Informing policy and service development at the interfaces between acute and aged care

ANNA L HOWE

Dr Anna Howe is a consultant gerontologist.

Abstract

This paper argues that policies to address the interfaces between acute care and aged care should view older people as members of the wider Australian population entitled to a range of health services under Medicare rather than focusing only on supposed "bed blockers". In seeking to explain the current level of policy interest in this area, three areas are canvassed: pressures on acute hospital care, particularly those attributed to population ageing; shrinking provision of residential aged care; and the proliferation of post acute services. If policy development is to maintain a wider rather than narrower perspective, attention needs to be given to improving collection and analysis of critical data that are currently unavailable, to developing system-wide funding arrangements for post acute care, and to reassessing what constitutes appropriate hospital activity for younger and older age groups alike.

Why the current policy interest?

Those aged 65 and over now account for 12% of the Australian population, 30% of hospital admissions and 43% of bed day use. There were 1.624m separations of people aged 65 and over from acute hospitals in Australia in 1997-98, of whom 840,000 were aged 65-74, 606,000 were aged 75-84, and 177,000 were aged 85 and over (Nichol, Lonergan & Mould, 2000). These few statistics all too easily give rise to the view that older people make disproportionate and often inappropriate use of acute hospital care, that this situation will only get worse as population ageing escalates dramatically as the baby boomers age, and that the solution to the problem defined essentially in terms of "bed blockers" is more nursing home beds.

An alternative view is that older Australians have the same entitlement as other Australians to a range of health care services under Medicare, including public hospital care, on the basis of medical need. This latter view prompts a search for wider strategies for ensuring access to acute care, other forms of health care including post acute care, and aged care on the basis of assessed need. A corollary of this wider perspective is that policy and service development should be informed by some knowledge of the volume and characteristics of the various flows of older people into and out of acute care as without this information, it is impossible to establish the potential impact of interventions at different points in these flows.

The population of 2.84m aged 60 and over at the 1996 census was projected to reach 3.21m by 2001, an increase of 13%. Against this increase, the ratio of available public hospital beds per 1000 population fell from 3.3 in 1995-96 to 2.8 in 1999-2000, a decline of 18%; the ratio of private hospital beds remained constant at 1.3/1.2 per 1000 over the same period (AIHW, 2001a: 32). While population ageing is readily seen as giving rise to increased demand for acute care, it is only half of the equation, and the impact of declining bed supply also needs to be taken into account. Without going into the reasons for the decline in public hospital bed numbers, it is apparent that a first explanation for the increasing pressure on acute care can be advanced simply

in terms of the divergence between demand and supply; indeed, under *ceteris paribus* conditions, falling bed supply has exerted more pressure than population ageing. But all else is has not remained equal, and the questions that arise are first whether changes in utilisation have been sufficient to offset the fall in bed supply, and second, what further changes might be required to manage demand within the expected supply of beds. While there is ample data available for projecting demand, predicting future bed supply is more problematic.

These opposing trends of demand and supply have been in train for at least the last decade, but since the discussion of interaction between acute and long term care in the Mid Term Review of the Aged Care Reform Strategy in the early 1990s (DHHLG&CS, 1993) development of acute care policy has given only passing attention to population ageing, and aged care policy has given similarly scant attention to interaction with acute care. That these issues are again a topic of policy interest is signalled by the establishment of a Working Group on Care of Older Australians by the Australian Health Ministers' Advisory Council in February 2001. A specific aim of the Workplan set out by the Working Group is to strengthen the information base for policy and service development.

The next sections of this paper canvass three sets of factors that are identified as contributing to the current policy focus on the interfaces between acute and aged care: pressures on acute hospitals, changes in provision of residential care and the proliferation of services aiming to address various transfers between acute care and aged care. Particular attention is given to the information base on which debate in each of these areas is founded.

