Joint geriatric/psychiatric wards: a review of the literature

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Abstract

Joint geriatric/psychiatric wards are a potential solution to improving care of older patients with both psychiatric and medical illnesses in acute hospitals. A literature search using Medline, PsycINFO, Embase and CINAHL between 1980 and 2010 was carried out for information about joint wards for older people. Thirteen relevant papers were identified. These wards share common characteristics and there is evidence that they may reduce length of stay and be cost-effective, but there are no high-quality randomised controlled trials. Further research is needed, particularly regarding cost-effectiveness.

Keywords: psychogeriatric, geriatric psychiatry, evaluation, assessment, elderly

Introduction

Up to 60% of over sixty-fives in acute hospitals have dementia, delirium or depression [1]. Acute hospitals are a hostile environment for older people with mental health problems [2, 3] and medical and nursing staff are often poorly trained to cope with their needs [4]. On the other hand, a significant proportion of older patients in psychiatric hospitals have serious medical problems which go untreated [5].

A potential solution to this problem is to have a joint geriatric/psychiatric ward. Many such wards have arisen out
of the need to provide a service for medically brittle, functionally dependant patients who need both psychiatric and medical inpatient care and for whom an appropriate setting of care was not previously apparent [6].

The aim of this review was to examine the literature to determine the evidence for the clinical effectiveness of joint geriatric/psychiatric wards.

**Search strategy and selection criteria**

A literature search was performed using Medline, Embase, PsycINFO and CINAHL databases between 1980 and July, 2010. The search terms, ‘geriatric’, ‘older’, ‘elderly’, or ‘aged’ were combined with the terms ‘psychogeriatric’, ‘geriatric psychiatry’ or ‘geropsychiatric’ and ‘assessment’, ‘evaluation’, ‘reviewing’ or ‘effective’. Further articles were obtained by searching reference lists and following the suggestions of the expert referees. Only papers in the English language describing or evaluating acute joint wards for older people (average age over 65 years) were included.

**Results**

Thirteen papers that met the search criteria were found and reviewed. Five papers [6–10] described established wards (Table 1) and six papers were evaluative and included comparison of patients and controls [11–16]. One of the units was the subject of both a descriptive and comparative study [10, 15]. Two papers in the literature primarily addressed the justification for and the practicalities of setting up of specialist joint wards. The first from New York [17] used information from focus groups of family caregivers of dementia patients and found that the overwhelming requirement was simply ‘better care’ for their loved ones and that frequently when patients came out of hospital ‘the acute problem was resolved, but their functional status was dramatically worse’. Inspired by this the authors describe how they established an eight bed acute dementia unit within an acute hospital designed around the needs of the patients and caregivers and the practical difficulties they encountered.

A second paper, from Nottingham, [18] argues a strong case for joint wards and describes how such a ward has been established in the N.H.S. with particular reference to environmental design, staffing, training and creating a philosophy of person-centred care and with plans for formal evaluation.

The five descriptive studies of well-established wards (Table 1) described two wards in the UK, two in Australia and one in the USA. Description of the wards emphasised that they were designed with adequate living space, but secure to allow safe wandering. Rehabilitation space is also important with a day room and separate dining facilities.

Three of the units had both psychiatric and medically trained nursing staff and the other two had medically trained nurses, but with special psychiatric training. All the units had both psychiatric and medical consultant input and had dedicated rehabilitation staff.

The key characteristics of the units are summarised in Table 2. The major patient group was patients with delirium and dementia, particularly with behavioural problems and coexistent medical illnesses. The disadvantages of such wards described included possible ‘deskilling’ of the nursing staff of other medical and surgical wards in managing delirium and dementia, difficulty recruiting staff and difficulty placing patients on discharge.

