviewed every two months as a consequence of the appraisal of each resident's care plan, a regulatory requirement of all care providers by the Commonwealth government (1998). In addition, the entire assessment process, examining all 20 aspects of care, is repeated each year on the anniversary of a resident's admission, and the new category to which a resident belongs allocated by the Department of Health and Aged Care as a consequence.

### **WHO WILL DO THE JOB?**

Individual team leaders are responsible for ensuring that the care plans of their own residents are reviewed and documented on schedule. However, it is proposed that the duties associated with the administration of the AQM be assigned to the job description of another individual. Responsibility for this may vary between facilities. For example, if a quality assurance officer exists

already he or she could be made accountable for assembling indicator data from individual care plans into statistics relevant to the entire facility. They could also be responsible for supervising the implementation of strategies and interventions to overcome weaknesses detected in the previous periods of assessment. If the home does not employ a person in this type of position, the nurse educator could fulfil the function with equal success.

Alternatively, the duty statement of a deputy Director of Nursing (DDON), night supervisor or similar position could include the assembly of overall facility data. A Deputy DON is likely to have the administrative expertise to undertake this task as an adjunct to duties associated with, for example, the compilation of statistics for Workplace Health and Safety purposes. The night supervisor is likely to have extended periods of uninterrupted time while residents are asleep, on at least some nights each week or roster period, to accomplish this duty. That is to say, responsibility for assembling facility-wide statistics could be added to routine functions associated with an existing position, thereby ameliorating the need to employ additional staff. The educator or the DDON would also be in a position to supervise any corrective actions needed to be taken to overcome identified weaknesses. There is one qualification to this suggestion, however, irrespective of to whom the task is allocated, and that is that the person will require tuition in the matrix's execution and uses. The cost of this training should be met by the proprietor as part of the facility's obligation to meet accreditation Standards 1.3, 2.3, 3.3, and 4.3 on staff education.

## **WHAT HAPPENS TO THE DATA?**

While acknowledging the issue of confidentiality, which would have to be resolved in advance of any public disclosure, the outcomes of the second monthly reviews could be made available to all practitioners, and residents or their representatives interested in learning them. Accomplishments over time will add to the standing of the facility and encourage personnel to maintain and/or improve their performance. The techniques for disseminating performance ratings may include lectures or reports given by the DON, nurse educator, or quality assurance officer, and confidential discussions during case conferences at the time of the RCS assessment. Documentary evidence would need to be worded with the discretion that currently applies to RCS items, because any written records can be subpoenaed should a matter be raised in court.

Inter-facility comparisons could be made because the AQM was designed for universal application among the nation's nursing homes. Furthermore, each service is obliged to comply with the aged care standards and to complete RCS assessments for all residents. For homes within an established network, such as those owned or operated by the same proprietor, comparison and competition between them is a straightforward process. For those outside such arrangements, other networks will exist or can be constructed. Professional associations for proprietors or practitioners is one source of participants for the construction of a network; others could be based on geographic proximity or cultural homogeneity. For example, a home for Greek seniors in one Melbourne suburb could compare their outcomes with another Greek home of

comparable size in a different suburb. While recognising that the Commonwealth has overall responsibility for aged care, the influence of state administrations also makes a contribution. Within these boundaries, the permutations for network construction are almost limitless, and the results in the form of enhanced clinical care for seniors around the country of immense value.

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## **FUTURE RESEARCH**

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### **VALIDITY AND RELIABILITY OF THE AQM**

The trial of the draft matrix identified a range of issues to be resolved by future research, while not detracting in any way from the development and application of the prototype tool. The first concerns the high quality of the service proved in the Phase 3 home. As Chapter 7 demonstrated, several aspects of the care identified by the clinical indicators are already at or near optimal levels of quality. Therefore, to ensure that the matrix as distinct from the 18 indicators had validity and reliability across the whole industry, it would need to be applied to a range of facilities of different sizes in all sectors throughout the country.

Utilising the methodological approach of Phase 2 of the *Quality of Care for Nursing Home Residents*' project, a multi centre multi state retrial of the matrix could be conducted in a representative sample of nursing homes throughout the nation. Sample size calculations and sample construction could be determined in a manner identical to that used for the current project. Furthermore, the multi



centre trial should commence after 1 January 2001. The advent of industry accreditation means that all homes will have achieved a predetermined standard of care delivery. The delayed application time would also help overcome any confounding factors associated with the processes of accreditation itself. Therefore, any improvements detected as a consequence of the application of the AQM would not be attributed to other forces.