Pressures on acute hospital care

The main explanation for the lack of attention to these boundary issues until recently probably lies in the expectation that reductions in hospital bed numbers could be realised through a suite of measures aimed at improving hospital efficiency, with reductions in average length of stay (ALOS) enabling increasing turnover. Trends in acute hospital use have generally been in accord with this expectation, and in *Australia's Health 2000*, the AIHW concluded that decreased ALOS has lead to a lower requirement for hospital beds (AIHW, 2000 p. 267).

But it is a case of averages being misleading, on three grounds. First, much of the fall in ALOS was achieved by very substantial increases in the number of same day separations, from 39% of all separations in 1993-94 to 49% by 1999-00. The impact of same day separations is seen in the ALOS of 3.9 days for all separations from public acute hospitals increasing to 6.4 days when same day separations are excluded (AIHW, 2000: 272-272; 2001a: 44-47)

Second, ALOS disguises differences across the age range. Data in Table 1 show that around the all age average of 3.4 days for all separations (including same day), there is a variation from 2.8 days for the youngest age group to 7.7 days for the oldest, and that there is even a considerable increase across the older age groups. When same day separations are excluded, the patterns vary again. ALOS increases for all age groups, but the increase varies marked in direct relation to the share of separations for each age group that are same day. Thus, ALOS increases by 82% for the 45-64 year age group, among whom 56% of all separations are same day, but most interestingly, only by 22% for the 85+ age group, for whom only 21% of separations are same day.

Table 1. Hospital Utilisation by Age Group, 2000

Hospital utilisation	Age group						All	All
	0-14	15-44	45-64	65-74	75-84	85+	65+	ages
% share of population, 2001 (a)	20.2	44.0	23.0	6.7	4.3	1.3	12.3	100.0
% share of all separations (b)	10.1	34.3	25.4	15.6	11.3	3.3	30.2	100.0
% share of all bed days (b)	8.4	27.2	21.6	17.5	17.9	7.5	42.7	100.0
Average Length of Stay (days) (c)								
a) Including same day separations	2.8	2.7	2.9	3.8	5.4	7.7	4.8	3.4
b) Excluding same day separations	3.9	4.2	5.3	6.8	8.0	9.4	7.7	5.5
% increase when same day								
separations are excluded	39	55	82	79	48	22	60	60
% all separations same day	37	46	56	51	38	21	43	47

Sources: Compiled from

- (a) ABS Cat. No. 3222.0 Series 1
- (b) Nichol, B, Lonergan, J & Mould, B. 2000.
- (c) AIHW 2001a.

Third, it appears that the reduction in ALOS for admitted patients may have run its course, with only a very marginal decline in ALOS for admitted patients over the last five years (AIHW, 2001a: 44-47). While the future may see increases in procedures that do not require admission to a hospital bed, allowing such procedures to be increasingly performed outside hospitals, this possibility does not necessarily amount to a lower requirement for hospital beds which rather depends on the level of need for care that does require admission. The figures in Table 1 foreshadow the impact of increases in the older population, especially the very old, on future demand for inpatient care.

Shrinking provision of residential care

The second set of changes contributing to current policy interest, and which are also seen as a source of pressure on acute care, relate to trends in provision of residential care. Provision of residential aged care has been contracting gradually over the last decade, but the Aged Care Reforms of 1997 added two short sharp shocks to the decline. It is largely because these trends have attracted attention out of proportion to the role of residential care as a destination for older people discharged from acute care, as set out below, that they warrant note.

The ratio of residential aged care places fell from 90.9 per 1000 population aged 70 and over in 1996 to 82.4 by 2001; the decline of 7.6 places per 1000 was much steeper than the gradual decline of 3.1 beds per 1000 over the five years 1991 to 1996. Within the total ratio, most of the decline has been in nursing home or high level care while the level of hostel or low level care has remained relatively stable and even increased slightly. The 1997 total ratio was divided between 47.6 nursing home beds and 41.6 hostel beds per 1000. As data on the two levels of care have not been published separately since 1996-97, it is only possible to infer subsequent growth trends from the approvals for new places over the whole period (AIHW, 2001b: 437). No approvals for any residential care places were granted in 1996, an election year, but in the four years to early 2001, more than eight new hostel places were approved for each nursing home place, with the hostel ratio presumably climbing as new places have come on stream.

