

POOLE'S ALGORITHM: NURSING MANAGEMENT OF DISTURBED BEHAVIOUR IN OLDER PEOPLE - THE EVIDENCE

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ABSTRACT

Disturbed behaviour in older people is a challenging and complex clinical problem. Accurate nursing assessment and management are key elements for good outcomes. The literature shows that nurses do not consistently understand this clinical syndrome and appropriate education is needed. In recognition of limited time frames and of theories of learning, an algorithm has been developed detailing, in order of priority, the management of aggression, delirium, depression or other mental disorders and dementia, plus an outline of supportive communication and care techniques. Three separate packages, each comprising a booklet of lecture notes and resources plus a matching poster are available. Each of these relates particularly to the needs of older people in aged care facilities, acute care or the community.

INTRODUCTION

The care of older people can be particularly difficult if it is complicated by behaviour that is considered abnormal. Whilst anxiety in relation to illness or treatment is easily understood, if that behaviour turns into outright aggression or interferes with the most basic social interactions, then the degree of difficulty in caring for that person is amplified by that aspect alone.

Tappen and Beckerman (1992, pp.149, 151) claim that there is a 'subtle' form of age discrimination, related to behavioural changes in older patients. Through case studies they described what appeared to be a 'cascade of indifference'. This term was coined by a family member who observed the labelling and acceptance of common behavioural symptoms such as confusion and incontinence, as being inevitable for older people and therefore not worthy of active investigation. This phenomenon is known to lead to further deterioration and eventual dependence or death.

Nevertheless, the tendency towards a combination of multiple co-morbidities and atypical symptom presentation in older age, provides a difficult diagnostic and management milieu. Therefore, the aim of this paper is to justify the establishment of specific guidelines for clinical decision making and optimal management, that will take into consideration the knowledge of the specialties of geriatric medicine and nursing and thus provide a system for education in best practice.

DEMOGRAPHY

It is a well known fact that people are living longer. Countless studies in political, economic and health fields have highlighted the coming boom in the number of older people (those over 65) and debated the resource implications. Not only did this group make up 12% of the population of Australia in 1998 but those numbers are expected to swell to 24% by the year 2051 (McLennan 1999). In addition, it was found that in 1995, 90% of older people had experienced a recent illness and 99% reported at least one long-term health condition. Kane et al (1999) report that 5-10% of community-dwelling older people over 65 also exhibit some degree of cognitive impairment (not necessarily dementia) and this rises to approximately

20% in those over 75. The literature provides recognition of the increased predisposition for disturbed behaviour in older people with diminished cognition and illness (Maher and Almeida 2002). Specifically, 6% of people over 65 are thought to have a diagnosed dementia with that figure doubling every five years. Hence, the likelihood of increasing numbers of older people exhibiting some form of behavioural disturbance.

WHAT IS DISTURBED BEHAVIOUR?

Any behaviour that causes concern or stress for the person or other people could be considered disturbed. The most common disturbances are related to confusion, memory disorders, and abnormalities in thinking and reasoning (Fauci et al 1998). Particular concern has traditionally been focussed on behaviour that is considered challenging, such as, aggression, agitation or inappropriate sexual acts.

Aggression is a most distressing form of disturbed behaviour because it presents the possibility for serious outcomes for the older person and their carers. In a random sample survey of 400 nurses' experience of aggression in one Australian hospital, it was indicated that nine out of 10 nurses on the wards surveyed, had experienced some form of aggression in the last 12 months (O'Connell et al 2000). Quite apart from the obvious risk for injury for an older person committing an aggressive act, nurses in this study were found to have experienced anger, anxiety, helplessness, fear and resentment as well as feelings of inadequacy. With the current nursing shortage this must be a mitigating factor for job dissatisfaction. Aggression must, therefore, always be a marker for clinical investigation.

However, there are other behaviours that are abnormal, such as withdrawal or apathy, that might not be as obvious but should also be investigated. Many different names have been used to denote abnormal behaviour including, confused, disruptive, disturbed, altered mental state, altered cognition, troublesome behaviour or behaviours of concern. For the sake of this paper, and to make sure that all aspects are included, the definition of the verb '*disturb*', meaning '*trouble, agitate, unsettle, derange*' (Webster 1988, p.125) seems appropriate. For clarity this is then broken down into the most commonly observed behaviours of aggression, confusion, or inappropriate behaviour.