The retrial could take the form of a matched case control study, with half of the study sample assigned at random to receive the intervention and half left to measure quality in their usual manner. This design is suggested for the following reasons. As Kirkwood (1988) indicates, case control studies are used to investigate the association between a factor of interest and a particular disease or problem. In clinical terms a group of individuals identified as having the disease (the cases) is compared with a group not having the disease (controls). For example, in assessing whether the application of the Australian Quality Matrix mediates against deterioration in aspects of clinical care delivered in nursing homes, the cases would comprise those homes in which the matrix was in use and the controls might be homes in the same area delivering equivalent types of services but not using the AQM. If the hypothesis were true it would be found that the cases were less likely to experience decrements in care compared with the controls. To put it more optimistically, the homes in which the AQM was in use would be more likely to deliver positive outcomes (premium care) in all or most of the 18 indicators under review.

Case control studies are relatively cheap, quick and easy to carry out, and lead to a measure of the relative incidence of a disease or outcome among those exposed and not exposed to the factor of interest (in this case the AQM). The complexities of the method lie in the careful consideration needed in the design in order to minimise the types of bias that might occur, such as selection or misclassification bias. In particular, the choice of appropriate controls may be controversial if the withholding of a treatment may have undesirable consequences. However, by utilising the protocols established by the *Quality of Care for Nursing Home Residents*' project and detailed in Chapter 3, many of these limitations will be overcome. Techniques for data analysis of case control results were also discussed in Chapter 3.

#### **THE INFLUENCE OF INDIVIDUALS**

A second area for further research was also identified in Chapter 7. There are several matters relating to individual residents which have the potential to skew AQM results. For example, the discussion on Australian indicator 16 (resident transfers and the prevalence of falls) provided an account of 'Mr W's' predisposition to falls. He contributed 20% of all falls recorded by the Phase 3 home over a 12 month period. To avoid biasing the results of the trial by individual characteristics such as this, the trial confined itself to measuring the number of individuals who fell. However, it is preferable that a means be found to compensate for such problems.

Epidemiologists, such as Kirkwood (1988), recommend 'standardisation' techniques such as the use of age-sex standardisation procedures to determine

national morbidity rates. Braithwaite et al. (1993) used interrater reliability coefficients to answer the question 'do many sick residents affect the reliability of the ratings?' in regard to their review of the earlier version of outcome standards. This option was open to them because a team of strangers (researchers) visited the homes in their study and calculated the outcomes. However, the AQM is a tool developed for use by care givers in their own place of work, and to calculate their own results. Given that the RCS has universal applicability it may be possible to construct a formulae to 'standardise' nursing home populations for the purpose of comparing clinical indicators using national RCS data. However, it is beyond the scope of this project to develop such a formulae.

Another somewhat related matter concerns residents in the end stages of diseases or terminal phases of their lives. People in these situations not infrequently experience multi system failures. Consequently, rates of indicators such as urinary incontinence rise. Seasonal influences are also apparent in this context. For example, rates of deaths from all causes are higher among the aged in periods of extreme conditions (Spencer 1988). Hence, numbers of separations from nursing homes due to deaths following episodes of prolonged heat or cold can also be expected to rise. Replacement residents are likely to be more independent, and therefore less likely to contribute to high rates of occurrence of any of the clinical indicators under review. This is another area in which the use of a 'standardised' nursing home population may provide the means for controlling the confounder.

## **SELECTION OF INDICATORS FOR INCLUSION IN THE AQM**

A further issue to be resolved concerns the selection of indicators for inclusion in the Australian Quality Matrix. Phases 1 and 2 results confirmed that the 18 clinical indicators in the matrix are relevant and valid in contemporary Australian aged care. However, several could have been subdivided into categories of their own. For example, indicator 4 in care domain 2 (the prevalence of incontinence) could easily be separated into two, urinary and faecal incontinence. Risk categories would also have to be adjusted under these circumstances.

It was noted earlier that the industry is in a state of considerable change. Furthermore, international best practice is the subject of continuous improvement and review. Therefore, those indicators isolated during the final years of the 20<sup>th</sup> century are almost certainly not an exhaustive list of those that may be applicable in the years to come. As such they represent a fundamental area of potential examination by future researchers.

## **QUALITY OF CARE AND QUALITY OF LIFE**

Reference has been made throughout the thesis to the close alignment between quality of care and quality of life issues. It was recognised that for nursing home residents a high quality of care is likely to contribute to a high quality of life. In Chapter 1 it was acknowledged that indicators to determine quality of life differed in many respects from those appropriate for quality of care. However, it was not within the purview of the present study to develop them because the conceptual and practical grounds on which each set of indicators

are built varied considerably. Therefore, the development of quality of life indicators for residents in Australian nursing homes represents another area for further research raised by the *Quality of Care for Nursing Home Residents*' project.