While it was intended that the nursing home ratio should decline gradually to a target of 40 beds per 1000 some time beyond 2006 (DCS, 1986:47), the decline has been much more rapid. The ratio of 47.6 per 1000 expected by 2006 was reached in 1997, and has fallen more precipitately since as the requirements for high building standards required by the 1997 Aged Care Act took their toll on the ageing stock of facilities. The clearest signal of concern about this rapid decline was the approval of 2,164 high care beds in September 2001, far exceeding the total approvals granted over the preceding five years. Rather than being in line with the steady annual growth of aged population, the ups and downs in the number of approvals reflect the overlay of political factors

on the Commonwealth residential care planning process. Uneven growth in new residential care places will bring about quite sudden changes in access in the next few years as approved beds come into operation, with some flowons to acute care; more regular growth would appear preferable to the drought then flood phenomena of recent years.

Changes in provision of residential care are not necessarily paralleled by changes in access to the beds that are available, which rather depends on turnover. Earlier analyses show turnover to have been higher in nursing homes than in hostels, but remarkably stable over time (AIHW, 1999: 193-94) Examination of more recent trends in access is limited by the publication only of data for high and low levels of residential care combined since the Aged Care Reforms of 1997 (AIHW, 2001c). The report on the Two Year Review of the Aged Care Reforms (Gray, 2001) highlighted several aspects of the changing interfaces between acute care and residential care, but detailed analyses comparing trends prior to and after the reforms were limited by discontinuity in available data.

The outcomes of ageing in place, whereby residents can remain in a hostel and receive a level of funding and care the same as that previously provided only in nursing homes, seem unclear in relation to access on discharge from acute care. The number of residents remaining in a hostel until their death has increased substantially and transfers to nursing homes decreased accordingly. Data reported by AIHW (2001b:232) show this decrease to be in the order of 5,000 people for 1999-2000 compared to 1996-97. Largely due to the reduction in transfers to nursing homes, and low turnover from new admissions to new beds, turnover in former hostels appears to have declined; using separations from former hostels as reported by AIHW above (excluding respite admissions) yields turnover of 18% in close to 70,000 hostel places estimated to be in operation in 2001, compared to 30% in 1996-97. Assigning the balance of all separations from residential care to nursing homes gives turnover of 52% in 2001; allowing for some estimating error and minor annual fluctuations, this turnover is only marginally higher than the 1996-97 figure of 48%, and so insufficient to offset the decline in nursing home bed numbers.

At the same time, there have been anecdotal reports of hostels being reluctant to take back patients requiring nursing care on discharge from acute care. The considerable expansion of Community Aged Care Packages and introduction of Extended Care at Home Packages was not intended to address post acute care and indeed the considerable time typically required to establish these packages limits their effectiveness as a prompt outlet for those requiring a high level of post acute community care.

Compounding the overall declines in the residential care ratios, there are marked difference between the states. These differences come into play in the AHMAC context not only in terms of public hospitals having fewer residential care places to take older people needing long term care, but also because the funding foregone is not fully available for other care services. Victoria experiences the greatest disadvantage. On the basis of data reported by the Productivity Commission (2001), it is estimated that the deficit of 4 beds per 1000 amounts to \$100m a year in revenue foregone. By way of comparison, total State and Commonwealth expenditure on HACC in Victoria was in the order of \$260m in 2001.

Finally, within states, there are marked local variations in changes in access to residential care. While the distribution of new beds follows the dispersion of the aged population, adjustment in the distribution of older facilities has been uneven. In particular, the closures of older and outdated facilities have occurred mainly in the inner and middle distance suburbs of Sydney and Melbourne, the same localities in which major acute hospitals are concentrated.

