

Please find below the results of your literature search request. If you would like the full text of any of the abstracts included, or would like a further search completed on this topic, please let us know.

“Google can bring you back 100,000 answers, a librarian can bring you back the right one.” — *Neil Gaiman*


Literature Search Results

Search request date: 11th April 2013
Search completion date: 15th April 2013
Search completed by: Alison Price

Enquiry Details

Is there any evidence that high mortality rates relate to patients being admitted to hospital who could have been cared for more appropriately at home or in a nursing home, especially patients who are expected to die and/or have an advance directive in place?


Theme 1

 (Mortality statistics OR Death OR Cause of Death OR Mortality) **AND** Hospitals
OR Hospital Mortality


Theme 2

 Advance Directives OR "living will"


Theme 3

 Quality improvement **OR** Quality of patient care **OR** health care quality

Theme 4

 Terminal Care **OR** Palliative Care **OR** Resuscitation Orders **OR** living will **OR**
palliative therapy

Theme 5

 Referral and Consultation **OR** Patient Admission **OR** Patient Transfer **OR** Homes
for the Aged **OR** Nursing Homes **OR** Hospices **OR** Home Care Services

Theme 6

 (Documentation **OR** Medical Audit **OR** Clinical Audit)

Comment

Bradford Teaching Hospital undertook

'an audit of 411 consecutive hospital deaths was carried out by the palliative care team to identify patients coming in to hospital to die, or being kept in hospital for too long prior to death. The audit results indicated that some patients were being admitted to hospital to die, and many patients were being kept in hospital for long periods prior to death. The palliative care team were involved in developing and supporting the use of end of life care guidelines. Hospital staff in each department were trained to diagnose dying and plan appropriately according to the patient's wishes with information about the services available in the community. In addition, a nursing home education project commenced to encourage nursing homes to care for dying patients rather than admit them to hospital.'

This is reported in the article 'Learning from Death' *attached*.

I have listed additional search results under the following headings:

[Hospital Mortality - Audit & Case Review](#)

[Reports & Research - Excluding Palliative Patients from HSMR Data](#)

[Research - Hospitalisation of patients with palliative care needs](#)

[Research - Hospitalisation of nursing home residents](#)

[Interface Audit - General](#)

Disclaimer

Every effort has been made to ensure that this information is accurate, up-to-date, and complete. However it is possible that it is not representative of the whole body of evidence available. No responsibility can be accepted for any action taken on the basis of this information. It is the responsibility of the requester to determine the accuracy, validity and interpretation of the search results.

All links from this resource are provided for information only. A link does not imply endorsement of that site and the Lincolnshire Knowledge and Resource Service does not accept responsibility for the information displayed there, or for the wording, content and accuracy of the information supplied which has been extracted in good faith from reputable sources.

Reports – Background Figures

Dying for Change, DEMOS, 2010

Until the second half of the last century most deaths happened in homes, with the support of family and neighbours, perhaps with a priest and a local doctor in attendance. Home deaths fell from 31 per cent of deaths in 1974 to 18 per cent in 2003. By 2030, on current trends, one in ten people will die at home. Nowadays death is contained in institutions supported by professional services.⁵⁰ About 60 per cent of people in Britain die in hospital, 17 per cent in care homes, and 5 per cent in hospices.⁵¹ By 2030 about 90,000 more people a year will die in hospitals and nursing homes, rising from 440,000 in 2008 to 530,000 a year in 2030. Institutional deaths will increase by 20 per cent and home deaths will fall by 42 per cent.

The NAO estimates that 40 per cent of people who die in hospital do not need to be there for the treatment of a medical condition.⁵⁹ One in ten people who die in hospital have been there for at least a month before death and about 20 per cent of hospital bed days are taken up by end of life care.⁶⁰ At Salisbury General Hospital senior staff estimated that as many as 50 per cent of the 1,000 people who die in the hospital each year did not need to be there on medical grounds.

[Attached](#)

Audit & Case Review

As death approaches: a retrospective survey of the care of adults dying in Alice Springs Hospital. Australian Journal of Rural Health, 2011, vol./is. 19/1(4-8)
Nadimi F, Currow DC

OBJECTIVE: Australians are more likely to die in a hospital than anywhere else, and most of these deaths are 'expected'. [The aims of this survey were to identify if specific end-of-life issues were documented in clinical records of a regional hospital serving remote Australia.](#)

DESIGN: A retrospective consecutive case-note audit covering 18 months from 1 January 2006.

SETTING: Alice Springs Hospital.

PARTICIPANTS: Adult deaths in Alice Springs Hospital. During this period there were 128 deaths.

OUTCOME MEASURES: Demographic, process (diagnosis of dying documented, 'not for resuscitation' documentation, intensive care unit (ICU) admission, social worker referral and specialised palliative care service referral) and outcome data ('comfort at end of life') were surveyed.

