6.5 Older people in hospital 548

6.5 Older people in hospital 548

ESSENTIALS Older people usually present to hospital because of a crisis: a sudden change in health, function, or circumstances that causes worry, dis- tress, or overwhelms independence or care provision. Crises may relate to the individual, the carer, care systems, or the environment. At the point of presentation it may not be clear which, or what com- bination, of these is responsible. It is necessary to identify all rele- vant factors for hospital care to be effective and efficient. Admission to hospital for an acute illness can have a major nega- tive impact on an older person's ongoing functional abilities, hence systems of care need to know when to expect and how to manage functional deterioration. For example, an unwell older person may have prolonged bed rest leading to deconditioning and loss of balance or falls; stress, dehydration, malnourishment, and the effects of drugs may cause delirium. Such patients, who account for at least half of hospital inpatients, do not fit the standard 'acute medical model' of care, and hospital care systems that fail to take into account their risks and needs increase the chances of poor out- comes and lose efficiency because of unnecessary resource use. Older people need a range of interventions addressing physical and mental health, rehabilitation, social care needs, and family engage- ment. This means that a more comprehensive and flexible approach to care is required, emphasizing a wider range skills and using pro- fessional judgement regarding the most appropriate degree of in- vestigation and treatment. The interface between 'acute' and 'rehabilitation' is blurred, and much evidence supports the effectiveness of efforts to maintain or restore function beginning very early in the course of an illness ('re- habilitation starts on admission'). Rehabilitation centres on defining problems in terms of diagnoses and their consequences in terms of organ systems, tasks, and activities in a social and environmental context. Goals are agreed and interventions undertaken at the levels of pathology, impairment, disability, or the environment, and as- sessed for effect, before continuing successive cycles as residual problems are addressed. Hospitals must provide for this rehabili- tation, care planning, and transfer of care to community services where these are separately organized. Some patients do not have the resilience to recover from an acute illness and return to independent living. In this context an individual may become dependent long term, or may experience progressive decline leading to death. Here the clinical approach changes from an emphasis on recovery to support or palliation. Despite efforts to enable people who prefer it to die

at home, more die in hospital, and so end-of-life care is a core task for hos- pitals. Place of death may be less important than the quality of care delivered. Hospitals should enable high-quality palliation and the experience of ‘a good death’. Introduction Public health services should be accessible to all regardless of age, sex, diagnosis, or level of disability. Health problems in older people form a large part of the business of many hospitals and there- fore services should be designed and organized with their needs in mind. To achieve this appropriate adjustments are required to the physical environment, staffing expertise and attitudes, and the hospital-wide cultures and processes. What is an acute hospital for? Hospitals provide multiple functions (see Box 6.5.1). They op- erate within wider health, social and informal care systems, and in varying cultural, professional, political, and financial contexts. Some hospital functions can only be provided in a highly technical environment. Some depend on alternative facilities and staffing groups in primary and community care. Definitions of different facilities may vary between countries. A subacute or long-term care facility may be called a hospital in one country, and a nursing home, or intermediate care facility in others. Hospitals provide acute care, but increasingly they must also manage chronic ill-health, functional limitations, and comorbid mental health problems, because those are the needs of many of their patients. Hospitals must also consider the impact of ill-health on family members and carers, and interface with providers of long-term health and social care. Older people usually present to hospital because of a crisis: a sudden change in health, function, or circumstances that causes 6.5 Older people in hospital Graham Ellis, Alasdair MacLullich, and Rowan Harwood

 worry, distress, or overwhelms independence or care provision. Crises may relate to the individual (illness or injury), the carer (illness, holidays, carer strain, abuse), care systems (availability or capability of home care or care homes), or the environment (reloca- tion or building work). At the point of presentation it may not be clear which of these is responsible. There are often multiple causes or contributory factors. For hospital care to be effective and effi- cient, it is necessary to identify all relevant factors. Admission to hospital for an acute illness can have a major negative impact on an older person’s ongoing functional abilities. Systems of care need to know when to expect and how to manage functional deterioration. For older people the interface between ‘acute’ and ‘rehabilitation’ is blurred, and much evidence supports the effectiveness of efforts to maintain or restore function begin- ning very early in the course of an illness (‘rehabilitation starts on admission’). Hospitals must provide for this rehabilitation, care planning, and transfer of care to community services where these are separately organized; this process is called discharge (or Transfer of Care) planning. Despite efforts to enable people who prefer it to die at home, more die in hospital, and so end-of-life care is a core task for hospitals. Place of death may be less important than the quality of care de- livered. Thus, hospitals should enable high-quality palliation and the experience of ‘a good death’. Why should modern hospitals adapt to the needs of older adults? Numbers attending and being admitted In developed nations, typically two-thirds of emergency hospital admissions are of people over 65. In the United Kingdom over the last 10 years there has been a 65% increase in the number of people aged over 75 requiring emergency hospital care, compared to a 31% increase for 15–59-year-olds. Greater numbers of older people are being admitted for emergency surgery, or elective procedures such as joint replacements, urological procedures, or ophthalmic sur- gery. Older people have longer lengths of stay than younger patients. The increased demand is partly due to demographic change (more older people in the population) but is also related to the increasing multimorbidity associated with longer-lived popu- lations, and changes in older peoples’ expectations and health-

seeking behaviours. How older patients differ from younger ones ‘If you can still move you are not old’—Nigerian Proverb Older people differ one from another more than do younger people. Many older people are fit and independent, free from disability and cognitive impairment, and not unlike their younger counterparts. They exercise, socialize, and work much as anyone younger would. They may not feel old and can be resentful of labels such as ‘eld- erly’, ‘frail’, ‘geriatric’ or other perceived pejorative terms. Their illness course and recovery may be unremarkable. Many perform important roles contributing to their families, voluntary organiza- tions, or wider society. Some may be caring for their spouse or much older parents. Others, however, struggle with ordinary daily tasks such as washing, dressing, and walking. They require assistance for the most basic of personal functions. They take longer to recover from acute illness and are more likely to require rehabilitation. These individuals are more likely to need acute hospital admission. These wide differences among older people (Box 6.5.2) neces- sitate a flexible, tailored approach, and evaluation of needs on an individual basis. Older people are prone to deterioration in the face of stressors. Often called frailty, the unifying explanation is of loss of resilience at all levels (cellular, organ, functional and social), reduced physio- logical or homeostatic reserve, and multiple pathologies, making older people prone to injury, illness, and social disruption. Frailty describes a state where patients are vulnerable to acute func- tional decline with challenges that would not present a problem to a younger or more resilient person. This is explored further in Chapter 6.2. The prevalence of multiple comorbidities increases steeply with age (Fig. 6.5.1) including many acute illnesses as well as chronic, degenerative, and disabling diseases. Complexity increases progressively with the number of diagnoses. Multiple chronic comorbidities are not synonymous with age, frailty, or disability per se, but multiple chronic conditions and social and environ- mental adversity predispose an individual to crises. Likewise, the presence of disability in activities of daily living is not syn- onymous with frailty, but the risk of acquired disability is higher in those who are frail. Frailty, more than age or physiological parameters, best identifies when an older person is at risk of new or worsening disability from an acute illness. Implications for acute hospital care Poor functional outcomes can occur as a consequence of illness, but also as a consequence of treatment or hospital systems. Older Box 6.5.1 Potential functions of a hospital • Emergency medical and surgical care • Elective medical and surgical procedures • Specialist outpatient consultation investigation and treatment • Assessment and management of crises of health or care • Investigation and diagnosis • Rehabilitation • End-of-life care • Care planning, decision-making, transitions to postacute or commu- nity care, care homes, or end-of-life care • Education and training • Research Box 6.5.2 How older patients differ • Multiple pathologies • Nonspecific presentations • Rapid loss of abilities • Proneness to complications • Need for rehabilitation • Importance of the environment After Grimley-Evans, J., ‘How are the elderly different?’, in R. L. Kane, J.
Grimley-Evans, and D. MacFadyen, eds, Improving the health of older people:
a world view, pp. 50–68. Oxford: Oxford University Press, 1990.