CAUSES OF DISTURBED BEHAVIOUR

One of the most widely recognised causes of disturbed behaviour in older people is dementia. Dementia is a clinical syndrome of organic origin, characterised by a slow onset of decline in multiple cognitive functions, particularly intellect and memory, which occurs in clear consciousness and causes dysfunction in daily living (Burns and Hope 1997; Jorm and Henderson 1993). Deterioration is common in orientation, judgement, problem solving, financial management and personal care.

Alzheimer's Disease and vascular dementia are the most common causes but there are many others including Lewy Body Disease and Pick's Disease. In Alzheimer's disease, for example, an older person may gradually stop maintaining their previously immaculate appearance or withdraw from usual activities but also appear quite unconcerned. Despite the encouraging results of recent drug trials, it has been recognised that successful treatment of the primary cause of the dementia with the aim of eliminating the disease, is mostly not possible (Jorm 2002).

Recognition of delirium as a cause for disturbed behaviour in older people, is growing (Maher and Almeida 2002; Moran and Dorevitch 2001; Inouye 1998; Creasey 1996). There are predisposing and precipitating factors, such as hypoxia, infections, toxicity (particularly drugs), metabolic disturbances, sensory deprivation and overload, diffuse and local central nervous system disorders, epileptic plus physical or environmental causes (Mulligan and Fairweather 1997). Since older people are predisposed to nonspecific manifestations of illness, the first sign of such illnesses as pneumonia or urinary tract infection might be a behavioural disturbance signifying a delirium. Furthermore, delirium is a common '*precipitant of hospitalisation in the elderly*' and affects up to 50% of patients in acute surgical and medical wards (Creasey 1996, pp.21-22). Maher and Almeida (2002) claim that delirium should be considered a medical emergency. Therefore, the routine investigation of all cases of disturbed behaviour in older people, with a view to ruling out delirium, is imperative.

A number of diagnostic terms have in the past been applied to the symptoms of delirium, including, acute confusion, reversible dementia, transient cognitive impairment, acute brain failure, toxic psychosis and pseudosenility (McCabe 1990; Lipowski 1994). Discussion arises in the American Psychiatric Association DSM-IV classification (1994, p.3) over the categorisation of delirium under '*mental disorders due to a general medical condition*' and '*primary mental disorders*', in recognition that aetiology is not always certain. Nevertheless, delirium is recognised as being a change in consciousness and cognition (particularly a memory deficit, disorientation or language disturbance) or a perceptual deficit, that occurs over a short period of time (usually hours to days), tending to fluctuate during the day and is either substance induced or caused by a general medical condition.

Depression is also a common, but poorly recognised cause of behavioural disturbance in older people (Baldwin 1997; Lovestone and Howard 1997). In an examination of the literature on depression in older people, Baldwin (1997) found general agreement that there was more likelihood for behaviour disorders, minimal expression of sadness, overlap of obvious physical symptoms with those that cannot be demonstrated, such as accentuation of abnormal personality traits and late onset alcohol dependency syndrome. In addition to the known link between depression and other illnesses in older people, the increasing evidence for a relationship between depression

and dementia (Roose and Devanand 1999; Katona and Livingston 1997) highlights the need to examine behavioural disturbances in older people in a broad context.

Other mental disorders that may affect the behaviour of older people include schizophrenia, paraphrenia, and personality and neurotic disorders. In a review of the prevalence of mental disorders in older people in nursing homes, Snowdon (2001) reported on clinical studies that found that about 80% of residents had dementia, 30-50% had depression, 6-7% had delirium whilst 3.5% had anxiety or panic disorders and possibly 2.4% had schizophrenia.

BARRIERS TO ASSESSMENT AND MANAGEMENT

The difficulties presented by disturbed behaviour in older people are evident across the continuum of care in acute care, aged care facilities and the community. A number of useful manuals have been written about the management of dementia offering solutions to care problems, mostly focussing on behaviours that are said to be challenging or difficult (Keane and Dixon 1999; Kratiuk-Wall et al 1996; Robinson et al 1989). However, the urgency for medical assessment is not immediately obvious and illness indicators are often mixed in with environmental considerations.