RESULTS: Of the 128 admissions, 55 cases were excluded: 10 were children under 18, 33 died in < 48 hours, nine were coroner's cases and three files could not be found. Of the 73 deaths surveyed (33 men), 47 (64%) were Aboriginal. A diagnosis of dying was made in 84%, 88% had an 'not for resuscitation' order, 48% were admitted to ICU during their last admission, 66% were referred to social workers, 68% were referred to palliative care and 85% of people were documented to be 'comfortable' during the dying process with no differential outcomes for Aboriginal and non-Aboriginal decedents except age ($P < 0.0001$).

Conclusion: This survey highlights the continuing need to diagnose dying, understand optimal use of intensive care and improve comfort care at the end of life.

Full Text: Available from *EBSCOhost* in [Australian Journal of Rural Health](#)

High mortality of older patients admitted to hospital from care homes and insight into potential interventions to reduce hospital admissions from care homes: the Norfolk experience.

Archives of Gerontology & Geriatrics, 2011, vol./is. 53/3(316-9)

Ong AC, Sabanathan K, Potter JF, Myint PK

Abstract: There is a high mortality rate in patients admitted to hospitals acutely from care homes. In a retrospective case analysis study of 3772 older people admitted to the Department of Medicine for the Elderly between January and June 2005, 340 (9.0%) were from care homes, and 93 (27.3%) of the residents died during the index admission. [Nearly 40% of these deaths occurred within 24h of admission indicating a high level of less appropriate admissions.](#) Investigating eight nursing homes which admitted the highest number of patients from one primary care trust revealed that the most cited reasons for admission were the lack of advance care plans, access to General Practitioners (GPs) out of hours, as well as general access to palliative care and specialist nurses, and poor communication between patient, relatives, GPs, hospitals and care home staff. Our findings provide some useful insight into the factors that need to be addressed to avoid unnecessary or inappropriate admissions from care homes for better end of life care in aging societies.

Audit of deaths and palliative care referrals in a large Australian teaching hospital.

Journal of Palliative Medicine, 2007, vol./is. 10/4(835-6; author reply 837-8)

Le BH, Ashby MA

Publication Type: Comment, Letter

In the February 2007 issue of the Journal of Palliative Medicine, we were interested to read of the utilization of palliative care services in acute care hospitals, and the discussion of training and education as a means to grow palliative care services.¹ In a similar, although smaller study than that performed by Lagman et al.,² we performed a recent audit in our institution based on a perception that our established palliative care consultative service was underutilized, not only for patients with life-limiting, chronic illness appropriate for concurrent palliative care measures, but also for those patients dying in hospital, whilst continuing to receive curative treatment. Our audit recorded the number of deaths occurring over 1 month in the acute care wards of the Royal Melbourne Hospital, an academic tertiary referral center and general hospital servicing a population of nearly 1 million people in metropolitan Melbourne, Australia. [The deaths were classified as expected or unexpected according to whether or not there was evidence in the medical record that the death had been anticipated by treating physicians, and the presence or absence of a referral to palliative care.](#)

ATTACHED

Learning from death: a hospital mortality reduction programme.

Journal of the Royal Society of Medicine, 2006, vol./is. 99/6(303-8)

Wright J, Dugdale B, Hammond I, Jarman B, Neary M, Newton D, Patterson C, Clinical & Scientific Support Services, Bradford Teaching Hospitals NHS Trust,

Abstract:

PROBLEM: There are wide variations in hospital mortality. Much of this variation remains unexplained and may reflect quality of care.

SETTING: A large acute hospital in an urban district in the North of England.

DESIGN: Before and after evaluation of a hospital mortality reduction programme.

STRATEGIES FOR CHANGE:

Audit of hospital deaths to inform an evidence-based approach to identify processes of care to target for the hospital strategy.

Establishment of a hospital mortality reduction group with senior leadership and support to ensure the alignment of the hospital departments to achieve a common goal.

Robust measurement and regular feedback of hospital deaths using statistical process control charts and summaries of death certificates and routine hospital data. Whole system working across a health community to provide appropriate end of life care.

Training and awareness in processes of high quality care such as clinical observation, medication safety and infection control.

EFFECTS: Hospital standardized mortality ratios fell significantly in the 3 years following the start of the programme from 94.6 (95% confidence interval 89.4, 99.9) in 2001 to 77.5 (95% CI 73.1, 82.1) in 2005. This translates as 905 fewer hospital deaths than expected during the period 2002-2005.

LESSONS LEARNT: Improving the safety of hospital care and reducing hospital deaths provides a clear and well supported goal from clinicians, managers and patients. Good leadership, good information, a quality improvement strategy based on good local evidence and a community-wide approach may be effective in improving the quality of processes of care sufficiently to reduce hospital mortality.