Proliferation of post acute care services

The third development that has focused policy attention on the interfaces between acute and aged care is the numerous initiatives taken in recent years to address the problems of older people in hospitals, and getting them out of hospital. There is no ready source of information on these services as they have come into being through participation of individual hospitals in a variety of "top down" opportunities such as the Commonwealth Coordinated Care Trials and the National Demonstration Hospitals Program, and separate State initiatives, such as the Victorian state-wide sub-acute program (Sach & Associates, 2001) and Queensland's continuity of care initiative (QLD Health Department, 1998). Some hospitals have also started their own "bottom up" experimental services to address local needs.

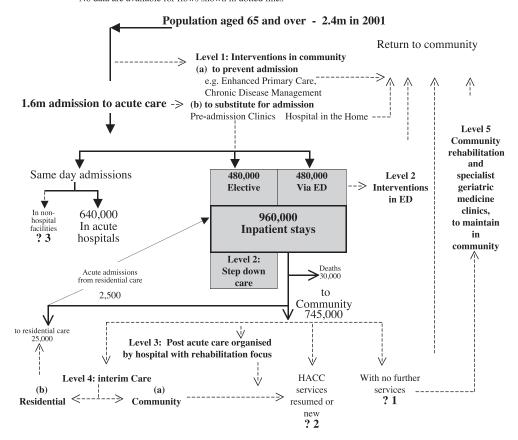
In order to make a systematic analysis of this diversity of services, a framework of different levels of intervention can be adopted to encompass the multiple interfaces between acute and aged care. Such a multi-level framework is especially useful in broadening the consideration of possible strategies from a narrow focus on moving "bed-blockers" to nursing home care, to a wider range of transitions into acute care from the community and out of acute care to various rehabilitation and community care services. It can also promote consideration of interaction between strategies.

In this framework, each level of intervention can be seen as a filter acting on flows of patients that become progressively smaller and more selected, and the purposes of the interventions change accordingly. These different flows and levels of intervention are set out schematically in Figure 1, and three features warrant note. First, while data is available on some flows, the size of others can only be estimated; the lack of data on the substantial flows of discharges to the community, with different subsequent service use, is conspicuous. In particular, the number and characteristics of those who take up a HACC service on discharge remains a continuing mystery as the HACC Minimum Data Set does not include an item on hospitalisation immediately prior to service take-up. Second, the contrast between the very large flows through emergency departments and discharges back to the community and the very small flow of discharges to residential care and even smaller flow back to acute care is evident, and the potential impact of interventions on different flows varies accordingly. Finally, these figures are aggregates, for separations only; planning of interventions needs detailed data on bed day use associated with each flow, and for the individual hospitals introducing new services. Without even such basic information, interventions may be misdirected to flows that are much smaller than they are thought to be, and which offer little margin for change.

Figure 1: Flows and levels of intervention at interfaces between acute and aged care

Note: Figures for flows are indicative only as based on different sources; see text for further data.

No data are available for flows shown in dotted lines



The broadest and least differentiated flow, addressed at Level 1, is of older people living in the community, all of whom may be regarded as potentially at risk of admission to acute care. These interventions aim to *prevent* admission, and this aim is inherent in the Commonwealth initiatives of the Enhanced Primary Care items on the Medical Benefits Schedule and the pilots of After Hours Primary Medical Care. These services complement a range of mostly state government initiatives for health promotion for older people, such as falls prevention and influenza immunisation, and chronic disease management programs, which also contribute indirectly to reductions in hospitalisation of older people. Other interventions in the community, such as Hospital in the Home and pre-admission clinics, *substitute* directly for all or part of an admission by providing the same kind of care in a non-hospital setting.

While admissions to acute care from residential care have attracted notice from time to time, these flows are very small and as beds are held for returning residents, there should rarely be delays in discharge. Of the 40,952 separations from residential care (excluding respite clients) in 1998-99, only 2,356 were to hospital. These flows are best seen as a sub-flow in the wider community based population and addressed through the same kinds of measures, strengthened by enhancement of medical care within residential care as recommended by the Australian Society for Geriatric Medicine (2001); extending existing outreach services from ACATs is one means to this end.