 people are more prone to complications of disease. The risk is in- creased across multiple domains such as adverse drug reactions, surgical wound infections, delirium, malnutrition, falls, pressure sores, venous thromboembolism, hospital-acquired infections, constipation, and deconditioning. For example, an unwell older person may have prolonged bed rest leading to deconditioning and loss of balance or falls. Stress, dehydration, malnourishment, and the effects of drugs may cause delirium. Hospital care systems that fail to take into account these risks and needs increase the chances of poor outcomes and lose efficiency because of

unneces- sary resource use. Treatment plans for an older adult will often include parallel aims such as the treatment of an acute infection, the rehabilitation of functional decline, the palliation of cancer-related pain and the support for a chronic disease such as diabetes. Implications for the initial assessment of

the older patient Acute illness may present ‘typically’ (as for younger adults), but may also present nonspecifically or atypically, for instance with functional deficits such as falls, immobility, delirium and incon- tinence (the ‘geriatric giants’). These atypical presentations may be misunderstood as ‘social’ rather than ‘medical’. On the contrary, these patterns should be recognized as signs of acute illness in the context of frailty, increasing the vulnerability of the patient to poor outcomes including increased early mortality, quicker loss of functional independence, and greater risk of being admitted to a nursing home following hospital care. Identifying degrees of frailty is necessary if patients are to re- ceive targeted interventions to mitigate these risks. There are sev- eral simple tools suitable use in clinical practice, for example, the Clinical Frailty Scale (Fig. 6.5.2). Assessment must include also sensory impairments (vision, hearing) and cognitive state, and systematic description of func- tional ability prior to, and on recovery from, the acute illness. This enables ongoing assessment of progress and is vital in plan- ning future care needs. An example of this is the Barthel Index in Fig. 6.5.3. Practitioners should be careful not to make assumptions and take care to incorporate older adults’ views. Moreover, there may be multiple stakeholders involved including relatives, carers, and services (such as care homes) as well as the patient themselves. Gaining insights from them, as well as understanding their per- spectives and concerns, will enrich the clinical assessment and help future care planning. Importantly, cultural expectations and norms for older adults of different ethnicities may be different from younger adults. Older patients’ needs are not readily addressed by

the traditional model of hospital care Many modern acute hospitals work on the assumption that simple and reliable rapid assessments, leading to defined treatment path- ways with short admissions, optimize outcomes, and maximize efficiency. Much care has a curative focus, and assumes that the individual has mental capacity and is cognitively able and engaged in their own care. Little account is taken of disability or sensory im- pairment. This ‘acute medical model’ of care is well-suited to single, reversible problems in otherwise well individuals. It may involve a patient in multiple contacts with many new faces. It may require invasive and potentially distressing tests and investigations. It pro- vides high levels of information to patients regarding their con- dition, treatment, and prognosis. It expects patients to withstand prolonged immobility on beds and trolleys, fasting for surgery, or multiple ward moves. This is accepted as the cost of restoring 100 90 80 70 60 50 40 30 20 10 Age group (years) Patients (%) 0 0–4 5–9 10–14 15–19 20–24 25–29 30–34 35–39 40–44 45–49 50–54 55–59 60–64 65–69 70–74 75–79 80–84 85+ 0 disorders 2 disorders 3 disorders 4 disorders 5 disorders 6 disorders 7 disorders ≥8 disorders 1 disorder Fig. 6.5.1 Number of chronic disorders by age group. From Barnett K, et al. (2012) Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. Lancet, 380, 37–43.

 health. Rehabilitation is the exception rather than a norm, and dis- charge is expected to be straightforward. However, at least half of hospital patients have health needs that do not fit this model. Older people need a range of interventions addressing physical and mental health, rehabilitation, social care needs, and family engagement. This means that a more comprehen- sive and flexible approach to care is required, emphasizing a wider range of skills (such as teamworking, communication, negotiation, and giving comfort) and using

professional judgement regarding the most appropriate degree of investigation and treatment. Hospital planning and performance management therefore needs to take systematic notice of diverse population needs, and plan for this provision, taking into account complexities and heterogeneity. Components of healthcare in the acute hospital The goals of acute hospital healthcare can be divided into some fundamental components (Box 6.5.3). These components may be combined (curing a disease may delay death, relieve symptoms, and restore function). Different areas of medical practice use different models to characterize illness and guide management. These are not necessarily incompatible, but emphasize the import- ance of different approaches. Diagnosis remains central to the care of complex older people. Treating the treatable will often be helpful, but palliation, multi- disciplinary management, information giving, counselling and negotiation of goals, restoration of function, and manipula- tion of the physical and social environment assume increased importance. Rehabilitation centres on defining problems in terms of diag- noses and their consequences in terms of organ systems, tasks, and activities in a social and environmental context. Goals are agreed and interventions undertaken at the levels of pathology, impairment, disability, or the environment, and assessed for effect, before continuing successive cycles as residual problems are addressed. Rehabilitation is key to managing disability in old age, but can be limited in progressive disease and mental health problems. The palliative care model also focuses on problems, which are meticulously analysed and treated where possible. There is a 1 Very fit—People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age. Clinical Frailty Scale 7 Severely frail—Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within c.6 months). 8 Very severely frail—Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness. 9 Terminally ill—Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail. Scoring frailty in people with dementia The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story, and social withdrawal. In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting. In severe dementia, they cannot do personal care without help. 2 Well—People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally (e.g. seasonally). 3 Managing well—People whose medical problems are well controlled, but are not regularly active beyond routine walking. 4 Vulnerable—While not dependent on others for daily help, often symptoms limit activities. A common complaint is being ‘slowed up’; and/or being tired during the day. 5 Mildly frail—These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework. 6 Moderately frail—People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing. Fig. 6.5.2 Clinical frailty scale. Geriatric Medicine Research, Dalhousie University, Halifax, Canada.

