NEW HORIZONS

New horizons in care home medicine

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Abstract

Care home medicine has been an under-researched area, but over the last decade there has been a substantial growth in publications. Most of these have focused on the ‘geriatric giants’ of falls, incontinence and mental health issues (especially dementia, behavioural disturbance and depression) as well as other key topics such as medication use and issues related to death and dying. Other areas of recent interest are around access to health services for care home residents, how such services may most effectively be developed and how the quality of life for residents can be enhanced. While many of the reported studies are small and not always well designed, evidence in several areas is emerging which begins to guide service developments. A common theme is that multi-disciplinary interventions are the most effective models of delivery. The role of care home staff as members of these teams is key to their effectiveness. Recent consensus guidelines around falls prevention in care homes synthesise the evidence and recommend multi-disciplinary interventions, and clarify the role of vitamin D and of exercise in certain populations in the care home. The benefits of pharmacist led medication reviews are beginning to emerge; although studies reviewed to date have not yet led to the ‘holy grail’ of hospital admission avoidance they point to benefits in reduction of drug burden. Effectiveness may be enhanced when working with GPs and care home nurses. Welcome evidence is emerging that in the UK the rate of prescription of anti-psychotics has fallen. This is clear evidence that changes in practice around care homes can be effected. The poor access to non-pharmacological therapies for care home residents with behavioural disturbance remains a significant gap in service. End-of-life care planning and delivery is an important part of care in care homes, and there is evidence that integrated pathways can improve care; however, the use of palliative care medications was limited unless specialist care staff were involved. Integrated models of care that focus on resident-centred goals and which value the role of care home staff as members of the team working to deliver these goals are most likely to result in improvements in the quality of care experienced by care home residents.

Keywords: care home, falls, frailty, incontinence, models of care, end-of-life care, medication review, integrated care

Introduction

Care homes provide accommodation, together with nursing or personal care, for people who are or have been ill, who have or have had a mental disorder, who are disabled or infirm or are or have been dependent on alcohol or drugs [1]. It is reported that there are ~15,700 care homes providing care and accommodation for ~459,450 people aged 65 years and over in the UK [2]. Care home residents live with a high level of disability and as many as 76% of residents require assistance with mobility or are immobile and 78% have at least one form of mental impairment [3].

In the past, care home medicine was an under-researched area, but over the last decade, there has been a blossoming of research around interventions in care homes and issues relating to living in care homes [4]. Different service models have been proposed to provide enhanced support for care home residents although there are few rigorous reviews as yet. Nevertheless, some features which indicate improvements of care can be discerned. This paper will outline recent updates on clinically relevant topics, and describe service models which may improve care in care homes for older people.

There has been ~150 randomised controlled trials that have evaluated problems of falls, immobility, frailty, incontinence and other topics such as pharmacotherapy in the last 5 to 6 years alone [4]. The recent focus in the recognition of the syndrome of frailty is highly relevant to the care home population [5]. Other research has begun to explore barriers to improvements in end-of-life care which are important to
the care home population. There has also been a growth in studies designed to explore methods of providing high-quality care to care home residents in ways which improve their quality of life. Few meta-analyses of research into key areas in nursing home medicine have been published and this would strengthen the evidence base from which practitioners can draw.

Falls

Falls are common in care homes where rates vary from 3 to 13 falls per 1,000 bed days [6]. UK care home residents fall on average two to six times per year and up to a third of falls in care homes result in injury and 1 in 20 results in a fracture [7, 8]. Recent meta-analyses of research into falls in care homes have reported a beneficial effect of hip protectors in reducing the rate of hip fracture by one-third [9]. In this review, studies involving multi-faceted interventions (which included factors such as removal of physical restraint, falls alarm devices, exercise, calcium and vitamin D treatment and changes in the physical environment) were not shown to be statistically significant in reducing falls. However, a later Cochrane review found that multi-faceted interventions to reduce falls in care homes were effective if they were coordinated via multi-disciplinary teams [10]. They found that vitamin D supplementation was beneficial and suggested that exercise may also be effective in falls reduction. Evidence regarding staff education was mixed [11, 12]. However, pharmacist medication review was shown to reduce the risk of falls in care home residents [13].

The American Geriatric Society have synthesised evidence and provided guidelines recommending multi-faceted interventions including exercise, medication review and environmental improvements delivered by a multi-disciplinary team. They also found evidence favoured the use of exercise-based programmes, vitamin D in those suspected or proven to have vitamin D deficiency and vitamin D supplementation for those with abnormal gait or risk factors for falls [14].