There are also numerous books and journal articles available that focus on ways to understand and manage disturbed behaviour specifically related to the effects of dementia (for example, Garrett and Hamilton-Smith 1995; Millen 1984; Mace and Rabins 1981; Acton et al 1999; Packer 1999; Taylor 1998). However, the overall emphasis is related to a presumption of dementia.

Lindesay (1997) points out that the increasing imperative to discharge people as early as possible from acute care also increases the pressure on community and aged care facility services to deal with disturbed behaviour in older people. In addition, the vulnerability of older people to developing dementia and depression increases their likelihood for medication prescription and therefore drug induced delirium. Disturbed behaviour may in fact be a result of some aspect of dementia, delirium, depression, or some other mental disorder, all at the same time. Consequently, the problem of correct diagnosis and management expands to one of diagnostic prioritisation.

At the same time, there seems to be a general lack of appreciation in nursing education and practice of the importance of recognising behavioural problems as symptoms of possibly treatable illnesses. A study by Inouye et al (2001) showed that although nurses have the closest contact with patients, they do not consistently recognise delirium. This was particularly problematic if the patient was hypoactive, older than 80, had a vision impairment or had dementia.

In a case study by Eden and Foreman (1996), the tragic outcomes for a 69-year-old patient with undiagnosed delirium associated with a straightforward surgical procedure, illustrated the need for improved recognition and treatment. Inouye et al (1998) examined the implications of an episode of delirium on discharge and long term outcomes for older hospitalised people and concluded they were generally poor. In reporting the results of this large scale, three centre, epidemiological study, it was stated that whilst it was not totally clear whether the delirious episode was part of the severe illness continuum or a separate contributor to that illness, it was likely that the delirium did add to the severity of the illness and symptoms often persisted for a long time. This, therefore, has implications for service providers and the ethics of aged care assessment team review of older people in acute care.

The problem, highlighted by the literature, is that the main causes of disturbed behaviour in older people can be grouped under the headings of delirium, depression or other mental disorder, and/or dementia. When the major presenting symptom is disturbed behaviour, older people are at risk of inadequate assessment, diagnosis and treatment. This can lead not only to inappropriate use of scarce health resources, but disintegration of that person's entire existence.

RECOMMENDATIONS FOR EDUCATION

An increasing number of authors are recommending the development of new procedures to enhance education for nurses about the assessment and management of delirium and depression, in addition to dementia (Maher and Almeida 2002; Snowdon 2001; Moran and Dorevitch 2001; Inouye et al 2001; Eden and Foreman 1996). In Australia, in particular, this is supported by Arie (2001, p.113) in a call for '*more appropriate education and training for staff*' as part of his response to Snowden's (2001) claim for increased funding for psychiatric care in nursing homes. This is further supported by the results of a survey of carers' perceptions of the care provided for their relatives with dementia who had been admitted to an acute care unit (Taylor 1998). In response to their observations of sub optimal care, the leading recommendation was for more inservice education.

However, staff education requirements are many but time is limited due to the pressures of increasing nursing workloads caused by the expanding complexity of care plus dwindling staff numbers and inadequate staff acuity combinations. Macri and Onley (2001) also responded to Snowdon's (2001) call for increased mental health education in nursing homes but pointed out that education and training are often the first casualty of budget revisions in response to inadequate funding legislation. In a survey of the perceived educational needs of providers of care for people with dementia in the community, this author found that sessions which were short and presented often, were

agreed to be most acceptable and accessible for this rapidly changing workforce (Poole 1992).

Theories of learning show that staff need opportunities to perceive and process information. This may be related to empathy and actual experience, or through a more abstract, logical approach, using analytical interpretation (McCarthy 1987). We need then, to search for enlightened educational methods to meet the needs of all nurses. However, as time is of the essence, the information must be simple, able to be presented quickly, easily assimilated plus, then, easily recalled.