 commitment to open and honest communication, and account taken of psychological, social, and spiritual aspects. Problems are anticipated and advance care plans made. The Recovery Model has its origins in mental healthcare. Positive attributes and

abilities are emphasized over the nega- tive. Achievable goals are formulated and risks taken in trying to achieve goals. Failure is accepted. The risk enablement approach identified and acknowledges risks, minimizes them where possible, and then openly decides if residual risks are to be taken, avoided, or compensated for. Person-centred care represents best practice in dementia, but is applicable for other vulnerable patients. Its precepts are to value the person and those who care for them; to individualize care ac- cording to physical and mental health problems, personality, biog- raphy, values, and preferences; to view problems from the patient's perspective; and use communication and relationships to enhance Activity Barthel score 0 5 10 15 Independent Independent Independent Independent (including buttons, zips, laces etc.) Can use enema or suppository independently Can control bladder day and night Independent (can get on and off, dress and wipe unassistes) Independent (but may use an aid, e.g. walking stick); ≥50 yards) Walks with little help; ≥50 yards) Minor help or supervision Unable Some help required e.g. needs help cutting, spreading butter etc. Can use a bath tub, shower or take a complete sponge bath unassisted Independent face/hair/ teeth/shaving (implements provided) Needs help but can do at least half unaided Needs help with an enema or suppository Occasional accidents or can not wait for the bed pan/get to the toilet in time Needs some help, but can do some things alone Major help (can sit up alone but needs to be lifted out of bed) Wheelchair independent, including corners; ≥50 yards Needs help or supervision Dependent Dependent Unable, no sitting balance Unable Immobile or <50 yards Dependent Incontinent (or need to be given enemas) Incontinent or catheterized and unable to manage alone Needs help with personal care Feeding Bathing Grooming Dressing Bowels Bladder Toilet use Transfer (bed to chair and back) Mobility (on level surfaces) Stairs Fig. 6.5.3 The Barthel Index of functional status. After Mahoney FI, Barthel D (1965). Functional Evaluation: The Barthel Index. Maryland State Medical Journal, 14, 56–61. Box 6.5.3 Models of healthcare for older people Prevention Anticipatory intervention in high risk groups Medical Diagnose, treat Rehabilitation Cycle of multiprofessional problem identification, analysis, therapeutic intervention and reassessment, directed at maximizing physical and social functioning Palliative Meticulous management of symptoms, open communication, attention to psychological, social and spiritual aspects, advance care planning Comprehensive geriatric assessment Assessment and management of (acute and chronic) diagnoses, functional, mental, social and environmental dimensions, and planning to address identified needs Person-centred care Value and respect for personhood, individualized care, empathic understanding, communication and relationships to promote well-being and reduce distress Recovery model Emphasize hope, set achievable goals, identity positive attributes and abilities, take risks, accept failure Social model Environment and relationships adapted to persons' abilities

 well-being, respect identity and provide comfort, inclusion, and attachment. The social model sees disability as a function of the failure of so- ciety to make adjustments to meet the needs of those with different levels of ability, rather than a defining feature of the individual, and emphasizes the social, legal, cultural, and environment aspects of enablement. The healthcare professional should draw on all of these flexibly and sometimes simultaneously. For geriatricians, the dominant model used is that of 'comprehensive geriatric assessment' (CGA) which overlaps with each of these. Comprehensive geriatric assessment Comprehensive geriatric assessment applied to older people with frailty improves clinical outcome (reduces mortality and the need for long-term care) and reduces the costs of health and social care. The likelihood of multiple overlapping problems necessitates as- sessment across multiple domains to develop a multifaceted thera- peutic plan for recovery and independence. This

process is referred to as comprehensive geriatric assessment, or CGA. This term is slightly misleading as it is about more than assessment. It requires an action plan and its delivery as well. Comprehensive geriatric as- sessment is a highly evolved form of ongoing care led by doctors, nurses, and allied health professions (physiotherapy, occupational therapy, speech and language therapy, dietetics) who specialize in looking after older adults with frailty and work as a coordinated team. This may be delivered in a specialist unit or ward, but also by a mobile team in other areas of medicine or surgical care. See Chapter 6.4 for further description. Meta-analysis of multiple randomized controlled trials dem- onstrated that older people who received comprehensive geriatric assessment were more likely to be alive and in their homes at dis- charge from hospital and at end of follow up (up to 12 months), compared with those who received routine inpatient medical care (Fig. 6.5.4). There are additional benefits from specialist care in terms of reductions in the likelihood of being admitted to resi- dential care. In addition, although not universal, many trials re- ported a reduction in costs associated with comprehensive geriatric assessment care. There are different models of comprehensive geriatric assess- ment. These are broadly similar in that they incorporate specialist coordinated multidisciplinary teams with expertise in the man- agement of older patients. Where they differ tends to be in their acuity or admission criteria. Some acute wards (often called acute care for elders wards, or ACE) admit directly from the emergency department, but typically (in the United Kingdom at least) their admission criteria are based on age alone with the exclusion of cer- tain conditions. Others take patients after 24–72 hours and are de- signed for patients with frailty syndromes such as falls immobility, delirium, dependence, or risk of admission to institutional care. Still others admit adults later in their hospital journey, perhaps in a less acute facility for rehabilitation when they are more medically stable. Orthogeriatric, surgical liaison, and onco-geriatric models have successfully applied similar approaches (see Chapter 6.6). In health systems with developed geriatrics services, there is a trend towards earlier and more extensive assessment prior to a decision on admission to hospital, including elder-friendly emer- gency departments and acute frailty units. These can use referral to community services (‘Hospital at home’) as an alternative to ad- mission in some cases. Rapidly identifying functional impairments or underlying pathology allows earlier commencement of treat- ment and recovery. This has the potential to lead to shorter more productive hospital stays or to more community management of common problems (see Chapter 6.4). If all services treating older patients (including emergency de- partments, surgery and organ-specialist services) incorporated the principles of comprehensive geriatric assessment, the impact on the health outcomes of this patient group could be significant. Trials of discrete wards provide evidence of greatest benefit (Fig. 6.5.4). The key messages are that specialist-led, organized, coordinated care with experienced multidisciplinary teams who have control to implement their recommendations and who target the frailer patient are most effective. Standardized valid and reliable assessment scales can be used to assess different domains (Fig. 6.5.5). This means that allied health professionals can describe and quantify a patient’s deficits in a way that is understood and can be reproduced by a separate observer. Assessments must be tailored to the patient group and setting. For example, patients presenting with falls need assessments targeted towards their likely constellation of problems (such as strength and balance), whereas those with delirium will need assessment fo- cusing on their cognition, mood, and behaviour. There are many assessment scales for different domains, including mobility, self care, falls risk, pressure sore risk, nutritional assessments, cogni- tion, and delirium. Success of the comprehensive geriatric assessment approach in- cludes use of protocols of care for the management of key condi- tions, which can be implemented consistently. Some of this may be implicit learning in teams that work regularly

together. Some may be more explicitly written protocols of assessment and manage- ment for common conditions such as falls, delirium, or immobility. Linking assessment to individually tailored but flexible interven- tions in real time is a continuous and iterative process, adapting to an individual's recovery or change in circumstances in order to adapt and maximize recovery.
Specialist care versus generalist care Who looks after a patient has two important aspects: 1) ensuring proper access to organ-specialist or surgical expertise where this is appropriate, which requires an assessment and decision-making process to take place, and close working between generalist and spe- cialist teams; 2) the need to take a broad overview of all aspects of care, with the authority to coordinate and direct care strategically. Evidence suggests that frail older people are best managed by a geriatrician supported by a suitably skilled and resourced multi- disciplinary team, using the comprehensive geriatric assessment approach. However, given the numbers of patients, the available workforce, the need for complex interventions or surgery in older