#### **URBAN VERSUS RURAL RESIDENTIAL AGED CARE**

Finally, Chapter 5 identified that there is significantly greater difficulty in recruiting registered nurses to work in aged care in urban settings compared with the experiences of rural nursing homes. While the national survey did not reveal other differences, distinctions between the provision of aged care in the city and country undoubtedly exist. The detection of these variations and the resolution of any difficulties revealed would comprise a major challenge for future aged care researchers because of differences in the retention rates of staff, infrastructure support, access to education and specialised health services among other features. In addition, Aboriginal people comprise a higher proportion of populations in many rural localities compared with urban centres. Disparities associated with urban and rural settings also have the potential to exacerbate the difficulties of providing culturally empathic care to non-mainstream seniors, alluded to at length throughout this thesis.

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#### **INDUSTRY CHANGES**

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Many chapters in this thesis have mentioned that the provision of aged care services has been the subject of almost unrelenting change in the past 15 years. These include changes in Government policy, the increased frailty of residents,

and the availability of fewer trained personnel, among many other causes. While their impact on the *Quality of Care for Nursing Home Residents*' project has been limited and will be mentioned later in the chapter, the influence of constant change on the industry itself has been significant.

## **GOVERNMENT POLICIES**

Chapter 2 highlighted that Government policy has moved from being concerned pre-eminently with the delivery of care in institutions, to the delivery of care in the community. In addition, the introduction of standards monitoring refocused the attention of industry participants from concentration on material inputs to one in which the emphasis is on resident outcomes. Furthermore, government regulation has been superseded by self-regulation, with the Commonwealth now playing a supervisory role. National survey respondents indicated that the industry welcomed the current policy of accreditation and certification, as Appendix 7 details. Implementation of government policy did, however, have a minor impact on the project. Their preoccupation with achieving the requisite number of 'satisfactory' outcomes meant that Phases 1 and 3 nursing home managers and staff alike expended considerable proportions of the time in their in-depth interviews discussing the challenges associated with accomplishing it. The quotation in Chapter 5 on this topic illustrated this concern. In addition, the time available for the researcher to conduct the matrix trial in the Phase 3 home was also restricted to enable its preparation for accreditation to proceed uninterrupted.

## **ENTRY ELIGIBILITY**

There have also been changes in eligibility for entry into supported accommodation. As recently as the middle 1980s all that was required to secure a bed in a nursing home or hostel was a compliant medical doctor, a vacancy in the desired facility, and the means to pay for the services either from private sources or from Government benefits. At the beginning of the 21<sup>st</sup> century, eligibility to enter care is determined by Aged Care Assessment Teams and facilities will not receive subsidies for the care they deliver for any resident who has not completed this process. As Chapter 6 noted, this has resulted in a nursing home population that is older than in previous decades. Further, the members of this population are more likely to suffer multiple pathologies due in part to their increased age. Chapter 6 also detailed the likelihood that ‘old old’ age is associated with increased numbers of handicaps. This results in increased rates of admission into care because informal carers are no longer able to manage their handicapped loved one.

There is one other ancillary effect arising from this change in the structure of nursing home populations: a diminution in the average length of stay of nursing home residents. Because they are older, frailer, and more handicapped on entry, there is a greater likelihood of residents dying sooner after admission than those in a previous era. Prior to 1987, it was not uncommon for most facilities to accommodate some individuals for periods extending over a decade. In the 21<sup>st</sup> century this is a highly unlikely scenario.

From the industry's perspective, bedside carers find the provision of high quality care for this very frail nursing home population has increased their workload considerably, compared with that required of them a decade or more ago. Chapters 4 and 5 illustrated this response. The seniority and frailty of informants made little difference to the study because only those who were cognitively intact were included in the recruitment process. Further, the researcher always invited participants to indicate when they were tired and brought any discussion to a close immediately as a consequence.

## **STAFF**

Another area in which change is evident, and predicted to become more acute, concerns the availability of some categories of staff. Chapter 5 highlighted the difficulties the majority of metropolitan nursing homes have at present in recruiting registered nursing staff. The Workforce Planning Division of the NSW Health Department (1999) also alerted the industry to the phenomenon of the 'ageing' of the gerontic nurse labour force, and the lack of interest in aged care among newly graduated registered nurses. A paucity of team leaders and facility managers is the likely outcome of these changes in the aged care labour force participation rates, and one for which current policy makers have yet to offer a solution. The NSW Health Department's report (1999) offered a variety of suggestions about recruitment and retention strategies, but it is too soon to determine whether or not these suggestions have been successful. There were no implications for the execution of the present study in the anticipated diminution of trained staff.