The idea of latent learning or the acquisition of broad non specific knowledge which can later be applied to specific incidents, was asserted by the psychologist Tolman in 1948 and reported by Laszlo et al (1996, p.3). They presented the notion of '*cognitive maps*' as an explanation of how humans build up internal representations of their environment and interactions. An understanding of these concepts could lead to enhanced ways to assist the comprehension of problems and their possible solutions. For example, Tolman described the way his rats were more able to find food in the centre of a maze after they had had a chance to examine the maze without the stimulus or distraction of the food. Those rats who were placed into the maze with food, without having a chance to firstly examine the layout, where consistently slower to find the food than those with prior understanding of the maze pathways.

Buzan created the concept of mind maps as a way of categorising and retrieving information rather than writing down vast amounts in note form (Buzan and Buzan 1996). The idea was that information should be recorded in a personally created code using '*words, lines, shapes, colours and pictures to represent ideas and information*' (Braithwaite 1996, p.140). This is said to maximise attention by involving both right and left brain activity at the one time.

Using these concepts, a map or model for providing general guidelines for the management of disturbed behaviour in older people has been created. A good model is said to help us to see more clearly, creates a simple language for complicated processes, presents the whole and all of the parts, is stable and is generalisable (McCarthy 1996). Therefore, an algorithm, which is defined as '*an explicit protocol with well-defined rules to be followed in solving a health care problem*' (Glanze et al 1990, p.41) or a flow chart with questions and answers, is proposed as an appropriate format.

THE ALGORITHM LOGIC

The major components, in order of priority, of an algorithm for the management of disturbed behaviour in older people are as follows:

Aggressive, confused or inappropriate behaviour?

1. Is the person aggressive?: Aggression is one of three psychiatric emergencies which require urgent action (Gelder et al 1999). As it may pose a serious threat to the safety of both the person and others, it is placed first in the algorithm to enable timely intervention. The other emergencies are, wandering and suicide or self harm attempts and will be duly addressed. General information is provided to address safety, a non-confrontational approach, communication skills, back-up assistance, restraint principles and assessment. A template for a behaviour chart for antecedent, behaviour and consequence descriptions for analysis, is essential.

2. Could the person have a delirium?: Reversible causes of disturbed behaviour need immediate attention, because management issues will change if a medical cause can be treated promptly (Kane et al 1999). Therefore, the nurse should **assume** that there might be a delirium present and so instigate assessment and referral or treatment of possible medical problems (Maher and Almeida 2002; Moran and Dorevitch 2001; Gelder et al 1999; Inouye 1998). Information needed includes the common clinical signs, potential causes and an overview of assessment principles. References for recommended assessment tools are helpful.

3. Could the person have depression or other mental disorders?: Depression or other mental disorders must be the next consideration as there is evidence that older people can be helped just as effectively as younger people (Baldwin 1997). An overview of assessment components plus templates for three depression assessment scales is relevant.

4. Could the person have dementia?: This is the final consideration because a diagnosis of dementia requires careful assessment to exclude all other causes of cognitive decline (Burns and Hope 1997). Delirium, depression (and a small number of other mental disorders) plus a small group of potentially 'reversible dementias' (such as Vitamin B 12 and folate deficiencies, normal pressure hydrocephalus, hypothyroidism etc) must always be ruled out prior to finalising a plan of care for people with dementia. A brief overview of the most common types of dementia and behavioural deficits is advantageous.

5. Plan ongoing 'supportive communication and care': Whilst assessment and treatment is the initial priority, interactive management must be simultaneous. Creasey (1996, p.21) states '*minimising predisposing and iatrogenic precipitants, combined with early detection and treatment of all reversible factors in a therapeutic nursing environment, provides the best outcome*'. Accordingly, methods of supportive communication and care need to be instigated through cooperation with the family and general practitioner, careful communication, consideration of functional and social history, adaptation of the environment, judicious use of medications and support for independence, mobility and sleep hygiene (Maher and

Almeida 2002; Lindsay 1997; Creasey 1996). Tables offering a referenced expansion of these headings, are useful with the aim to provide a consistent, appropriate plan of care.