554 Section 6 Old age medicine people, different healthcare systems, and re-imbursement mech- anisms, it is likely that many older people will be managed by those who are not specialized in the care of older people. In these circumstances, liaison and consultation models are helpful (see Box 6.5.4). Whether overall care is managed by a geriatrician, an internist, or an organ-specialist (perhaps relating to the primary working medical diagnosis), they must deliver the aspects of comprehensive geriatric assessment that have been shown to be effective in opti- mizing outcome.
Multidisciplinary teams A team can achieve more than its individual members working alone. Any team needs to be led and coordinated if it is to be ef- fective. Clear leadership is important to focus the team on goals, achieving consensus, and keep to timescales. Meetings frequency should be adequate to keep up with the need for reassessments and adapting treatment plans, being as often as daily in some set- tings. Clear documentation is essential and should centre on the patient's goals. A patient may wish to return to as near normal life as possible, live at home, and remain independently self-caring and mobile. The team would identify the obstacles to achieving this, based on comprehensive geriatric assessment, and then plan a menu of interventions to address those aspects which are modifiable. These interventions are likely to be multilateral, addressing symptom relief, specific impairments, task capacity, confidence, and adap- tation strategies. There is usually a hierarchy of importance and timing of these interventions, adjusted in the light of change. Take, for example, mobility improvements aimed at reaching the toilet independently. Interventions may include relief of lower limb pain, repetitive chair based exercise to increase strength, assisted prac- tice performing sit to stand, and temporary provision of a walking aid to enable some independence prior to a fuller recovery. This multilevel approach is an application of the WHO ICF model of disability. Repetitive performance of functional activities is a cornerstone of rehabilitation of older adults, for two reasons. Firstly, because this makes sense to patients as relevant to the life they wish to re- sume living. Secondly, because the complex combinations neces- sary for task performance (e.g. strength of lower and upper limbs, balance, executive function, body-eye coordination, and so on) cannot be simulated by individual exercises and respond better to composite approaches. Timing matters, and in some cases the team will identify that particular aspects need to addressed first in order to enable progress to build. Goals are reviewed regularly and readjusted at repeated multi- disciplinary team (MDT) meetings to take account of the patient's Study or Subgroup 1.2.2 Team Subtotal (95% CI) 2940 2765 83.8% 0.04 Total (95% CI) 3498 3301 100.0% 0.03 [0.01, 0.05] 1.2.1 Ward Cohen 2002 GEMC (8) 200 346 185 346 10.3% 0.04 [-0.03, 0.12] 2002 Saltvedt 2002 (9) 60 127 55 127 3.8% 0.04 [-0.08, 0.16] 2002 Cohen 2002 UCOP (10) 217 348 185 348 10.3% 0.09 [-0.02, 0.17] 2002 Somme 2010 (11) 11 24 9

21 0.7% 0.03 [-0.26, 0.32] 2010 Goldberg 2013 (12) Total events Heterogeneity: Chi2 = 12.63, df = 11 (P = 0.32); I2 = 13% Test for overall effect: Z = 3.14 (P = 0.002) 146 1769 1548 Total events 310 304 Total events 2079 1852 310 125 290 8.9% 0.04 [-0.04, 0.12] [0.02, 0.07] Subtotal (95% CI) 558 536 16.2% -0.02 [-0.07, 0.04] 2013 McVey 1989 (13) 64 93 62 92 2.7% 0.01 [-0.12, 0.15] 1989 Winograd 1993 (14) 32 99 36 98 2.9% -0.04 [-0.18, 0.09] 1993 Kircher 2007 (15) 104 150 96 129 4.1% -0.05 [-0.16, 0.05] 2007 Edmans 2013 (16) Heterogeneity: Chi2 = 0.92, df = 3 (P = 0.82); I2 = 0% Test for overall effect: Z = 0.61 (P = 0.54) Heterogeneity: Chi2 = 17.15, df = 15 (P = 0.31); I2 = 13% Test for overall effect: Z = 2.64 (P = 0.008) Test for subgroup differences: Chi2 = 3.39, df = 1 (P = 0.07), I2 = 70.5%
110 216 110 217 6.4% 0.00 [-0.09, 0.10] 2013 CGA Control Risk Difference Risk Difference M-H, Fixed, 95% Cl Events Total Events Total Weight M-H, Fixed, 95% Cl Year 121 190 134 223 6.1% 0.04 [-0.06, 0.13] 2000 Rubenstein 1984 (1) 35 63 22 60 1.8% 0.19 [0.02, 0.36] 1984 Counsell 2000 (7) 474

767 485 764 22.7% -0.02 [-0.07, 0.03] 2000 Applegate 1990 (2) 55

78 43 77 2.3% 0.15 [-0.00, 0.30] 1990 Asplund 2000 (6)
Landefeld 1995 (3) 218 327 194 324 9.7% 0.07 [-0.01, 0.14] 1995 Nikolaus 1999 (4) 114 179 56 93 3.6% 0.03 [-0.09, 0.16] 1999 Nikolaus 1999 plus ESD (5) 118 55 92 3.6% 0.05 [-0.07, 0.18] 1999 Favours control Favours CGA –0.5 –0.25 0.25 0.5 0 181 Fig. 6.5.4 Meta-analysis of randomized controlled trials of comprehensive geriatric assessment: living at home at the end of follow up (up to 12 months). From Ellis G, et al. (2017) Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database of Systematic Reviews, (9), CD006211.

 changing progress. It may be necessary to set intermediate goals, which can be part of tempering expectations or overambitious goals. For instance, ‘I want to walk’ may be tempered with ‘let’s work on standing first’. It might become apparent after time that the patient’s initial goals are not possible and so a revised plan is put in place. These changing goals need to be regularly negotiated with patients and their families, particularly where families may play a part in providing ongoing care. Palliative and supportive care Some patients do not have the resilience to recover from an acute illness and return to independent living. In this context an individual may become dependent long term, or may experience progressive decline leading to death. Here the clinical approach changes from an emphasis on recovery to support or palliation (see also Chapter 6.11). Identifying this point is important, but can be difficult and uncertain. A key skill is how to manage the uncertainty, and tread a path between overaggressive medical intervention and nihilism. Repeated hospital admissions, especially with infec- tions, severe weight loss, or in the context of dementia with loss of mobility, continence, swallow, appetite, or communication, are all indicative of a prognosis that may be weeks to months rather than years. Waterlow pressure ulcer prevention/treatment policy Build/weight for height Average Healthy 0 Male A - Has patient Lost Weight recently Yes - Go to B No - Go to C Unsure - Go to C and score 2 B - Weight Loss Score C - patient eating poorly or lack of appetite ‘No’ –0, ‘Yes’ Score = 1 Nutrition score If > 2 refer for nutrition assessment /intervention Continence Complete/ Catheterised 0 1 2 3 Urine Incont. Faecal Incont. Urinary + Faecel Incontinence Mobility Fully Restless/Fidgety Apathetic Restricted Bedbound e.g. Traction e.g. Wheel chair Chairbound 0 1 2 3 4 5 Special risks Tissue malnutrition Terminal cachexia Diabetes, Ms, Cva Motor/sensory Paraplegia (Max of 6) Major surgery or trauma Orthopaedic/Spinal Medication-Cytotoxics, long term/High dose steroids, Anti-

Inflammatory Max of 4 Score 10+ At Risk 15+ High Risk 20+ very High Risk On Table > 2 HR# On Table > 6 HR# 4–6 4–6 4–6 5 5 8 Multiple organ failure Single organ failure (Resp, renal, cardiac.) Peripheral vascular Disease Anaemia (Hb < 8)

Scores can be discounted after 48 hours provieded patient is recovering normally

- The 2005 revision incorporates the research undertaken by Queensland Health. Smoking 8 8 5 5 2 1 Neurological deficit 0.5–5kg = 1 10–15kg = 3

> 15kg = 4 Unsure
> = 2 5–10kg = 2 Female 14–49 50–64 65–74 75–80 81+ 1 1 1 2 2 3 4 5 1 1 1 2 3 Tissue Paper Dry Oedematous Clammy, Pyrexia Discoloured Grade1 Broken/Spots Grade 2–4 BMI = 20–24.9 0 Above Average BMI = 25–29.9 1 Obese BMI > 30 2 Below Average BMI > 20 3 BMI = W (kg)/Ht (m)2 Skin type visual risk areas Sex age Malnutrition screening tool (mst) (nutrition vol. 15, no. 6 1999 - australia Fig. 6.5.5 Waterlow Score Risk Prediction Tool. © J. Waterlow 1985, revised 2005. Box 6.5.4 What is a geriatrician? • A physician with a firm foundation in internal medicine, broad gen- eral knowledge, and an understanding of prognosis, but trained to meet the unique healthcare needs of older adults. • Knowledge of ageing and its impact on tissues, organs and systems, and an ability to recognize frailty and its potential consequences. • Ability to investigate and manage frailty syndromes such as confu- sion, immobility, falls, and functional decline. • Additional specialist training in old age psychiatry and palliative care. • Expertise in specific age-related conditions such as dementia, stroke, Parkinson’s disease, delirium, and fragility fractures. • Generic skills including multidisciplinary leadership and team working, effective communication, understanding of complexity and adaptability. • Compassionate, person-centred, and patient.