Six comparative studies were found in the literature review [11–16] (Table 3). Two of these are in the UK, two in Australia, one in the Netherlands and one in Germany. Two of the studies were ‘before and after’ studies, in two studies a comparison was made with other medical wards in the same hospital, in one study the control group consisted of similar patients in other hospitals in the area without a joint ward, and in only one study was there an attempt to randomise patients to an intervention or control ward. Two of the wards catered mainly for delirium patients and the rest for patients mainly with dementia. Discharge destination and mortality were similar between patients and controls. Mean or median length of stay was slightly longer in the two early studies before 1990 (not specified and 3 days) [11, 12] and shorter in the four more recent studies than the controls [13–16] (4, 7, 5 and 5 days). In the study by Chiu et al. [15] changes in behavioural scores were significantly better than for similar patients in other hospitals. This particular joint psychogeriatric ward is co-located with a geriatric ward and the authors are of the opinion that this has particular advantages with improved liaison and avoidance of unnecessary transfers of patients. In the one randomised controlled trial, a 40-bed ward, in which there was additional joint management with a multidisciplinary team led by a geriatrician, also trained in psychiatry and including liaison nurses and a physiotherapist, in addition to usual care, was compared with a similar 40-bed ward, but with usual care only [16]. There was a reduction in mean length of stay (24.8 versus 19.7 days, P < 0.001). This study, however, used alternate randomisation dependent on bed availability and treatment assignment was not blinded. In only one of the studies [14] was there a cost-effective analysis done. In this study of a secure delirium unit, with both psychiatric and geriatric input, it was estimated that cost savings of approximately £1,000–2,000 Australian dollars (around £600–£1,200) were made per patient episode because of reduced length of stay, staffing costs and reduced transfers to a higher level of care. Although no formal costing was done in the Netherlands study, the reduction in median length of stay was achieved by improved collaboration between psychiatric and geriatric staff and no extra staff were employed [13].

**Discussion**

In this review of joint geriatric/psychiatric wards, we have identified 13 papers—two reviewing the need for such wards and describing the practicalities of setting up joint
there is considerable evidence that they are clinically and cost-effective. This is a narrative review rather than a systematic review as this is a difficult area to review as the limited number of studies address different aspects of care.

## Table 1. Descriptive studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Centre</th>
<th>Description</th>
<th>Case Mix</th>
<th>Outcomes</th>
<th>Advantages</th>
<th>Problems</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Porello et al [6]</td>
<td>Clinton Hospital, Clinton, MA, USA</td>
<td>20 Beds. Mainly medical nursing staff. Jointly led by psychiatry and geriatrics</td>
<td>Average age 76 years. 40% Dementia. 27% Depression. 6% Delirium</td>
<td>Average length of stay 15.4 days. Range 1–65 days. 13% discharged home</td>
<td>Better psycho-pharmacological management. Better diagnosis of underlying medical problems. Improved rehabilitation. Reduction disturbed behaviour</td>
<td>Difficulty recruiting staff</td>
<td>Low start-up costs. Improved staff development and training and increased prestige of hospital. Comprehensive activity and rehabilitation programme</td>
</tr>
<tr>
<td>Tulloch [7]</td>
<td>Mount Royal Hospital, Victoria, Australia</td>
<td>11 Beds. Secure, enclosed with living space. General trained nursing staff. Jointly led psychiatry and geriatrics</td>
<td>Age range. 48–96 years. 92% over 65 years. 84% Dementia</td>
<td>Average length of stay 28 days. 35% discharged home. 54% to nursing homes. 6% died. Improvement in behaviour—e.g. wandering, aggression</td>
<td>Sharing of expertise between geriatricians and psychiatrists. Improved management of behavioural problems</td>
<td>Insufficient long-term beds for discharge</td>
<td>Attracted ‘out of area’ referrals</td>
</tr>
<tr>
<td>Astell et al [9]</td>
<td>Cameron Hospital, Fife, Scotland, UK</td>
<td>26 Bedded Unit. Medical and psychiatric nurses. Joint leadership Psychiatry/Geriatrics. Secure with alarmed exits</td>
<td>49.1% 80–89 years. 24% over 90 years. 4.3% &lt;70 years. 38% severe dementia. 41.5% moderate dementia. 32% treated for depression</td>
<td>Length of stay not stated. 58.5% discharged to nursing home. 9% discharged home. 23.5% died. Independence in activities of daily living best predictor of discharge destination ( (P &lt; 0.0001) )</td>
<td>Better management of behavioural and social problems and improvement in expected discharge destination</td>
<td>None reported</td>
<td>Ward developed from continuing care ward</td>
</tr>
<tr>
<td>Lu et al [10]</td>
<td>Bankstown-Lidcombe Hospital, Sydney, Australia</td>
<td>Co-located Geriatric and Psychiatric Unit. Joint Psychiatry/Geriatrics. 12 Beds. Dually qualified nursing staff</td>
<td>Average 80 years. Average length of stay 21.2 days. Delirium patients with behavioural problems</td>
<td>Reduction in physical and pharmacological restraint and falls. Avoided multiple transfers</td>
<td>Management more efficient than general wards with shorter length of stay. Better integration and communication between medicine and psychiatry. Better observation and safety for patients</td>
<td>None reported</td>
<td>Patients admitted directly had shorter length of stay than transfers</td>
</tr>
</tbody>
</table>
in different patient populations and we do not consider it meaningful to attempt to combine results. Joint units for both younger adults and older people are very different in their medical and psychiatric acuity, varying from high dependency for the severely ill to ‘step down’ to facilitate discharge [13]. However, despite not being a formal systematic review, we believe our literature search has been thorough and we have focused particularly on the areas of most interest in cost-effectiveness and length of stay.