A Cochrane review of hip protectors used in care home residents found that fracture rates may not be reduced because of problems with adherence to treatment [15]. A subsequent review of the role of hip protectors investigated their effectiveness and identified that adherence to wearing protectors reduced from 85% of residents agreeing to wear protectors but only 29% continuing to do so at 8 months [16]. The attitude of the care giver working with the resident was identified as relevant. Other factors included perception of pain and discomfort associated with the protector, patient insight into its usefulness and interference of the use of incontinence aids.

Urinary incontinence

Recent reviews have examined the prevalence of urinary incontinence in care homes and have confirmed highly prevalent rates of both urinary and faecal incontinence (30–65 and 22–55%), respectively. Common comorbidities include cognitive impairment, limited mobility, skin infections and urinary tract infections. An inverse association was observed between the presence of incontinence and quality of life [17]. Treatment methods were limited; regular toileting and containment with pads were the most common management methods. Medication use to treat incontinence was infrequent (8%) and sadly, there were no studies identified which aimed to maintain continence [18]. The promotion of continence and management of incontinence in care homes remains an under-researched area.

Medication reviews

Specific papers have identified benefit from pharmacist-led prescribing reviews for care home residents; however, a meta-analysis described mixed results and suggested a multifaceted approach and clear policy guidelines were most likely to be effective in improving prescribing [13, 19]. Brulhart and Wermelie [20] also recommended multi-disciplinary medication reviews and reported that the pharmacist working with the physician and nursing staff reduced medication burden and identified potential adverse drug reactions in care home residents. However, a recent Cochrane review examined interventions designed to optimise prescribing for older people in care homes. The authors commented on the heterogeneous nature of the studies which tested several types of intervention with mixed results. They reported no clear benefit on adverse drug reactions, mortality, hospital admissions or quality of life. Some studies reported a benefit on medicine costs, but this effect was not consistent [21].

Dementia, depression and anxiety are common psychiatric disorders in care homes where they are more prevalent than in the general population [22]. The role of specialist cognitive pharmaceutical services has also been examined; a reduction in the number of medications and improvement in the appropriateness of prescribing was reported, but there was no evidence that the intervention improved adherence, mortality, hospitalisations, functional capacity or cognitive function [23].

Use of psychotropic medication

It is estimated that up to 40% of elderly patients in hospital and care homes are depressed with the risk higher in those with chronic medical conditions [24]. A study in England and Wales found that 37.5% of care homes residents were prescribed antidepressants [25], and a recent study [26] described that one-third of UK care home residents had recurrent depressive disorder. Anti-psychotic use in care homes has been highlighted as an area of concern. There is some variation between nations in the prescribing rates in care homes, but 25% of UK care home residents were reported to be prescribed anti-psychotics [27]. However, a more recent report found lower prescription rates with 12% of care home residents receiving such prescriptions, although
Frailty

Frailty has long been used as a term to indicate vulnerability, but recent key publications have described clearly the syndrome of frailty [31–33]. A recent review has drawn together scientific research and synthesised current knowledge [5]. The clinical syndrome of frailty is characterised by poor muscle strength, vulnerability to infections because of impaired immunity and failures of the endocrine system resulting in a critically reduced homeostatic capacity to withstand any insult (whether from infection, organ impairment etc). The characteristic response of the frail person is to such an insult is to fall, become immobile or suffer a delirium. Care home residents are substantially frail, and developments in the treatment of frailty and its prevention will undoubtedly be of key interest to those who care for care home residents. Early evidence points to the importance of exercise (including chair based) and nutrition in reducing the impact of frailty [5]. The robust evidence base around the role of comprehensive geriatric assessment in the management of frailty indicates the need for access to multi-disciplinary assessment for care home residents [34].

Care home residents frequently suffer multi-morbidity and a key area of interest is in the overlap between the management of frailty and that of multi-morbidity. The majority of evidence around the management of long-term conditions is obtained from studies focusing on single conditions, and there is recent interest in examining how the management of one long-term condition can impact on another, in the absence of frailty [35]. Although not all frail persons are multi-morbid, both are more common in the older population.

Measures to improve care and quality of life for care home residents

‘My Home Life’ is a joint charitable and academic initiative which has the aim of improving the quality of care home residents’ life using ethnographic methods. The stories of residents, carers and care home managers are used to illustrate factors which contribute to or detract from a resident’s quality of life, with an emphasis on relationship-centred care. The studies also facilitated the development of recommendations about the potential for better partnership working between care homes and the NHS as a means of delivering better access to healthcare for residents [40].