556 Section 6 Old age medicine Palliative care does not mean withdrawal of care, but a refocusing on avoiding distress, improving quality of life, and achieving new goals and priorities. The shift in emphasis from cure and recovery to supportive or palliative care in an acute care setting in hospital can be confusing to staff and patients and families. When open dis- cussion of uncertainty is allied to a combination of the palliative care alongside a trial of 'curative' care (a 'twin track' approach), this can reduce anxiety. Following open discussion, issues like the continuation or stopping of treatments are simpler, more context- oriented, and person-centred. For those who are leaving hospital with a short life expectancy, this provides an opportunity to review and plan future care needs. This requires an explanation of the likely illness trajectory. Goals ('what is important now?) and fears should be identified, and the trade-offs necessary to achieve or avoid them discussed. Families and patients can begin to think about the practical requirements for their care. If a patient or their carers better understand what to expect, they may feel better able to cope with its demands. Crucial to these discussions can be capturing the patient's wishes. This can be linked to 'advance care planning' about what future interventions are, or are not, wanted, and the preferred place of care (or place of death). This might include a discussion about when future hospital admission would, or would not, be appro- priate. Use of advanced care plans to record the patient's wishes about their future care can reduce subsequent unhelpful hospital- ization, and might include arranging for treatment at home or in a care home in preference. Medications may also be reviewed; for example, to reduce the therapeutic burden of the 'pill count' from statins, antithrombotic and antihypertensive drugs may now outweigh the potential bene- fits of the prevention of further vascular events. Some markers have been defined that indicate that the patient may be in the last year of life, but these are not accurate enough to be the sole guide. For instance, in the United Kingdom the 'Gold Standards Framework' lays out prognostic indicator guid- ance that can be helpful in identifying stages when a patient may be approaching end-of-life care. Safety and risk Frail older people are vulnerable to harm. Recovery from acute illness or injury is often tenuous or uncertain, and equal harm may result from deconditioning, prolonged hospital stays, and restrictive care regimens. The balancing act between enabling recovery and avoiding risk must be tailored to the individual's circumstances and choices. Older peoples' priorities go beyond staying alive, or 'safe', and restoration of function and autonomy requires the taking of risks. Healthcare-associated harm is a tragedy. Distinguishing be- tween the inevitable consequences of ill-health, recognized com- plications, and care-related mishap or negligence, is not easy. Judgements made, and risks taken, in good faith and for rational reasons, may result in unintended harm. Not all these are neces- sarily causally related to hospital processes, and not all are avoid- able, nor exclusive to hospitals, but they may be. There are considerable political pressures around redu- cing risk. Organizations (including hospitals) are aware of this. Healthcare-associated harm can result in death, disability, pro- longation of hospital stay, re-admissions, litigation, and profes- sional censure. This creates tensions as the needs of patients and families may conflict with those of organizations or staff that manage them. Learning from industry and surgical practice has inspired attempts to systematically minimize (or eliminate) risk. Common healthcare-associated harms in hospitalized older pa- tients are summarized in Box 6.5.5. Many of these overlap with common frailty syndromes, and the same general principles can apply. Thorough assessment, management, communication, and anticipation of common problems are necessary to prevent poor outcomes for vulnerable patients. In general, good multidiscip- linary care is as much about the prevention of harm as the treat- ment of acute illness. Falls Risk of falls in frail hospitalized older people is high. This is be- cause many patents have weakness or hypotension associated with acute illness or immobility. They may make misjudgments or be

agitated in association with dementia or delirium or boredom. They may have additional difficulty mobilizing to the toilet, placing them at increased risk. Most falls occur around the bed/chair space or in toilets, and at times of maximum patient activity rather than at times of low staff presence. Risk can be increased by iatrogenic factors such as drugs and the presence of lines or tubes as irritants or obstacles The relative risk of falls should be assessed, but when caring for older frail patients it can be assumed that all are at risk. Much falls prevention embraces good routine geriatric medical prac- tice: prompt and accurate diagnosis and treatment of problems (especially delirium), careful drug review, and cautious use of po- tential culprit drugs, checking for hypotension and postural hypo- tension, assessing vision. Appropriate footwear should be worn. Box 6.5.5 Examples of healthcare-associated harms common in older hospitalized patients • Falls • Pressure sores • Constipation • Hospital-acquired infections (including Clostridium difficile, norovirus, methicillin-resistant S. aureus (MRSA), urinary catheter-associated, intravascular line-associated, and surgical wound infections) • Deconditioning • Soft tissue contractures • Venous thromboembolism • Unrecognized acute deterioration • Predictable and unpredictable adverse drug events • Delirium • Depression • Malnutrition • Poor sleep • Loss of autonomy • Disruption of usual support structures (e.g. carer input) • Disorientation to time and place • Discomfort associated with excessive noise or light • Disruption to familiarity and routine • Disruption to caregiver routines and difficulty re-establishing on discharge

6.5 Older people in hospital 557 Walking aids should be in reach. A continence assessment enables anticipation of those patients whose urgent call may precipitate an unsteady ‘dash’ to the toilet. Reducing the risk of falls has to be balanced against inactivity or boredom. Reluctance to get patients out of bed, discouragement of walking or use of the toilet, or a restrictive or custodial style of care provision with frequent confrontation as patients attempt to do things (‘sit down’) is not an appropriate way to reduce risk. If risk remains high after remediable factors have been corrected, a risk enablement approach should be adopted, that is, to acknow- ledge, minimize, and discuss risk, then decide how far to accept them. The benefits and risks of restraint with bed rails is finely balanced and needs individualized assessment. Although use of electronic aids to alert staff about patients’ movements are increas- ingly popular, evidence for reduction of injurious falls is lacking. Pressure sores Pressure sores are caused by continued pressure of a hard surface against a bony prominence, resulting in ischaemia and breakdown of intervening tissues. The sacrum, trochanters, and heels are the sites at greatest risk. Immobility, loss of sensation, malnutrition, diabetes, peripheral vascular disease, glucocorticosteroid use, and dementia are risk factors. Shearing injuries can also occur. Moisture can also cause maceration and abrasion of skin (‘mois- ture lesions’). Skin damage is graded 1 (nonblanching erythema), 2 (skin break), 3 (subcutaneous tissue loss), 4 (cavity, caused by muscle necrosis). Pressure sores are much less prevalent now, largely due to as- siduous risk assessment and the use of pressure-relieving mat- tresses. Chairs and wheelchairs also require pressure-relieving cushions. Patients should be educated and reminded or helped to change position regularly (every half hour). Heel sores are diffi- cult to prevent, although there is a variety of supports and boots available. A mattress alone will not avoid all sores, and many pa- tients require turning (up to two-hourly) in addition. Judgement must be used over the need for continuing turning overnight, as this disrupts sleep and is unlikely to be continued if the patient returns home. Healing a pressure sore requires relief of pressure, debridement of nonviable tissue, treating of any surrounding cellulitis, dressing to ensure a moist environment, treatment of anaemia, and provi- sion of an adequate diet. Cavity sores require packing so they heal from the bottom and do not close over, and take several months to heal. Venous thromboembolism (VTE)