Joint medical/psychiatric wards have a long history. However, most of the wards described in the literature serve mixed age groups in academic centres [19], whereas this review concentrates on units predominantly for older people. It is perhaps surprising that only a handful of such units exist in the UK [20]. The key characteristics of the wards described include joint working between psychiatrists and geriatricians, a secure rehabilitation environment and a multidisciplinary team with dedicated specially trained staff (Table 2). These characteristics are difficult to achieve and maintain in acute medical and surgical wards with the very clinical environment, rapid transit of patients through multiple wards and the high turnover of nursing staff with little training in mental health [4].

Patients with dementia are particularly vulnerable in acute hospitals as they are highly susceptible to

## Table 2. Key characteristics of joint psychiatric/geriatric wards for older people

| 1. | Joint working between geriatricians and psychiatrists to avoid unnecessary transfers and avoid missing important medical and psychiatric diagnoses |
| 2. | Homely secure environment to facilitate rehabilitation and maintain independence |
| 3. | Person centred care and involvement of family and carers in care planning |
| 4. | Access to acute investigations and treatments of an acute hospital |
| 5. | Training of medical and nursing staff to manage behavioural problems without recourse to physical or pharmacological restraint (anti-psychotics) |
| 6. | Dedicated multidisciplinary team and continuity of care |
| 7. | Good community links with psychiatric and medical staff to facilitate safe discharge |

## Table 3. Comparative studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Setting</th>
<th>Comparator</th>
<th>Results</th>
<th>Comments</th>
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<tbody>
<tr>
<td>George and Bleasdale [12]</td>
<td>Carlisle (UK). 14 Bed Joint Ward</td>
<td>Comparison with general medical and surgical wards</td>
<td>Discharge destination and mortality similar. Average length of stay longer (average 3 days longer). Reduction in complication rate—falls, deep venous thrombosis and chest infections</td>
<td>Delirium patients only. Patients not randomised. Specialist ward complied better with guidelines</td>
</tr>
<tr>
<td>Maier et al. [13]</td>
<td>Hamburg, Germany 64 beds</td>
<td>Before and after study; Staff interviews before and after establishing joint unit</td>
<td>Reduction in median length of stay from 22 days to 18 days ($P &lt; 0.001$). Reduced transfers to psychiatry</td>
<td>Staff reported increased contact between psychiatric and medical staff resulting in improved quality of treatment. Staff attributed reduced length of stay to improved cooperation</td>
</tr>
<tr>
<td>Wong et al. [14]</td>
<td>Perth, Australia. 10 Bed Delirium Ward</td>
<td>Before and after study. After appointment of dedicated geriatrician and new policies and guidelines based on comprehensive geriatric assessment</td>
<td>Reduction in median length of stay from 19 days to 12 days ($P &lt; 0.005$) and numbers of falls ($P = 0.05$). Improved Cognitive assessment</td>
<td>Cost analysis suggested cost savings, approximately 1,000–2,000 Australian dollars per patient</td>
</tr>
<tr>
<td>Chiu et al. [15]</td>
<td>Bankstown-Lidcombe Hospital, Sydney, Australia. 12 Bed Psychogeriatric Ward co-located with a geriatric ward</td>
<td>Comparison with eight other units in New South Wales</td>
<td>Change in psychosocial scores significantly better in specialist ward. Average length of stay reduction (33.4 versus 28.3 days, $P &lt; 0.001$)</td>
<td>Use of non-standardised Measuring instruments and non randomised</td>
</tr>
<tr>
<td>Slaets et al. [16]</td>
<td>Leyenburg Hospital, The Hague, Netherlands. 40 Bed Ward with geriatric liaison team with a geriatrician trained in psychiatry and a specialist liaison nurse and physiotherapist</td>
<td>40 Bed General Medical Ward on a different floor of the hospital</td>
<td>Reduction in mean length of stay 24.8 versus 19.7 days ($P &lt; 0.01$). Patients in intervention group more independent and mobile ($P &lt; 0.01$)</td>
<td>Randomised controlled trial— alternating randomization procedure dependent on bed availability. Treatment assignment not blinded</td>
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</table>
Joint geriatric/psychiatric wards