THE EDUCATION PROGRAMME

An algorithm incorporating lines, colours and shapes to denote components and prioritisation (see Figure 1), has therefore been developed. This has then been expanded to reflect the different requirements in acute care, aged care facilities and the community, in the form of three booklets of explanatory lecture notes and resource kits with matching A1 sized posters. This enables the presentation of short inservice sessions that provide maximum visual and auditory input (Poole 2000a; Poole 2000b; Poole 2001). The provision of a reference list supports the components in best practice and clinical governance endeavours.

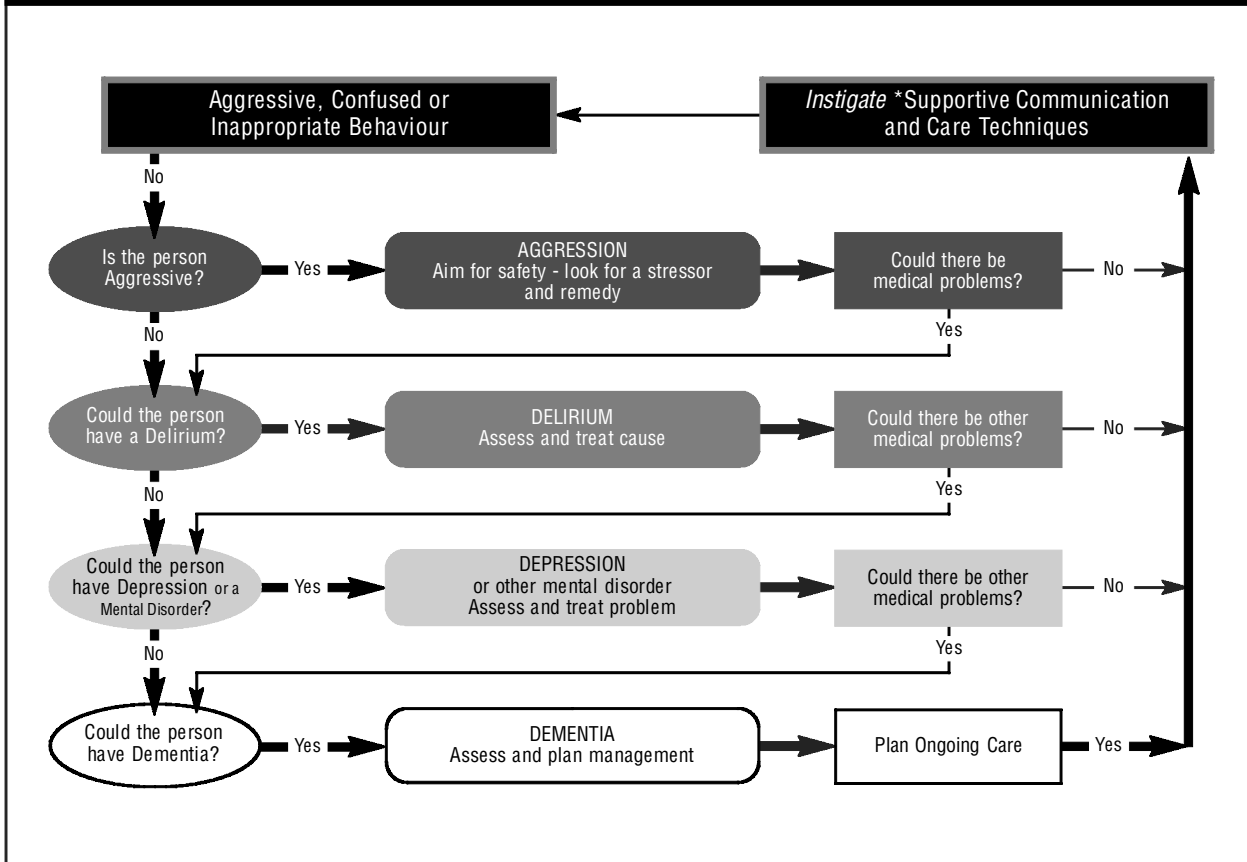
Projects to evaluate the acceptability and effectiveness of these programmes are underway. Unpublished early results of the first project by Poole and McMahon (2001) show that staff in 67 out of 130 nursing homes and hostels across a large Sydney health area, attended train-the-trainer sessions and of those, 37 returned three months later for focus group debriefing. Responses

showed that staff were more confident, more aware of the causes of disturbed behaviour, able to retain the knowledge and exhibited enhanced practice. Plans are presently being made to expand this evaluation to a rural area and the acute sector.