Immobility and age are the biggest risk factors. However, apart from after hip surgery (where there is good evidence for up to four weeks prophylaxis), the evidence for venous thromboembolism prevention in older people is weak, certainly beyond two weeks in hospital. In England, routine assessment of risk is mandated in all acute hospitals. Prophylaxis with low-dose low molecular weight heparins is reasonable when there is an acute decline in mobility, or limb immobilization, but probably not for those who had limited mobility before the acute illness, or who will never regain their mobility. Importantly, low molecular weight hep- arin (LMWH) injections are painful and are time-consuming for nurses to administer. Rescue from acute medical deterioration Older people can deteriorate quickly. Vigilance is required to de- tect this. Risk scores, such as the National Early Warning Score (NEWS) in the United Kingdom have been developed to indi- cate patients who are at risk of acute physiological deterioration. However, risk scores have poor specificity in older people (many false positives). In acute settings, high acuity and frailty do not map to the same patients. They are also insensitive to reduced level of arousal, which is a poor prognostic sign. Over-reaction to risk scores can result in burdensome overobservation, which interferes with sleep and diverts both nursing and medical staff from other activity. This may be appropriate in some cases, but represents an opportunity cost that hard-pressed systems can ill-afford. For those rehabilitating, awaiting care transitions, or approaching the end of life, a more individualized approach is required, with opt- outs or defined ceilings of response. Delirium Delirium is distressing, and is associated with poor prognosis. Older age, dementia, sensory impairment, and other comorbidities are important risk factors. It is also common, being present in more than one in five older hospital patients. Cognitive function may not recover fully and the associated mortality is high (40% at six months). Functional recovery after an episode of delirium is often poor. Any medical condition, trauma, or surgery, drug use or drug withdrawal can cause delirium, and cause is often multiple. Infections, adverse drug reactions, metabolic derangements, hyp- oxia, and acute neurological disease are important, and there are also numerous rarer causes that must be sought in cases of persist- ence. Mimics include dementia with Lewy bodies and the step-wise progression of vascular dementia. Identification requires a high index of suspicion (Box 6.5.6). Mental status impairment should be sought routinely in older pa- tients, and a cognitive collateral history taken for prior cognitive function, time course of decline and change. Assessment of the level of arousal is critical because acute drowsiness is a highly spe- cific (>90%), though not sensitive indicator of delirium. Attention is assessed during history taking, mental state examination, and cognitive assessment. Specific tests include asking the patient to recite the months of the year backwards (or days of the week, if that is too hard). Hallucinations and delusions should be spe- cifically sought; patients often do not volunteer these bewildering Box 6.5.6 Delirium definition and associated features • Acute change in cognition, fluctuating course • Impaired attention • Altered level of arousal • 50% have hallucinations (typically visual) or delusions (typically paranoid) • Emotional features include anxiety (fear), depression, or anger • Psychomotor agitation or withdrawal • Disrupted sleep-wake cycle, often worse at night • Autonomic features (labile blood pressure, syncope, incontinence)

 Structured tests such as the 4AT (see Fig. 6.5.6) can be useful in routine practice. Core to management is to find the underlying causes or drivers and treat them all, as well as to simultaneously optimize conditions for brain recovery. Agitation can be caused by pain, urinary reten- tion, thirst, constipation, or psychosis, so vigilance in the face of behavioural symptoms is important. Distressing psychotic symptoms or severe anxiety not re- sponding to nonpharmacological methods can be controlled using antipsychotic

drugs if needed, or benzodiazepines if the cause is alcohol or drug withdrawal, or in patients with Parkinson's or Lewy body dementia. These must be subject to regular critical review. Care must be taken to avoid complications such as injury from falls, oversedation, dehydration from poor oral intake, malnutri- tion, or pressure sores. The principles of person-centred dementia care help (relation- ship building, family involvement, provision of explanation, validation, and comfort). Equally, the physical environment is 4AT Assessment test for delirium & cognitive impairment (label) Patient name: Date of birth: Patient number: Date: Time: Tester: CIRCLE [1] ALERTNESS This includes patients who may be markedly drowsy (eg. difficult to rouse and/or obviously sleepy during assessment) or agitated/hyperactive. Observe the patient. If asleep, attempt to wake with speech or gentle touch on shoulder. Ask the patient to state their name and address to assist rating. Normal (fully alert, but not agitated, throughout assessment) 0 Mild sleepiness for <10 seconds after waking, then normal 0 Clearly abnormal 4 [2] AMT4 Age, date of birth, place (name of the hospital or building), current year. No mistakes 0 1 mistake 1 2 or more mistakes/untestable 2 [3] ATTENTION Ask the patient : "Please tell me the months of the year in backwards order, starting at December." To assist initial understanding one prompt of "what is the month before December?" is permitted. Months of the year backwards Achieves 7 months or more correctly 0 Starts but scores <7 months/refuses to start 1 Untestable (cannot start because unwell, drowsy, inattentive) 2 [4] ACUTE CHANGE OR FLUCTUATING COURSE Evidence of significant change or fluctuation in: alertness, cognition, other mental function (eg. paranoia, hallucinations) arising over the last 2 weeks and still evident in last 24hrs No 0 Yes 4 4 or above: possible delirium +/- cognitive impairment 1–3: possible cognitive impairment 0: delirium or severe cognitive impairment unlikely (but delirium still possible if [4] information incomplete) 4AT SCORE Fig. 6.5.6 The 4AT delirium screening tool. www.the4at.com

 important, including quiet, and light. Many acute medical wards are very challenging places for people with delirium. Prevention is more strongly supported by evidence and is there- fore of particular importance. Studies suggest that up to one-third of delirium can be prevented. Measures include careful drug use, drug review, avoiding anticholinergic, opioids, and benzo- diazepine drugs, avoiding hospital-acquired infections (in par- ticular urinary catheter-associated, and aspiration pneumonia). Also important is maintaining hydration, nutrition, sleep, and mobility, detecting and treating pain, and optimizing sensory function where possible. In around 30% of cases, delirium can be very persistent, lasting for many months. Awareness of this is important as this provides a management challenge. As recovery is uncertain, decisions have to be made under conditions of lack of mental capacity that may be temporary, and the pace of recovery does not match the expect- ations of either acute or rehabilitation services. It is important not to make decisions regarding long-term care or other limiting de- cisions until cognitive recovery has been maximized. Often this will mean that decisions regarding onward care are not made in an acute setting. After the event a debrief and explanation of what occurred can be helpful. Many older people with delirium have little recall of events, but some do. Even after recovery they may be unable to dis- tinguish what was real from what was delusional, may be trauma- tized, or develop post-traumatic stress disorder. It is also important to communicate with families, explaining delirium's features and outcomes, as they may also find it upsetting and bewildering, sometimes ascribing the delirium to neglect and sometimes feeling guilt associated with it. Dementia Dementia affects at least a quarter of older people in hospital. Detection is vital for appropriate adjustments to be made to care (Box 6.5.7). However, only 50–70% of dementia is diagnosed in the United Kingdom, so many patients will have