These interventions in the community have close links to post acute geriatric medical services delivered in outpatient settings such as specialist clinics, day hospitals and community rehabilitation centres. These services were identified as Level 5 in the framework as they provide post acute services following on from the intervening three levels that involve inpatient care. As well as admitting clients on discharge from acute care, the Level 5 services admit clients directly from the community and are often involved in delivering the same preventative programs identified at Level 1. The purpose of these services is to *maintain* individuals in the community and they are thus provided on an on-going rather than time limited basis.

The three other levels of intervention can be defined by three common characteristics that distinguish them from both Level 1 and Level 5 and identify them as what can be properly labelled "transition" services:

- 1. they all manage the transfer of clients between acute care and another setting,
- 2. their prime functions are assessment and care coordination ahead of delivery of direct care services, and
- 3. their timelines are characterised by quick responses, with provision of support for limited periods only until "usual" support services can be instigated.

On the basis of a number of studies of recent initiatives reported in the literature, interventions in hospitals (Level 2) can be divided into those in the Emergency Department, aiming to *divert* admissions, and those aiming to *reduce LOS and facilitate discharge* of admitted patients. Both these levels of interventions deal with clients selected from well defined flows. The flow in the ED is filtered first by standard ED triage and the subsequent interventions aim to identify patients who can return home with prompt instigation of support services and so divert admission. Older people presenting to the ED are more likely to be admitted than other age groups, and as half of all acute admissions of older people are non-elective and hence via the ED, the diversion of even a relatively small proportion of this large flow can have a significant impact on immediate admissions and subsequent flow-ons through the whole system. An evaluation of the Discharge of the Elderly from the Emergency Department service (DEED) at Prince of Wales Hospital in Sydney reported a 17% reduction in admissions among 468 patients who were to be admitted following initial ED triage (Caplan et al, 1998). Outcomes reported in evaluations of short stay observation units were less clear cut, in part because these services did not particularly focus on older people (Daly et al, 2001).

The second type of in-hospital interventions are step down units that provide a short period of inpatient care for relatively small groups of patients who were likely to experience a delay in discharge and who could benefit from a short period of restorative care before a final decision was reached on their discharge destination. This model of care grew in the early 1990s through the Medicare Incentive Packages that focused on management of specific conditions requiring rehabilitation, notably orthopaedic procedures, and evaluations reported a range of positive outcomes (Cameron, I et al, 1992; Hill, Street & Gray, 1992; Farnsworth &Kenny, 1991). Since then, the spread of these diagnostically focused services has extended to step down units catering to other and more generalised patient intakes.

The third level of intervention is post acute care organised by the hospital, for the purposes of reducing LOS by *completing treatment* at home, maximising the patient's level of functioning and minimising risk of readmission. These services can be distinguished by their focus on therapy, both nursing and rehabilitation, including provision of rehabilitation in the home and supply of aids and equipment, possibly by hospital allied health staff, as these kinds of services are not generally available under the Home and Community Care Program (HACC). No published evaluations of these kinds of services were located.

The boundary between these therapy focused post acute services and the interim post acute care (PAC) services delivered in the community is somewhat blurred. The main function of the former services can be seen as bringing an episode of hospital care to an end, whereas the latter services provide a bridge to take-up of usual HACC services or a Care Package for on-going care. It is on the basis of this *bridging* function that the latter services are defined as the fourth level of intervention, by way of interim care, in Figure 1.

While the flow of clients to both rehabilitation and general post acute community care services is potentially large, the number of clients referred to these services is small compared to the total flow of older people out of acute care, and the basis of selection is a critical area for clarification. Evaluation of four pilot projects for Victoria's PAC program (Gray et al, 2001; Lim 2001) noted that risk screening was a major issue; an initial risk screening tool that identified large numbers of clients but failed to address use of usual community services, was modified and a set of supplementary exclusion criteria were also adopted. The evaluation reported mostly marginally positive outcomes, but the wide age range in the sample and the strong effect of the particular projects limit to the scope for generalisation of the results.