A detailed case-note audit of consecutive hospital deaths was undertaken to identify gaps in current quality of care. A team consisting of an intensivist, lead clinician, pharmacist and nurse were established for four specialties with the majority of hospital deaths: care of the elderly, medicine, surgery and trauma and orthopaedics. Each team was asked to audit a convenience sample of case notes of 30 consecutive patient deaths using a detailed structured audit form: 118 patient records were reviewed. Analysis revealed a high prevalence of suboptimal clinical observations, hospital acquired infections, medication errors.

In addition, an audit of 411 consecutive hospital deaths was carried out by the palliative care team to identify patients coming in to hospital to die, or being kept in hospital for too long prior to death. The audit results indicated that some patients were being admitted to hospital to die, and many patients were being kept in hospital for long periods prior to death. The palliative care team were involved in developing and supporting the use of end of life care guidelines. Hospital staff in each department were trained to diagnose dying and plan appropriately according to the patient's wishes with information about the services available in the community. In addition, a nursing home education project commenced to encourage nursing homes to care for dying patients rather than admit them to hospital.

ATTACHED

The role of periodic mortality case review sessions in a primary care teaching clinic. Israel Medical Association Journal, 2006, vol./is. 8/6(373-377)

Rosenberg R., Vinker S., Yaphe J., Nakar S.

Background: Maintaining a death register and holding staff discussions about patients who died can aid the physician in audit and research, which will lead to improved care of the terminally ill and the bereaved and to the development of prevention strategies. These issues are important for students and residents as well. **Objectives:** To review the value of mortality-case discussions in primary care clinics, particularly teaching clinics. **Methods:** The clinic death register, instituted in 1998, includes age, gender, cause of death, place of death, relevant illnesses, and support provided to the patient before the death. In the half-yearly sessions, the data are reviewed, and individual cases that had an emotional impact on the staff, or information that can bring about changes in future care are discussed by the clinic staff and trainees.

Results: In our clinic 233 deaths occurred during a 6 year period (1998-2003). The crude all-cause mortality rate was 7.1/1000. The median age was 80 years old. Neoplastic causes were slightly more frequent than cardiovascular causes of death. Only 15% died at home; 20% lived alone and 70% lived with a spouse or family members before the death. [Topics discussed in the mortality review meetings include](#) identifying pro-suicidal patients, [when to hospitalize the sick elderly](#), dealing with the anger of bereaved families, and ensuring proper home care for terminal patients. **Conclusions:** We recommend keeping a death register and conducting mortality review sessions in order to improve the quality of care, emotional support of the staff, and training students and residents about the complex issues surrounding the death of patients.

A chart review of seven hundred eighty-two deaths in hospitals, nursing homes, and hospice/home care. Journal of Palliative Medicine 2005, vol./is. 8/4(789-96), Solloway M, LaFrance S, Bakitas M, Gerken M

8/4(789-96), Solloway M, LaFrance S, Bakitas M, Gerken M

BACKGROUND: While most people die in the hospital or a nursing home, surveys indicate that more than 70% of people would prefer to die at home. Expert panel recommendations have called for epidemiologic studies to document the nature of dying in America.

OBJECTIVE: To determine if the experience of dying differed among settings in New Hampshire.

DESIGN: A voluntary, statewide medical record audit of adult deaths in hospitals, nursing homes and home care/hospice agencies was conducted for February and March 2002.

MEASUREMENTS: Records were examined for place of death, patient decision-making capacity and advance directives (ADs). Information was collected on demographic characteristics, primary and secondary diagnoses, presence of a "values history" (documented discussion with patient about their values and end-of-life care) and whether emotional and spiritual support was provided to patients and their families. Medical chart notes for the 48 hours preceding death were reviewed for "pain" and "other symptoms routinely assessed, treated and documented," and for whether the patient had undergone any of the following "treatments": surgery, ventilator, cardiopulmonary resuscitation, or extubation.

RESULTS: Nearly one third (32%) of health care organizations in the state reported on 782 deaths (424 hospital, 148 nursing home, and 210 home care/hospice) representing 44% of the adult deaths during this period. Significant differences among settings ($p < 0.001$) were found for mean age, gender, marital status, primary insurance, diagnosis, ADs, symptom assessment, and provision of emotional and spiritual support for patients and families. Among hospital decedents, 56% were in acute care beds, 30% were in intensive care units, and 4% were in palliative care beds. Nineteen percent of decedents received interventions such as extubation,

placed on a ventilator or surgery in the 48 hours preceding death. Over 80% had a do-not-resuscitate (DNR) order, 45% had a Durable Power of Attorney for Health Care, and 37% had a Living Will. Age and setting were significant factors in the presence of ADs.