undiagnosed de- mentia. Because delirium or milder acute cognitive impairments commonly complicate dementia in hospitalized patients, detec- tion in such patients is best done by informant history. A tool such as the Informant Questionnaire for Cognitive Decline in the Elderly, validated for use in hospitals, can be helpful. Brief cognitive tests can be useful, but in all cases informant history indicating several months of impaired function is essential. Making a formal diagnosis has enormous implications for pa- tients, and in the short-term acknowledging the presence of likely 'cognitive impairment' to enable immediate adjustments in care to be made, followed by more comprehensive assessment after discharge, is best practice. People with dementia often come to general hospitals because there is a crisis. The relative contributions of physical, mental, and social factors may not be immediately clear. Physical illness is very common, often complicated by superadded delirium. However, if the cause is 'nonmedical' (not due to physical illness), it is still important to document and make appropriate referrals, such as to mental health or social care services, rather than seeing the patient as not needing care from the healthcare system as a whole. 'Diagnostic overshadowing' is the phenomenon of attributing all symptoms to dementia, and is a common pitfall. For instance agi- tation, aggression or shouting may be due to pain, urinary symp- toms, constipation, or delirium, among other possibilities. An understanding of dementia, what promotes wellbeing and living well, and what leads to distress has developed consider- ably over the past 30 years, in particular with the philosophy of person-centred care. This holds that the experience of dementia is only partly explained by the neurological deficits (amnesia, aphasia agnosia, apraxia, executive dysfunction). In addition, personality, life story, physical and mental health and, (crucially) relationships (the way people relate to you and treat you) are important. Person- centred care aims to respect the personhood of the patient with de- mentia, aiming to affirm identity, provide comfort and occupation, and promote inclusion and attachment. Hospitals and hospital systems are often not well-adapted to meet the needs of people with dementia, although most staff are sympathetic and want to do a good job. An admission to hospital is at a minimum disruptive of familiarity and routine. Continuity both in place and of staff is usually poor as patients are moved from ward to ward, or for investigations. The environment is often busy, noisy, overstimulating, and overwhelming. People who struggle with orientation need help with navigation. Lighting, signage, and way-finding need to be optimized. All staff need expertise in understanding delirium and dementia, and applying the principles of person-centred care including non- confrontation, diversion (e.g. by engaging in conversation about interests, family, or the past), de-escalation and threat reduction (e.g. by talking through care or procedures to explain what is hap- pening). Occupation and purposeful activity is important but rarely provided in hospital. This can, however, be an everyday tasks such as dressing or social eating, leisure (games, films) or thera- peutic. Finally, family engagement is especially important; they have information that healthcare professionals need, they need ex- planation and updating, and may want to be involved in hands-on care such as feeding or occupying. Visiting hours should be liberal or unrestricted. Close integration with mental health professionals is essential, either embedded within older people's clinical teams or through consultation or liaison services. Close cooperation is also required with community services, such as in accessing previous records, diagnoses and management, and in planning for discharge and fu- ture follow up. General hospital staff can learn appropriate skills and deploy them in a ward environment with the right leadership, expectations, and culture. Care provided in this way also benefits other vulnerable patients, including those with sensory impairments, other mental health problems, or learning disabilities. Box 6.5.7 Diagnosis of dementia • Cognitive history and collateral account of functional decline • Physical and mental state examination • Neuroimaging and other tests (to exclude mimics) • Cognitive testing •

Observation of function (e.g. during complex kitchen tasks) • Evolution over time

560 Section 6 Old age medicine Nutrition Nutrition is a further area of vulnerability for older people. Weight loss is a defining feature of frailty. Conversely, obesity is an increasing problem, and this persists into old age, where it is associated with sarcopenia, an important determinant of both functional capacity and metabolic reserve in acute illness. Malnutrition is associated with depression, dementia, meta- bolic disease, cancer, cerebrovascular and other neurological dis- ease, and cardiorespiratory problems. It may also be symptomatic of inadequate or abusive care. Many problems contribute to poor food intake in hospitals, in addition to unsuitable or unpalatable food! Problems include ab- sent, loose or painful teeth, dry mouth or candidiasis, lost or ill- fitting dentures, nausea, anorexia, dysphagia, changes in taste and food preference, cognitive problems (forgetting to eat), dyspepsia, and constipation. Dysphagia is often neurogenic due to cerebrovascular disease, neurodegeneration or Parkinson's disease, and may be decompen- sated by acute illness. The main approach to maintaining nutrition in acute hospital care is prevention or treatment of conditions that contribute to poor intake, attention to food preferences and food consistency, and provision of sufficient human help for those who need it. Social eating (at a table) can help for those who are able, and feeding as- sistants (nurses, or volunteers) are valuable. Use of special diets must be evaluated in the context of the acutely ill person. For in- stance, high fat foods may be better than low fat if they promote palatability, energy intake, and food preference. During an acute illness and injury catabolism predominates and this may lead to weight loss (including muscle), which is often not restored with medical recovery. Nutrition dense supplements are logical, as an efficient way to enhance nutrition in those whose intake is low volume. Muscle mass lost will not be regained without concomitant exercise as well as an appropriate diet. Evidence of benefit is limited in short-term use or advanced frailty. Nasogastric, gastrostomy, or jejunostomy tube feeding is required in some cases, and can be maintained long term. The main indica- tion is where a potentially reversible problem with swallowing has prevented access to the gut (e.g. acute stroke), or in some postsurgical and critical care situations. Use in frail older people can sometimes be useful, but the balance of potentially small relative benefits against a potentially high procedural risk should be subject to a full, shared decision-making process with the patient and family. Tube feeding is rarely indicated in advanced dementia and may be traumatic. Care should always be individualized and there are no hard and fast rules. If swallow is vulnerable and tube feeding is not used, it is im- portant to have an open conversation with the patient and family about accepting the potential risks. Some rules for 'feeding at risk' or 'comfort feeding' can be used to minimize the potential harm. The patient should be alert and sat up. Food should be single consistency, cold rather than hot, and paced so food is placed in the mouth only so fast as each mouthful is cleared. Consistency is important, and fluids may need to be thickened (but do try tasting thickened water or tea; it is quite unpleasant). Speech and language therapists can as- sess and advise. Rapid feeding after a period of starvation or poor nutrition risks Wernicke's encephalopathy and refeeding syndrome. In such cir- cumstances, high-dose parenteral B-vitamins (including thia- mine) should be given, and blood tested for potassium, phosphate, and magnesium. In frailer patients and those with dementia or approaching the end of life, it is important to consider the wider goals of nutrition. Eating should be enjoyable, a focus for social being, and human contact. Oral feeding helps the mouth to stay clean. Social eating (at a table) for those who are well enough is the best means of increasing oral intake in hospital. Moreover meal- times are a key activity for very frail people and can become an important part of the daily routine. Provision should also be made for irregular meals, snacking, finger foods, and flexible meal