The other set of interim care services at Level 4 are residential services that aim to reduce LOS in acute care by transferring patients waiting for a nursing home or hostel place to a non-acute setting. When seen in the five level framework, it is apparent that these services are the last in the series of filters on patient flows and address a very small group of individuals who remain after all other older patients have been discharged, including the majority of those who are discharged to residential care without undue delay. Rather than being random instances of patients who have somehow slipped through all the other filters, this residual group needs to be recognised as a "hard core" for whom care in another setting is not likely to be easily found. Most interim residential care services are recent and no evaluations have been found to date.

The significance of the overall flow to residential care is very different when viewed from the doors of the acute hospital rather than the residential aged care facility. Hospitals are indeed an important source of patients entering residential aged care, with two out of three nursing home residents being admitted from an acute hospital (AIHW, 1998: 54). It is thus not surprising that, at any one time, there are a number of patients in acute hospitals waiting for places in residential care. But as a destination for discharge from hospitals, the numbers look rather different; it has not been possible to make an exact estimate for a single year, but there were some 20,000 people admitted to permanent nursing home care from acute care in 1996-97 compared to 963,000 separations of patients aged 65 and over in 1997-98 (excluding same day separations). Assuming a total flow to all residential care in the order of 25,000, and that as many as 25% experienced a delay in discharge from the acute hospital, these 6,250 patients would account for less than one in every 150 older patients discharged from an acute inpatient stay in a year.

Even when considered in terms of bed days, bed use by this group is not vast. Victorian hospitals report the number of patients waiting for residential care and the days waited in bi-monthly censuses; as of May 2001, 230 patients in acute hospitals had waited 7,800 days, and another 328 patients in sub-acute care had waited some 20,000 days (Victorian Department of Human Services, 2001b). But this number of bed days is small compared to the total bed days available. It is difficult to estimate the annual bed use of patients awaiting placement from the published data, but freeing 15,000 bed days would require a halving of the days used by the 558 patients reported above as waiting for residential care in May 2001, but less than a 0.4% reduction across the balance of some 3.8 million patient days used in Victorian public hospitals (as of 1999-2000) (A1HW, 2001a).

Given that concern about the protracted stays of this small group of patients is warranted, both on grounds of appropriateness of the care they are receiving and the impact of their high bed day use on hospital throughput, it is surprising that the reasons for delays in discharge have attracted so little recent investigation. Replication of the 1988 study of factors affecting delay in placement made by Lazarus and Gray (1988) appears long overdue to obtain a better understanding of the current reasons why some wait weeks for a residential care place while

others are transferred in a matter of days. It is evident that shortages of nursing home places is not a sufficient explanation and that the way this flow is managed comes into play; a recent Adelaide study concluded that total stays could be reduced by earlier recognition of the need for residential care, and accelerated referral and assessment processes within the acute setting (Whitehead & Wundke, 2001). An increased presence of geriatric medicine and ACATs in acute hospitals appears to be indicated.

Perspectives on policy development

Comparing bed day use by patients awaiting residential care with total available bed days serves as a useful reminder that policies aimed at "saving" acute bed days by reducing LOS can be more effectively pursued through a range of strategies addressing much larger flows of patients at the other levels of intervention canvassed here than by focusing only on the small residual group who have not been filtered out by any of these interventions. The basic requirement for policy development must then be to maintain a wide view of the interfaces between acute and aged care and the range of strategies available and needed to manage transfers across them, and three concluding comments can be made in this regard.

First, several points at which better information is needed have been noted through this paper, but this wider understanding is not simply a matter of having more or even better data: informed policy development requires that analyses of different services be brought together in a coherent and structured way. By way of illustration, single interventions which have generally been found to have only small outcomes when evaluated separately may well be found to generate more significant multiplier effects when their impact is considered in conjunction with other interventions and across multiple margins. A report on multiple strategies that eliminated access block at Sydney's Royal North Shore Hospital concluded that "while no single initiative appeared revolutionary, the consistent application of the total package of measures has resulted in a true revolution in access block" (Hammett et al., 2000). Rather than seeking some yet to be discovered innovation that would sweep large numbers of older people out of hospitals, the framework outlined here involves gearing up a wide range of existing services.