CONCLUSIONS: This information provides a benchmark for different care systems to identify areas for improvements in end-of-life care.

Full Text: Available from *EBSCOhost* in [Journal of Palliative Medicine](#)

Appropriateness of the decision to transfer nursing facility residents to the hospital. *Journal of the American Geriatrics Society*, 2000, vol./is. 48/2(154-63)

Saliba D, Kington R, Buchanan J, Bell R, Wang M, Lee M, Herbst M, Lee D, Sur D,

OBJECTIVES: To develop and test a standardized instrument, the purpose of which is to assess (1) whether skilled nursing facilities (SNFs) transfer residents to emergency departments (ED) inappropriately, (2) whether residents are admitted to hospitals inappropriately, (3) and factors associated with inappropriate transfers.

DESIGN: [A structured implicit review \(SIR\) of medical records.](#)

SETTING AND PARTICIPANTS: Using nested random sampling in eight community SNFs, we identified SNF and hospital records of 100 unscheduled transfers to one of 10 hospitals.

MEASUREMENTS: Seven trained physician reviewers assessed appropriateness using a SIR form designed for this study (2 independent reviews per record, 200 total reviews). We measured interrater reliability with kappa statistics and used bivariate analysis to identify factors associated with assessment that transfer was inappropriate.

RESULTS: In 36% of ED transfers and 40% of hospital admissions, both reviewers agreed that transfer/admit was inappropriate, meaning the resident could have been cared for safely at a lower level of care. Agreement was high for both ED (percent agreement 84%, kappa .678) and hospital (percent agreement 89%, kappa .779). When advance directives were considered, both reviewers rated 44% of ED transfers and 45% of admissions inappropriate. Factors associated with inappropriateness included the perceptions that: (1) poor quality of care contributed to transfer need, (2) needed services would typically be available in outpatient settings, and (3) the chief complaint did not warrant hospitalization.

CONCLUSIONS: Inappropriate transfers are a potentially large problem. Some inappropriate transfers may be associated with poor quality of care in SNFs. This study demonstrates that structured implicit review meets criteria for reliable assessment of inappropriate transfer rates. Structured implicit review may be a valuable tool for identifying inappropriate transfers from SNFs to EDs and hospitals.

Palliative care at home: an audit of cancer deaths in Grampian region.

British Journal of General Practice, 1998, 48/431(1299-302). Millar DG, Carroll D

BACKGROUND: Ninety per cent of the last year of life of cancer patients is spent at home. Some studies have suggested that care in this setting is often suboptimal.

Information on the standard of palliative care delivered at home by general practitioners (GPs) and their teams is limited, and clarification of the problems faced is needed.

AIM: To audit the home-based palliative care of patients dying of cancer.

METHOD: Matched postal questionnaires were sent to the GPs and nurses of 1086 successive patients dying of cancer in whatever setting in the Grampian region of Scotland some six weeks after the death to establish the professionals' perception of symptom control, communication problems, use of services, and information given to patients and relatives.

RESULTS: Response rates were 88.8% for GPs (964 out of 1086) and 87.1% for nurses (325 out of 375 that were passed on to nurses). Two-thirds of patients received palliative care at home. Pain was poorly controlled in 15.7%, and poor control of other symptoms ranged from 13.8% (nausea and vomiting) to 21% (depression and dyspnoea). Communication difficulties were present in 93.7% of cases, although only 5.2% of these were of a major nature. District nurses were involved in 76.7% of cases and Macmillan nurses in 28.0%. Twenty-six per cent of referrals to district nurses were assessed as being late in the course of the illness. Patients were fully informed about the diagnosis in 66.3% of cases and about the prognosis in 55.4%. General practitioners were more likely to report the presence of communication problems between themselves and the patient (when compared with nurses: 43.9% versus 28.0%), more likely to report that patients were 'not at all informed' about self-help groups (57.5% versus 36.3%), and were less likely to report the involvement of occupational therapists (21.8% versus 39.7%).

CONCLUSIONS: Levels of reporting of poor symptom control by professionals was much lower than levels reported by relatives in other studies, but there was no difference between the reporting of GPs and nurses. However, a number of areas were identified where care could be enhanced by improved teamwork and further education and training in symptom control, as well as in communication, use of services, and information provision.

Full Text: *National Library of Medicine* in [British Journal of General Practice, The](#)

An audit of hospital mortality after urgent and emergency surgery in the elderly.