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## RECOMMENDATIONS

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As a consequence of its three year investigation, the *Quality of Care for Nursing Home Residents*' project has identified several aspects of the Australian aged care industry that would benefit from modification. Areas for reappraisal have been detected from both the project itself and the AQM trial.

As a result, the project makes the following recommendations:

### THE AQM TRIAL

1. It is recommended that the Australian Quality Matrix of clinical care be re-evaluated in a multi centre multi state trial to commence after 1 January 2001. It should encompass homes of various sizes, with representatives from each sector of the industry and incorporate stand alone and multi service facilities. Funding for such an undertaking could be sought from the National Health and Medical Research Council or industry associations rather than particular groups within the industry to avoid any conflict of interest implied or real in the study's results.
2. For reasons that were detailed earlier in this chapter, it is recommended that any national evaluation take the form of a matched case control study in which homes are paired and one is exposed to an AQM intervention while the other is not, and the results are compared.

3. It is recommended that during any multi centre trial, techniques be developed to identify and resolve the issues that have the potential to confound trial results, such as the characteristics of individual residents that might serve to skew indicator outcomes.
4. It is recommended that during the multi centre trial attention be paid to the identification of other indicators, or the reconfiguration of those already recognised, to more accurately reflect the care to be provided in the future taking into account the changes in the industry identified above.

#### ***THE QUALITY OF CARE FOR NURSING HOME RESIDENTS' PROJECT***

The study also detected a matter of particular importance outside its primary focus, the delivery of culturally sensitive care. Chapters 4, 5 and 7 demonstrated that, under previous policy directions, the Australian aged care industry was less than successful in delivering culturally appropriate care to those from non-English speaking backgrounds, and those outside the cultural majority, such as Australian Aborigines.

The study recognises that any ancillary set of standards or outcomes has the potential to result in a two tiered system, with one offering first class services and the other a less rigorous standard of service. In addition, the study acknowledges that Commonwealth Standard 3.8 will address the cultural and spiritual well-being of nursing home residents, from 1 January 2001. Further, it acknowledges that seniors from groups outside the mainstream do not represent

a homogeneous collection, and that matters of importance to one cultural minority may be of no consequence at all to another. Notwithstanding all of these qualifications, the following recommendations are made.

5. It is recommended that if and when new standards are developed, the Committee established to produce them includes representatives from the Aboriginal community and other ethnic groups with high proportions of elderly citizens in the Australian population.
6. It is further recommended that any draft standards be circulated among representatives of cultural minorities such as the Ethnic Communities Council, in addition to aged care industry representatives, for their comments and suggestions, prior to finalising the new standards.

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## SYNOPSIS

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The values and goals of the aged care industry, which emerged from the Australian health care system in the middle of the 1990s, incorporate a variety of Government policies and industry philosophies. Principal among the Government's contributions is the *National Strategy for an Ageing Australia* characterised by an assortment of legislation and regulations including: the Aged Care Act (1997), the Standards for Residential Facilities (1997) and the Residential Care Guidelines (1998), among others. In general, they are designed to facilitate continuous improvement in residential services for all Australian seniors.

The focus of the *Quality of Care for Nursing Home Residents*' project, an industry sponsored study conducted with the co-operation of practitioners across the country was, however, directed exclusively to care provided for highly needy individuals in nursing homes. It comprised a three phase study incorporating both quantitative and qualitative research methodologies and took almost three years to complete. It identified 18 indicators by which the industry agreed that quality clinical care could be assessed. They were incorporated into a tool, the Australian Quality Matrix of clinical care for application in nursing homes around the country. The prototype matrix was trialed and evaluated with the objective of determining whether or not the quality of care delivered in the trial facility would be improved by its application. The AQM identified a range of strengths and weaknesses in the 18 indicators of care under review in the Phase 3 home. Therefore the project concluded that the matrix was capable of achieving the goals it was constructed to do. A range of recommendations was made to enhance the matrix and thereby improve even further the quality of clinical care delivered in Australian nursing homes.

A final outcome of the study, which arose as a consequence of the knowledge gained from its execution, concerns the lack of cultural sensitivity in the delivery of aged care services. This was particularly true with reference to the manner in which they had been provided in the past. While the project acknowledges that Standard 3.8 will address this issue from 1 January 2001,

the study also recommended a series of strategies to help overcome this failing in the present system for the benefit of nursing home residents in the future.

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