CONCLUSION

The essence of this education programme is to highlight the imperative for immediate, careful management of aggression, then to promote prioritisation of diagnostic components to enable appropriate management of disturbed behaviour in older people. Since symptoms of delirium and depression can mimic those of dementia, as well as being complications and precursors to a diagnosis of dementia, then all aspects of these conditions must be considered. Early priority must be given to assessing for those conditions that may be reversible, so that appropriate care can be instigated to give optimum outcomes for all involved. In addition, it must be recognised that a milieu of supportive communication and care must surround all efforts to manage older people exhibiting disturbed behaviour to enable mitigation of common ageing changes, environmental stressors and the long term effects of life events.

Figure 1: Poole's Algorithm: Nursing management of disturbed behaviour in older people.



REFERENCES

- Acton, G., Mayhew, P., Hopkins, B. and Yauk, S. 1999. Communicating with individuals with dementia. *Journal of Gerontological Nursing*, February:6-13.
- American Psychiatric Association. 1994. *Diagnostic and Statistical Manual of Mental Disorders*. (4th edn). Washington: American Psychiatric Association.
- Arie, T. 2001. Commentary 1. *Australasian Psychiatry*. 9(2):112,113.
- Baldwin, R. Depressive Illness, in Jacoby, R. and Oppenheimer, C. (eds). 1997. *Psychiatry in the Elderly*. Oxford: Oxford University Press.
- Braithwaite, J. 1996. *How to learn faster and easier*. Balgowlah: Deborah Joy Braithwaite.
- Burns, A. and Hope, T. Clinical aspects of the dementias of old age, in Jacoby, R. and Oppenheimer, C. (eds) 1997. *Psychiatry in the Elderly*. Oxford: Oxford University Press.
- Buzan, T. and Buzan, B. 1995. *The Mind Map Book*. London: BBC Books.
- Creasy, H. 1996. Acute confusion in the elderly. *Current Therapeutics*. August: 21-26.
- Eden, B. and Foreman, M. 1996. Problems associated with underrecognition of delirium in critical care: A case study. *Heart and Lung, The Journal of Acute and Critical Care*. 25(5):388-400.
- Fauci, A., Braunwald, E., Isselbacher, K., Wilson, J., Martin, J., Kasper, D., Hauser, S. and Longo, D. 1998. *Harrison's principles of internal medicine*. Sydney: McGraw-Hill.
- Garratt, S. and Hamilton-Smith, E. 1995. *Rethinking Dementia: An Australian Approach*. Ascot Vale: Ausmed.
- Gelder, M., Mayou, R. and Geddes, J. 1999. *Psychiatry*. (2nd edn). Oxford: Oxford University Press.
- Glanze, W., Anderson, K. and Anderson, L. 1990. *Mosby's Medical, Nursing and Allied Health Dictionary*. St Louis: The CV Mosby Co.
- Inouye, S. 1998. Delirium in Hospitalised Older Patients. *Clinics in Geriatric Medicine*. 14(4):745-764.
- Inouye, S., Foreman, M., Mion, L., Katz, K. and Cooney, L. 2001. Nurse's recognition of delirium and its symptoms. *Archives of Internal Medicine*. 161:2467-2473.
- Inouye, S., Rushing, J., Foreman, M., Palmer, R. and Pompei, P. 1998. Does delirium contribute to poor hospital outcomes? *Journal of General Internal Medicine*. 13:234-242.
- Jom, A. 2002. Review: Prospects for the prevention of dementia. *Australasian Journal on Ageing*. 21(1):9-13.
- Jom, A. and Henderson, A. 1993. *The Problem of Dementia in Australia* (3rd edn). Canberra: AGPS.
- Kane, R., Ouslander, J. and Abrass, I. 1999. *Essentials of Clinical Geriatrics*. (4th edn). Sydney: McGraw Hill.
- Katona, C. and Livingston, G. 1997. *Comorbid depression in older people*. London: Martin Dunitz Ltd.