Annals of the Royal College of Surgeons of England, 1997, vol./is. 79/5(361-7)

Cook TM, Britton DC, Craft TM, Jones CB, Horrocks M

Abstract: An audit was carried out of 102 patients aged over 75 years undergoing urgent or emergency surgery in a district general hospital. The risk of death in hospital after general surgery (13 deaths in 49 patients) was greater than after orthopaedic surgery (two deaths in 53 patients) ($P < 0.05$). In particular, laparotomy carried a high in-hospital mortality: 12 of 25 patients undergoing laparotomy died. Risk of death after general surgery increased with increasing preoperative ASA class, increasing medical risk factors and duration of operation. Orthopaedic cases were fitter than the general surgical cases as determined by ASA class and the number of medical risk factors. NCEPOD has recommended increased involvement of senior medical staff in operations, reduced night-time operating and avoidance of futile surgery. A high proportion of cases were operated on and anaesthetised by higher specialist trainees and consultants. Death rate was not affected by the seniority of doctors involved, nor by the time of day the operation took place. General surgical deaths were predictable postoperatively in most cases, but preoperative prediction of outcome was not specific enough to alter management.

Full Text: [Annals of The Royal College of Surgeons of England](#)

A new method of auditing surgical mortality rates: application to a group of elderly general surgical patients British Medical Journal, 1982, 284/6328(1539-1542). SEYMOUR, David Gwyn, PRINGLE, Robert

In a prospective study of 505 patients aged 65 years or over admitted to a general surgical unit the overall hospital mortality rate was 14.5% and the postoperative hospital mortality rate was 12.0%. [These rates fell to 3.6% and 5.8% respectively when deaths in non-viable patients were excluded from the analysis.](#) An audit of surgical outcome that fails to identify non-viable patients is therefore potentially misleading. A standardised system of reporting surgical mortality is proposed to aid the comparison of results from different units. Data presented in such a way should be of direct relevance to surgeons and physicians who are seeking ways of improving the service provided for surgical patients of all ages. Cites 23 references.

Full Text: *National Library of Medicine* in [British Medical Journal](#)

Reports & Research - Excluding Palliative Patients from HSMR Data

Measuring and reporting mortality in hospital patients

Flinders University, March 2009

There is an emerging international consensus on which measure to use (the risk-adjusted Hospital Standardised Mortality Ratio, HSMR), on patient characteristics (such as age and diagnosis) to be included in risk-adjustment models, on modelling methods, [and on types of cases to exclude \(e.g. palliative care cases\).](#) Routinely collected data from good quality systems appear to provide an adequate basis for measuring in-hospital mortality, though discussion continues about data quality. Risk-adjusted in-hospital mortality rates—calculated using routinely collected data—are now reported regularly and publicly in several countries or jurisdictions within countries (United Kingdom, The Netherlands, Canada, and Queensland, Australia). In all studies, provision is made to exclude those patients for whom death in hospital is integral to the service provided. Strategies have been developed to deal with palliative-care-type hospital separations (CIHI 2007).

In Australia, palliative care is designated within administrative data sets as a care type that can only be provided in a designated Palliative Care service. It is straightforward to exclude such patients. In settings where that is not possible, other arrangements are required to deal with potential palliative⁹ care issues, such as excluding patients with a primary diagnosis of cancer (e.g. Lakhani et al. 2005). Restricting the analysis of mortality to a small number of conditions may be relevant if there is a strong interest in linking mortality outcomes with specific process measures. Otherwise, a broader sample of in-hospital deaths is likely to provide a more representative population for analysis. The case for confining a more broad-based analysis to the higher risk diagnoses that account for 80% of deaths—instead of all in-hospital deaths—has not been formally argued, and relates more to convenience and the capacity to include primary diagnoses as they stand within the risk-adjustment process, than to other issues of substance. The analyses further include high-risk diagnoses, low-risk diagnoses, and all causes of mortality.

[The Australian administrative data sets separate types of care into acute, rehabilitation and palliative care. Information about previous admissions and linkage across hospital and community services are less common. \(The spreading availability of data linkage facilities in Australia is overcoming this limitation.\)](#)¹³ In the UK, there have been particular difficulties relating to the use of multiple consultant completed episodes within a single admission that have had to be overcome (Jarman et al. 1999), but that is not a widespread problem outside the UK.

CIHI (*Canadian Institute for Health Information*) 2007. *HSMR: A new approach for measuring hospital mortality trends in Canada*. Ottawa: CIHI.

ATTACHED

Ethical considerations for classifying patients as 'palliative' when calculating Hospital Standardised Mortality Ratios.

Journal of Medical Ethics, 2010, vol./is. 36/7(387-90)

Downar J, Sibbald R, Lazar NM

Abstract: The Hospital Standardised Mortality Ratio (HSMR) is a commonly used measure of hospital mortality that is standardised for age, comorbidities and other factors. By tradition, this statistic has always excluded patients classified as 'palliative'. The HSMR has never been validated as a reliable measure of quality of care, and it can be very hard to interpret, partly due to difficulties with defining and applying the term 'palliative'. In this paper, we review the Canadian experience with the palliative status flag, and explain why it is so difficult to define and apply consistently. We also highlight some potential concerns about clinicians labelling inpatients as 'palliative' during their admission. Finally, we propose an organisational ethics framework, and six specific suggestions for hospitals to use when publishing statistics such as the HSMR.