The most critical information needs to this end are for an informed view of the flows marked ?1 and ?2 in Figure 1. The first question mark draws attention to the unknown flow from acute care back to the community with no further services; this information would provide a starting point for identifying who was and was not likely to need post acute care. The second question mark flags the flow of those who take up a HACC service on discharge, and without a more informed view of this flow, it is impossible to assess the scale and nature of need or the margins for change, let alone know whether the many small scale post acute services that have proliferated in recent years are struggling to fill large gaps in HACC, adding to the total volume of services, or making very small and often complicated embellishments at extremely narrow margins. If it remains uninformed on this area, policy making can only be an attempt to fit the pieces of a jig-saw puzzle together without ever having seen the full picture that is to be completed.

Second, at least as important as issues of information, there are crucial policy questions as to how the interfaces between different funding systems are to be addressed. Figure 1 could usefully be constructed to show the flows of funding and the points at which complex funding arrangements have developed to cover some relatively small budget services that do not quite fit under existing programs, and which in some cases draw on several different funding sources. One particular concern is that any additional resources that are put into post acute care achieve an expansion in the range and volume of services available rather than just paying a premium for priority access to existing services; an example of such an apparently perverse payment is the premium paid by some states for interim residential care in facilities that are already funded by the Commonwealth. A second concern is the additional demand for HACC services that is generated, but not necessarily funded, by post acute services which support assessment, case management and service coordination functions but not direct care services. Rather than funding more boutique programs, it seems timely to widen the range of products on the shelves of the Medicare and HACC supermarkets.

Finally, developing policies on acute care of older people and across the interfaces of acute and aged care could well begin by returning to the definition of what constitutes appropriate hospital activity. There is a widening divide between those whose procedure-based care can be managed on a same day basis in settings other than hospitals, and those who require inpatient admission. The latter group are increasingly likely to have more

complex conditions and co-morbidities that may bring complications, and to need a longer stay: in summary, to be older. Rather than seeing older people as making inappropriate and unnecessary use of acute care and pushing for their ever faster discharge from hospitals, it is same day procedures that are and can be increasingly performed outside hospitals.

A practical starting point here would be to revise the reporting of hospital statistics to separate inpatient and day procedures more fully, and to combine the reporting of day procedures carried out in registered day surgery centres that is now included in the hospital statistics with data on the same procedures carried out elsewhere, marked ?3 in Figure 1, which is currently reported only through the Health Insurance Commission. A full picture of the extent to which same day procedures are performed outside acute hospitals could indicate the likely future shift, leaving hospitals to concentrate on inpatient care.

Improved information on the use of acute care and flows to post acute care is likely to show that older people will come to account for more rather than less use of hospital beds in future. But this cannot be seen as a negative outcome as increased use of inpatient care by younger age groups could hardly be an indicator of better health status. And as Australia's hospital expenditure is relatively high on an age-weighted basis compared to other OECD countries (Goss et al, 1997), there may be greater margins for directing "inappropriate" hospital use by younger age groups to out of hospitals settings. Indeed, all the interventions set out in the five level framework presented in this paper, except perhaps interim residential care, apply to all age groups, and to the extent that they may be even more successful with younger patients, they should be vigorously pursued for all. Rather than developing separate policies for acute and post acute care for older and younger people, a wider perspective across all ages seems likely to bring hospitals into focus as the proper setting for "appropriate and necessary" inpatient care of older people.

References

Australian Institute of Health and Welfare. 2001a. Australian hospital statistics 1999-00. AIHW, Canberra. AIHW Cat. No. HSE 14.

Australian Institute of Health and Welfare. 2001b. *Australia's Welfare 2001*. AIHW, Canberra. AIHW Cat. No. AUS 24

Australian Institute of Health and Welfare. 2001c. Residential aged care in Australia 1999-00. AIHW, Canberra. AIHW Cat. No. AGE 19.