environmental change and find it difficult to communicate their needs—for instance, pain relief [21]. The evaluative studies (Table 3) suggest that joint wards can be both clinically effective and cost-effective and manage patients with delirium and dementia with medical illness and behavioural problems better than single speciality or general wards. However, it is difficult to make any definite conclusions because of the lack of high-quality randomised control trials to eliminate potential bias. There are obvious practical difficulties setting up a randomised control trial, especially when bed availability is scarce, and it is likely that the advocates of specialist units would be reluctant to randomise their patients to non-specialist wards. Furthermore, joint wards are a complex intervention and it is difficult to define their most essential ingredients and how generalisable a randomised controlled trial would be. We owe the development of geriatric medicine to an uncontrolled trial by Marjorie Warren [22] and the evidence base did not follow until many years later.

There are randomised controlled trials of specialist geriatric wards [23] and this may well include patients who have combined psychiatric and medical illnesses.

Furthermore, meta-analysis of inpatient comprehensive geriatric assessment has shown to improve outcomes of older patients, particularly those with confusion [24]. However, it is recognised that caring for patients with severe cognitive and behavioural problems alongside cognitively intact severely ill patients can be detrimental to both [25] and there is some merit in managing these patients in separate areas. The joint wards in this literature search cater for older patients with delirium and/or dementia with severe behavioural problems that are difficult to manage, even on specialist geriatric wards. Not included in our literature review are specialised areas within traditional geriatric wards for delirium only, which is an alternative service model [26].

A further service model to manage older patients with mental health problems in acute hospitals is the psychiatric peripatetic liaison model which has been extensively reviewed and hard evidence for its effectiveness is lacking [27]. Psychiatric liaison services only see a small proportion of patients with dementia and delirium in acute hospitals [28], primarily to give advice rather than take over management. Often crises occur out of hours—for example, an agitated, wandering patient with delirium on an acute medical or surgical ward. In these circumstances, advice only may not be adequate and the patient needs to be looked after on a ‘dementia friendly’ ward and their care taken over by a multidisciplinary team trained in assessment and delivery of the multicomponent interventions in delirium [29].

The ideal service model is a psychiatric liaison service linked to a joint shared care ward [1] which can provide a 24 h, 7 days a week service and also take over patient care if necessary. A joint ward has the advantage that psychiatrists and geriatricians can work in a co-ordinated fashion rather than independently and supported by nurses who are trained to implement both psychiatric and medical interventions to improve patient care. This is particularly crucial in managing delirium which involves delivering a multicomponent intervention [29] and also in making decisions about capacity, discharge and end of life care in patients with dementia.

An important characteristic of joint wards described in our review is minimal use of physical restraint and antipsychotics. Joint geriatric and psychiatric wards also have an important role in teaching and education for nurses, doctors and therapists [8] and can be a ‘hub’ for specialist advice and specialist service provision.

It is likely that, with the development of stroke units and intermediate care facilities, traditional acute geriatric wards will be increasingly occupied with older people with combinations of severe physical and mental illnesses as patients with stroke and obvious rehabilitation potential will go elsewhere. This will represent a considerable challenge as it is widely recognised that the care of patients with dementia is often suboptimal in acute hospitals with high levels of dissatisfaction from staff, carers and patients themselves [30]. Creation of more specialist joint units may be a solution, especially to improve patient safety and stimulate better training in dementia care. It is, however, unlikely that more such joint units will be created by the closure of long stay wards in these difficult financial times. However, the UK is moving towards a payment by results system where acute hospital funding is dependent on activity and case complexity. Dementia has a high-associated tariff and a long-predicted length of stay [31]. Reducing length of stay for patients with dementia can potentially considerably increase income for acute hospitals. There are lessons to be learnt from joint wards with the close collaboration of psychiatrists and geriatricians to improve patient management at ward level. Further research into both the clinical and cost-effectiveness of joint wards is required.

Key points

- Joint geriatric/psychiatric wards have many potential advantages in hospital care of frail older people.
- Many joint geriatric/psychiatry wards have been described and evaluated in the literature worldwide.
- The clinical and cost-effectiveness of joint geriatric/psychiatric wards needs to be investigated further.

Conflicts of interest

None declared.

References


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