Full Text: Available from *Highwire Press* in [Journal of medical ethics](#)

Making hospital mortality measurement more meaningful: incorporating advance directives and palliative care designations.

American Journal of Medical Quality, 2010, vol./is. 25/1(24-33)

Kroch EA, Johnson M, Martin J, Duan M

Abstract: Accounting for patients admitted to hospitals at the end of a terminal disease process is key to signaling care quality and identifying opportunities for improvement. This study evaluates the benefits and caveats of incorporating care-limiting orders, such as do not resuscitate (DNR) and palliative care (PC) information, in a general multivariate model of mortality risk, wherein the unit of observation is the patient hospital encounter. In a model of the mortality gap (observed - expected from the baseline model), DNR explains 8% to 24% of the gap variation. PC provides additional explanatory power to some disease groupings, especially heart and digestive diseases. One caveat is that DNR information, especially if associated with the later stages of hospital care, may mask opportunities to improve care for certain types of patients. But that is not a danger for PC, which is unequivocally valuable in accounting for patient risk, especially for certain subpopulations and disease groupings.

Hospital mortality rates: how is palliative care taken into account?.

Journal of Pain & Symptom Management, 2010, vol./is. 40/6(914-25)

Cassel JB, Jones AB, Meier DE, Smith TJ, Spragens LH, Weissman D

CONTEXT: Using mortality rates to measure hospital quality presumes that hospital deaths are medical failures. To be a fair measure of hospital quality, hospital mortality measures must take patient-level factors, such as goals of care, into account.

OBJECTIVES: To answer questions about how hospital mortality rates are computed and how the involvement of hospice or palliative care (PC) are recognized and handled.

METHODS: We analyzed the methods of four entities: Centers for Medicare & Medicaid Services "Hospital Compare;" U.S. News & World Report "Best Hospitals;" Thomson-Reuters "100 Top Hospitals;" and Health Grades.

RESULTS: All entities reviewed rely on Medicare data, compute risk-adjusted mortality rates, and use "all-cause" mortality. They vary considerably in their recognition and handling of cases that involved hospice care or PC. One entity excludes cases with prior hospice care and another excludes those discharged to hospice at the end of the index hospitalization. Two entities exclude some or all cases that were coded with the V66.7 "Palliative Care Encounter" International Classification of Disease, Ninth Revision, Clinical Modification diagnosis code.

CONCLUSION: Proliferation of, and variability among, hospital mortality measures creates a challenge for hospital administrators. PC and hospice leaders need to educate themselves and their hospital administrators about the extent to which these mortality rates take end-of-life care into account. At the national level, PC and hospice leaders should take advantage of opportunities to engage these mortality raters in conversation about possible changes in their methods and to conduct further research on this topic.

Hospital mortality: When failure is not a good measure of success

CMAJ, July 2008, vol./is. 179/2(153-157), Shojania K.G., Forster A.J.

Mortality for specific conditions and procedures has figured prominently among outcomes-based performance measures.^{1–3} However, in recent years there has been renewed interest in overall hospital mortality, specifically the hospital standardized mortality ratio (HSMR) (Box 1).^{4–8} Although efforts to measure performance represent welcome developments, the focus on the hospital standardized mortality ratio, especially when the ratio is derived solely from administrative data, goes against the results of decades of investigation.^{9,10} Proposed strategies to measure and improve hospital performance efforts have included the establishment of national patient safety agencies,¹¹ mandatory accreditation,¹² financial incentives¹³ and publicly reported performance measures.¹⁴ Performance measures have targeted structure (e.g., patient volumes and recommended staffing patterns for intensive care¹⁵), process (e.g., report cards on adherence to recommended aspects of care for patients with acute myocardial infarction and pneumonia¹⁶) and outcomes.

In this commentary, we apply a previously published framework by Davies and colleagues¹⁷ to analyze the limitations of the hospital standardized mortality ratio as a performance measure. Specifically, we address the validity, precision and potential bias associated with this measure as well as its cost and capacity to promote real improvement in performance (Table 1). We also briefly discuss alternative measures of hospital performance. [An additional problem concerns palliative care. Although one might expect that the exclusion of patients receiving palliative care would lower hospital standardized mortality ratios, almost half of Ontario hospitals have been found to have higher ratios after the exclusion of these patients.²⁷ This finding suggests that variation in coding and discharge practices for palliative care patients distort standardized mortality ratios in an unpredictable manner.](#)

ATTACHED

The inaccessibility of advance directives on transfer from ambulatory to acute care settings. JAMA, 1995, vol./is. 274/6(478-82). Morrison RS, Olson E, Mertz KR

OBJECTIVE: To investigate the accessibility of patients' previously executed advance directives during an acute hospitalization.