- Keane, B. and Dixon, C. 1999. *Caring for people with problem behaviours*. (2nd edn). Melbourne: Ausmed Publications.
- Kratiuk-Wall, S., Quirk, S., Heal, C. and Shanley, C. 1996. *The TECH approach to dementia care: A resource kit for caring for people with challenging behaviours in a residential care setting*. Concord: CERA.
- Laszlo, E., Artigiani, R., Combs, A. and Csanyi, V. 1996. *Changing visions: Human cognitive maps: Past, present and future*. Westport: Praeger.
- Lindsay, J. 1994. Delirium: The psychiatrist's perspective, in Jacoby, R. and Oppenheimer, C. (Lipowski, Z. Delirium (acute confusional states), in Hazzard, W., Bierman, E., Blass, J., Ettinger, W., Halter, J. and Andres, R. (eds). 1994. *Principles of Geriatric Medicine and Gerontology*. New York: McGraw-Hill Inc.
- Lovestone, S. and Howard, R. 1997. *Depression in elderly people*. London: Martin Dunitz Ltd.
- McCabe, M. 1990. From disease to delirium: Management of the declining elderly Patient. *Geriatrics*. 45(12):28-31.
- McCarthy, B. 1996. *About learning*. Illinois: Excel Inc.
- McLennan, W. 1999. *Older people, Australia: A social report*. Canberra: The Australian Bureau of Statistics.
- Macri, S. and Onley, J. 2001. Commentary 3. *Australasian Psychiatry*. 9(2):114.
- Mace, N. and Rabins, P. 1981. *The 36-hour day*. London: The John Hopkins University Press.
- Maher, S. and Almeida, O. 2002 Delirium in the elderly: Another emergency. *Current Therapeutics*. March:39-45.
- Millen, J. 1985. *Dilemma of dementia*. Sydney: Lansdowns Press.
- Moran, J. and Dorevitch, M. 2001. Delirium in the hospitalised elderly. *The Australian Journal of Hospital Pharmacy*. 31(1):35-40.
- Mulligan, I. and Fairweather, S. 1997. Delirium: The geriatrician's perspective, in Jacoby, R. and Oppenheimer, C. (eds) 1997. *Psychiatry in the elderly*. Oxford: Oxford University Press.
- O'Connell, B., Young, J., Brooks, J., Hutchings, J. and Lofthouse, J. 2000. Nurses' perceptions of the nature and frequency of aggression in general ward settings and high dependency areas. *Journal of Clinical Nursing*, 9(4):602-610.
- Packer, T. 1999. Dementia Part 3: Communication. *Professional Nurse*. 14(10):727-731.
- Poole, J. 1992. An evaluation of a Commonwealth funded demonstration project in a dementia day centre. (Unpublished). Sydney: Tom O'Neill Day Centre.
- Poole, J. 2000a. *Nursing management of disturbed behaviour in older people in acute care: An education package*. Sydney: Government Printing Service.
- Poole, J. 2000b. *Nursing management of disturbed behaviour in aged care facilities: An education package*. Sydney: Government Printing Service.
- Poole, J. 2001. *Nursing management of disturbed behaviour in older people in the community: An education package*. Sydney: Government Printing Service.
- Poole, J. and Mc Mahon, C. 2001. An evaluation of the effectiveness of the educational programme: Poole's Algorithm: Nursing management of disturbed behaviour in aged care facilities. (Unpublished). Sydney: Royal North Shore Hospital.
- Robinson, A., Spencer, B. and White, L. 1989. *Understanding difficult behaviours*. Michigan: Eastern Michigan University.
- Roose, S. and Devanand, D. 1999. *The interface between dementia and depression*. London: Martin Dunitz Ltd.
- Snowdon, J. 2001. Psychiatric care in nursing homes: More must be done. *Australasian Psychiatry*. 9(2):108-112.
- Tappen, R. and Beckerman, A. 1992. The hospitalized older adult. *Geriatric Nursing*. May/June:149-151.
- Taylor, B. 1998. Dementia care: How nurses rate. *Collegian*. 5(4):14-21.
- Webster's Dictionary*. 1988. New York: Book Essentials Publications.