provision. Immobility and deconditioning Reduction in the ability to walk independently or at all is often the presentation of an acute illness. It is a nonspecific presentation that is in itself a core sign of frailty when the acute event is not clearly resulting in a relevant major impairment such as a hemiparesis or lower limb fracture. Eliciting a history of functional change is cru- cial in the initial assessment. This history should be corroborated with carers, family, or others who can describe and quantify the impact of such changes. The aim is to get a thorough, objective understanding of the ex- tent of the problem, its timescale, and potential causes. Examination includes general assessment, such as postural hypotension and breathing, as well as specific assessments of gait, limb function, muscle, joints, or sensory function. The goal is to determine both the causes of the decline and its impact. This will guide the multi- disciplinary team on how best to address recovery through specific treatments and functional rehabilitation, the aim being at least to restore pre-admission function. The choice to use a walking aid such as a stick or Zimmer frame should be guided by a physiotherapist who would assess the patient's ability to use the device safely, as well as the potential it may have to reduce the risk of falls. The clear aim should al- ways be to have the patient use the least restrictive form of aid or to continually improve their mobility. Walking inside on a level floor and managing stairs either inside or outside the building represent two different degrees of challenge and often need to be assessed separately. Physical deconditioning after admission to hospital, acute illness, or surgery is the norm in vulnerable older adults (Fig. 6.5.7). It can be rapid and have disproportionate impact. Bedrest is potentially harmful to older patients: early mobilization and socialization are vital in preventing functional decline. After major surgical intervention, for instance, patients may have prolonged admissions with delays in recovery of independence, or they may be prone to complications such as infections or delirium. Prevention of functional decline should therefore be addressed with anticipa- tion in high-risk surgery or patient groups. Multidisciplinary team involvement can prevent or reverse the process. Failure to address deconditioning can result in unnecessarily persistent disability or dependency, and hospital re-admission.

6.5 Older people in hospital 561 Summary—what would an older adult-centred hospital look like? First and foremost, the hospital will have the corporate ethos that the care of older people is a core priority. The approach and care will be flexible and eclectic, encompassing a mix of goals and models. It will be adapted to the individual patient's needs and be able where appropriate to incorporate the family in care. Staff will be knowledgeable and skilled in assessing complexity and its impli- cations in frail older people in addition to more traditional skills in managing acute illness. For some patients the health outcomes may inevitably be poor, but with excellent care each patient will have an experience which minimizes distress and gives the best chance of medical recovery and restoration of function or good palliative care as appropriate. The NHS in Scotland and the Royal College of Physicians of London have considered the needs of hospitalized older people in recent reports (Box 6.5.8). Lessons can also be learnt from pallia- tive care and paediatrics, in terms of both environmental design and processes. All aspect of hospital care need examination, including the en- vironment, facilities, signage, staffing skill mix and training, pro-cesses and pathways, risk assessments, management approaches, and family engagement. The hospital environments will be designed to be enriched and facilitating. Visual clutter, which can cause confusion for patients with cognitive impairment, will be simplified. Signage will be clear and use symbols as well as words. Clocks and orientation boards will be visible (and correct). Furniture will be strategically placed to enable mobility and socializing. A day room or dining room will be provided, enabling social eating for those who are able. Ambient noise will be kept to a minimum,

especially at night. Light and visual design will take account of the needs of people with visual impairment and will reflect more natural lighting hues to avoid day and night confusion. High contrast colour will be used to help with orientation within wards. Systems and clinicians will be flexible and be able to embrace mul- tiple approaches—curative, rehabilitative, mental health-inspired, palliative, or supportive—and be able to recognize and communi- cate when a change is appropriate. They can live with uncertainty for those patients where their clinical course is unpredictable or fluctuating, and adaptable if their needs change quickly. There will be no unjustified discrimination on the basis of age, disability (or any other characteristic not pertinent to the decision) in access to services. Following a process of shared decision-making on goals and preferences, there will be access to organ-specialist investigation and treatment, surgery, rehabilita- tion, and end-of-life care. Care will be safe, but this will be balanced against broader goals for the individual and the need to take risks to achieve those goals. Services will not assume that they can deal with the patient as an independent agent who is cognitively intact and able to give their own account, understand their treatments, or agree to complex interventions. Neither will they presume that frail older people are incapable, or have no view on their care. Assessments of commu- nication, understanding and mental capacity will be made, and family or other carers engaged and consulted as appropriate. Hospitals will cater for families with rules that promote inclu- sion, facilitate visiting, and engagement in care. Communication with family members will be proactive and regular. Support services such as mental healthcare, occupational therapy, speech and language therapy, dietetics, or physiotherapy will be responsive and readily available. Teams will meet sufficiently regularly to enable joint working and planning. The hospital will integrate medical and psychiatric services, acute, rehabilitation and palliative care, hospital and community services, and medical and social needs. A programme of purposeful and therapeutic activities will be provided for people operating at all levels of ability, directed by staff capable of identifying their capacities and strengths (e.g. occupa- tional therapists, dedicated staff, or volunteers). Loss of cardiovascular fitness complicates and slows recovery Immobility increases the risk of deep venous thrombosis, joint pain and stiffness, constipation, depression, hypostatic pneumonia, pressure sores, delirium and thus increases the risk of institutionalization Up to 5% loss of muscle strength per day of inactivity Antigravity muscles are affected most with 40% of this loss of strength occurring in the first week of illness or immobility 40% 5% Fig. 6.5.7 The risks of bed rest. Box 6.5.8 Healthcare Improvement Scotland recommendations for older people in hospital 1 Opportunity and assistance to discuss needs and preferences, including those involved in their care 2 Treatment with dignity and respect 3 Involvement in decision-making 4 Identification of current health needs, predisposing conditions which heighten the risk of healthcare-associated harm, and the most appropriate place for care to be delivered 5 If frail to have prompt comprehensive geriatric assessment (CGA) and management by a specialist team 6 Drug review and active medicines management 7 Cognitive assessment 8 Identification assessment and treatment for delirium 9 High-quality care for those with diagnosed or suspected dementia 10 High-quality care for those with diagnosed or suspected depression 11 Assessment for risk of falls and measures to reduce risk 12 Timely access to rehabilitation services 13 Effective discharge planning, and good communication at transfers of care 14 Support through periods of transition or delays between care environments 15 Cared for by sufficient numbers of knowledgeable and skilled staff

 Staff will be well-trained and available in appropriate num- bers and skill mix. They will work in teams and feel supported. They will be confident, and use their professional judgement in the service of patients and their families, and will be sup- ported professionally and psychologically. They will have time to communicate, make thorough

assessments, and deliver care compassionately. FURTHER READING British Geriatrics Society—a comprehensive resource with online guidelines, research and educational materials. www.bgs.org.uk Ellis G, et al. (2017). Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database of Systematic Reviews, (9), CD006211. Future Hospital Programme (2013). Caring for Medical Patients: A Report from the Future Hospital Commission to the Royal College of Physicians. September 2013. https://www.the4AT.com Harwood RH (2012). Dementia for the hospital physician. Clin Med, 12, 35–9. Healthcare Improvement Scotland (2015). Care of Older People in Hospital Standards. June 2015. www.healthcareimprovementscotland.org Oliver D, et al. (2014). Making our health care systems fit for an ageing population. The Kings Fund, London. Pollock K (2015). Is home always the best and preferred place of death? BMJ, 351, h4855. Quinn TJ, et al. (2011). Functional assessment in older people. BMJ, 343, d4681. Tadd W, et al. (2011). Dignity in Practice: An Exploration of the Care of Older Adults in Acute NHS Trusts. NIHR SDO Programme report. http:// www.netscc.ac.uk/hsdr/files/project/SDO_ES_08-1819-218_V01.pdf

---

Revision #1
Created 2026-01-22 16:44:37 UTC by Omar Ayman
Updated 2026-01-22 16:44:37 UTC by Omar Ayman