DESIGN: Retrospective chart review.

SETTING: A large metropolitan teaching hospital, a 514-bed skilled nursing facility, a geriatrics ambulatory care clinic, and a geriatrics group practice office.

PATIENTS: One hundred fourteen geriatric patients who had previously executed an advance directive.

MAIN OUTCOME MEASURES: The medical records of 180 admissions over 3 years, 1991 through 1993, were reviewed for documentation of patients' advance directive status.

RESULTS: Twenty-six percent of patients who had previously executed advance directives had their directives recognized during their hospitalization. Of the subgroup of patients who were judged not to have the capacity to make medical decisions during their admissions, 26% (14/53) had their directives recognized. When the advance directive was recognized, it appeared to influence treatment decisions in 12 (86%) of 14 cases.

CONCLUSIONS: Previously executed advance directives are not accessible when patients are admitted to hospitals for acute illness. When such directives are recognized, they are used to influence medical treatment decisions. Further research is needed to define and overcome barriers to this inaccessibility.

Full Text: [JAMA: Journal of the American Medical Association](#);

Research - Hospitalisation of patients with palliative care needs

What is the extent of potentially avoidable admissions amongst hospital inpatients with palliative care needs? Merryn Gott¹, Clare Gardiner², Christine Ingleton³, BMC Palliative Care 2013, 12:9 doi:10.1186/1472-684X-12-9

Background

There is clear evidence that the full range of services required to support people dying at home are far from being implemented, either in England or elsewhere. [No studies to date have attempted to identify the proportion of hospital admissions that could have been avoided amongst patients with palliative care needs, given existing and current local services. This study aimed to examine the extent of potentially avoidable admissions amongst hospital patients with palliative care needs.](#)

Methods

A cross sectional survey of palliative care needs was undertaken in two acute hospitals in England. Appropriateness of admission was assessed by two Palliative Medicine Consultants using the following data collected from case notes: reasons for admission; diagnosis and co-morbidities; age and living arrangements; time and route of admission; medical and nursing plan on admission; specialist palliative care involvement; and evidence of cognitive impairment.

Results

A total of 1359 inpatients were present in the two hospitals at the time of the census. Of the 654 consenting patients/consultees, complete case note data were collected for 580 patients; the analysis in this paper relates to these 580 patients. Amongst 208 patients meeting diagnostic and prognostic criteria for palliative care need in two acute settings in England, only 6.7% were identified as 'potentially avoidable' hospitalisations. These patients had a median age of 84. Half of the patients lived in residential or nursing homes and it was concluded that most could have received care in this setting in place of hospital.

Conclusion

Our findings challenge assumptions that, within the existing configuration of palliative and end of life health and social care services, patients with palliative care needs experience a high level of potentially avoidable hospitalisations.

ATTACHED

Extent of palliative care need in the acute hospital setting: a survey of two acute hospitals in the UK. Palliat Med. 2013 Jan;27(1):76-83.

Gardiner C, Gott M, Ingleton C, Seymour J, Cobb M, Noble B, Bennett M, Ryan T. University of Sheffield, School of Health and Related Research (ScHARR), Sheffield, c.gardiner@sheffield.ac.uk

BACKGROUND: In common with international health policy, The End of Life Care Strategy for England has highlighted the delivery of high quality palliative care in the acute hospital setting as an area of priority.

AIM: [The aim of this study was to explore the extent of palliative care need in the acute hospital setting, and to explore agreement between different sources in the identification of patients with palliative care need.](#)

DESIGN: A cross-sectional survey of palliative care need was undertaken in two UK acute hospitals. Hospital case notes were examined for evidence of palliative care need according to Gold Standards Framework (GSF) prognostic indicator criteria. Medical and nursing staff were asked to identify patients with palliative care needs. Patients (or consultees) completed assessments of palliative care need.

PARTICIPANTS: Of a total in-patient population of 1359, complete datasets were collected for 514 patients/consultees.

RESULTS: 36.0% of patients were identified as having palliative care needs according to GSF criteria. Medical staff identified 15.5% of patients as having

palliative care needs, and nursing staff 17.4% of patients. Patient self-report data indicated that 83.2% of patients meeting GSF criteria had palliative care needs. CONCLUSION: The results reveal that according to the GSF prognostic guide, over a third of hospital in-patients meet the criteria for palliative care need. Consensus between medical staff, nursing staff and the GSF was poor regarding the identification of patients with palliative care needs. This has significant implications for patient care, and draws into question the utility of the GSF in the hospital setting.