Australian Institute of Health and Welfare. 2000. *Australia's Health 2000*. AIHW, Canberra. AIHW Cat. No. 19. Australian Institute of Health and Welfare. 1999. *Australia's Welfare 1999: Services and Assistance*. AIHW, Canberra. AIHW Cat. No. AUS 16.

Australian Institute of Health and Welfare. 1998. Nursing homes in Australia 1996-97. AIHW, Canberra. AIHW Cat. No. AGE 9.

Australian Society for Geriatric Medicine, 2001. ASGM Position Statement No. 9: Medical care for people in residential aged care services. *Australasian Journal on Ageing*. 20(4): 204-8.

Cameron, I. et al. 1992. Fractured neck of femur rehabilitation study (Hornsby Hospital) Department of Public Health, University of Sydney, Sydney.

Caplan, G.A., Brown, A., Croker, W.D. & Doolan, J. (1998) Risk of admission within 4 weeks of discharge of elderly patients from the emergency department – the DEED study. *Age and Ageing*, 27: 697-702.

Daly, S., Campbell, D, and others. 2001. *Short Stay and Observation Units*. Melbourne Health Clinical Epidemiology and Health Service Evaluation Unit, Melbourne.

Department of Community Services. 1986. Nursing Homes and Hostels Review. Australian Government Publishing Service, Canberra.

Department of Health, Housing, Local Government and Community Services. 1993. Aged Care Reform Strategy Mid Term Review Stage 2 Report. Australian Government Publishing Service, Canberra

Gray, L. 2001. Two Year Review of Aged Care Reforms. Department of Health and Aged Care, Canberra.

Gray, L., Hawthorne, G., Carter R., Lambert, S. & Lim, W.K. 2001. Post acute care program health outcomes and cost benefit study: Final report. Victorian Department of Human Services, Acute Health Division, Melbourne

Goss, J., Mathers, C., Eckermann, S., Pinyopusarerk, M. & Wen, X. 1997. The Impact of Population Ageing on Health Expenditures in Australia in the 21st Century. AIHW, Canberra.

Hammett, R., Hodges, B., Croome, V. & Robinson, B. Eliminating access block: a blueprint for success. www.archi.net.au/RIS/RISWEB.ISA

Hill, T., Street, P. & Gray, L. 1992. Hip fracture: not always the turning point. Report on an evaluation of an ortho-geriatric service. Preston and Northcote Community Hospital and Bundoora Extended Care Centre, Melbourne.

Lazarus, R. & Gray, L. 1988. Clinical characteristics and outcomes in a cohort of patients who were assessed as in need of nursing home care. *Medical Journal of Australia*. 149: 410-415.

Lim, W.K. 2001. *Post acute care study: Evaluation of outcomes in older patients.* Victorian Department of Human Services, Acute Health Division, Melbourne.

Nichol, B., Lonergan, J & Mould, M. 2000. The use of hospitals by older people: a casemix analysis. Commonwealth Department of Health and Aged Care Occasional Papers, New Series, No. 11.

Productivity Commission. 2001. Report on Government Services 2001. Volume 2: Emergency Management, Community Services, Housing. Ausinfo, Canberra.

Queensland Health. 1998. Continuity of care for older people in Queensland. Queensland Health, Health Funding and Systems Development Unit, Brisbane. (Four reports: Literature Review and Information Paper; District Health Service Initiatives; Data Analysis and Environmental Scan; Appendices: Data Analysis and Environmental Scan.)

Sach and Associates. 2001. Sub-acute services: Strategic Directions Victoria. Main Report. Department of Human Services, Melbourne.

Victorian Department of Human Services. 2001. Hospital Services Report: June Quarter, 2001. Department of Human Services, Acute Health Division, Melbourne.

Whitehead, C., Wundke, R. et al. 2001. Accessing residential care from an acute hospital: can we be more efficient? *Journal of Quality in Clinical Practice*. 21 (1-2): 9-12.