There has been a marked growth in research around improvement in quality of life and the resident’s experience of care in care homes. Several reviews published in this area have concluded that a resident-centred approach to care and a home-like environment can contribute positively to the resident’s experience of living in a care home [41]. The role of education and training in achieving change in care homes has been studied. The findings were that staff education is necessary but not a sufficient condition for success and recommended that the role and status of care homes needs to be raised [42]. They recommended that a relationship-centred approach to care be adopted which acknowledges the importance of attending to the needs of all those who live in, work in or visit care homes. Factors to promoting effective working between the National Health Service and care homes have been examined. The support of the care home manager and protected time for staff training were identified as important factors. It was noted that most studies focused on health service outcomes rather than resident-focused outcomes [2]. Another review found that leadership style and a supportive management approach were most effective in facilitating care staff to deliver improved quality of care [43].

Models of medical support for care home residents

Recent publications have highlighted the inconsistent and often inadequate health care which care home residents
receive. Twenty-five per cent of NHS trusts surveyed in 2008 reported inequality of access to physiotherapy and occupational therapy and 35% to district nursing [44]. Fifty-seven per cent of residents in a 2009 Care Quality Commission survey were unable to access all healthcare services required [45].

In 2011, a collaboration of healthcare groups described existing arrangements for support to care home residents as ‘a betrayal of older people, an infringement of their human rights and unacceptable in a civilised society’ [46]. This has led to consideration of more appropriate models of care for care home residents [2, 47]. Examination of studies designed to improve integration between care homes and health care services reported barriers to integrated working included lack of trust from both health service and from care home staff; rapid turnover of staff and professional isolation of care homes. Facilitators were health service staff acting as advocates for care homes in relation to care, care homes valuing health service input and training, and care home managers supporting staff access to training. The evidence was mixed but indicated that multi-disciplinary teams working with care home staff as partners in such teams were likely to be most effective. Integrated care pathways also seemed likely to lead to more effective integration of services [2].

Further descriptions of possible service models to offer medical support to care homes have been published. Services described included enhanced primary care input in a sessional regular visit to the care home, with or without access to the support of a geriatrician. Other models of care described include an integrated primary and secondary care service with advanced nurse practitioner, GP and geriatricians working together, with access to community services such as physiotherapy, pharmacist and speech and language therapy. None of these models have been robustly tested for effectiveness or cost-effectiveness. More recently a number of authors have described the impact of the input of a geriatrician to supplement and support the work of primary care practitioners. These interventions have been reported to have led to reductions in hospital admissions and an increase in the number of residents with an advance care plan in place, with a consequent increase in the number of residents dying in their preferred place of care (in the care home). These improvements have been by comparison with historical controls [48].

**Conclusion**

Care home residents are the most frail and vulnerable group in our society. Recent landmark research has begun to give us a clearer picture of their needs and has provided some indications as to how services can most effectively respond [26]. We have evidence that multi-disciplinary interventions are most likely to be effective in preventing falls and in providing effective medication reviews [10, 21]. It is probable that such an approach is most likely to be effective in other areas of care home residents’ treatment. Care home staff are key members of multi-disciplinary teams caring for their residents.

There is emerging evidence that geriatrician support to other members of the primary and community care team enhances the effectiveness of interventions [48]. Clearly the robust evidence base for comprehensive geriatric assessment which applies to frail people in other settings indicates that there are sound reasons to anticipate additional value from the inclusion of the geriatrician in the care home support team [34]. Emerging research on the management of frailty is likely to influence the continuing development of care home medicine, and further research into the interaction of frailty and multiple long-term conditions may help in rational approaches to polypharmacy in this group.

As further evidence emerges this may well have implications for best practice and for improving the outcome for care home residents of incentive schemes such as the UK incentive framework for general practitioners [49].

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**Key points**

- Recent research has given a clear picture of the health status of care home residents.
- At least in the UK many care home residents have limited access to some health service resources.
- Models of care that include multi-disciplinary teams provide effective care to care home residents; services are likely to be more effective if care home staff are an integral part of the team.
- Most studies to date have focused on health service rather than resident-focused goals.
- Further development in our understanding of the syndrome of frailty and its interaction with multi-morbidity is likely to be highly relevant to improvements in the care of care home residents.

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**Conflicts of interest**

None declared.

**References**


Received 5 November 2013; accepted in revised form 6 November 2013