Half of older Americans seen in emergency department in last month of life; most admitted to hospital, and many die there. Health Affairs, 2012, 31/6(1277-85). Smith AK, McCarthy E, Weber E, Cenzer IS, Boscardin J, Fisher J, Covinsky K
Abstract: Emergency department use contributes to high end-of-life costs and is potentially burdensome for patients and family members. We examined emergency department use in the last months of life for patients age sixty-five or older who died while enrolled in a longitudinal study of older adults in the period 1992-2006. We found that 51 percent of the 4,158 [corrected] decedents visited the emergency department in the last month of life, and 75 percent in the last six months of life. Repeat visits were common. A total of 77 percent of the patients seen in the emergency department in the last month of life were admitted to the hospital, and 68 percent of those who were admitted died there. In contrast, patients who enrolled in hospice at least one month before death rarely visited the emergency department in the last month of life. Policies that encourage the preparation of patients and families for death and early enrollment in hospice may prevent emergency department visits at the end of life.

A literature review on care at the end-of-life in the emergency department
Emergency Medicine International, 2012, vol./is. 2012/, 2090-2840;2090-2859
Forero R., McDonnell G., Gallego B., McCarthy S., Mohsin M., Shanley C., Formby
Abstract: The hospitalisation and management of patients at the end-of-life by emergency medical services is presenting a challenge to our society as the majority of people approaching death explicitly state that they want to die at home and the transition from acute care to palliation is difficult. In addition, the escalating costs of providing care at the end-of-life in acute hospitals are unsustainable. Hospitals in general and emergency departments in particular cannot always provide the best care for patients approaching end-of-life. The main objectives of this paper are to review the existing literature in order to assess the evidence for managing patients dying in the emergency department, and to identify areas of improvement such as supporting different models of care and evaluating those models with health services research. The paper identified six main areas where there is lack of research and/or suboptimal policy implementation. These include uncertainty of treatment in the emergency department; quality of life issues, costs, ethical and social issues, interaction between ED and other health services, and strategies for out of hospital care. The paper concludes with some areas for policy development and future research. 2012 Roberto Forero et al.

Of the estimated 140,000 Australians who die each year [41], it is calculated that at least 100,000 of them die as a result of an "anticipated" [21] or "expected" death [42]. Of the 140,000 who die each year, 54% die in acute care hospitals; 20% die in hospices/palliative care; 16% die at home; 10% die in nursing homes [43]. The elderly tend to be overrepresented in EDs [44, 45].

ATTACHED

Hospice eligibility in patients who died in a tertiary care center.

Journal of Hospital Medicine (Online), 2012, vol./is. 7/3(218-23)

Freund K, Weckmann MT, Casarett DJ, Swanson K, Brooks MK, Broderick A

BACKGROUND: Hospice is a service that patients, families, and physicians find beneficial, yet a majority of patients die without receiving hospice care. Little is known about how many hospitalized patients are hospice eligible at the time of hospitalization.

METHODS: Retrospective chart review was used to examine all adult deaths (n = 688) at a tertiary care center during 2009. Charts were selected for full review if the death was nontraumatic and the patient had a hospital admission within 12 months of the terminal admission. The charts were examined for hospice eligibility based on medical criteria, evidence of a hospice discussion, and hospice enrollment.

RESULTS: Two hundred nine patients had an admission in the year preceding the terminal admission and a nontraumatic death. Sixty percent were hospice eligible during the penultimate admission. Hospice discussions were documented in 14% of the hospice-eligible patients. Patients who were hospice eligible had more subspecialty consults on the penultimate admission compared to those not hospice eligible (P = 0.016), as well as more overall hospitalizations in the 12 months preceding their terminal admission (P = 0.0003), and fewer days between their penultimate admission and death (P = 0.001).

CONCLUSION: The majority of terminally ill inpatients did not have a documented discussion of hospice with their care provider. Educating physicians to recognize the stepwise decline of most illnesses and hospice admission criteria will facilitate a more informed decision-making process for patients and their families. A consistent commitment to offer hospice earlier than the terminal admission would increase access to community or home-based care, potentially increasing quality of life.

How common are palliative care needs among older people who die in the emergency department?

Emergency Medicine Journal, 2011, vol./is. 28/6(491-5)

Beynon T, Gomes B, Murtagh FE, Glucksman E, Parfitt A, Burman R, Edmonds P, Department of Palliative Care, St. Thomas' Hospital, London SE1 7EH, UK.

teresa.beynon@gstt.nhs.uk

OBJECTIVE: To determine the prevalence and nature of palliative care needs in people aged 65 years or more (65+) who die in emergency departments (EDs).

METHODS: This was a retrospective analysis of routine hospital data from two EDs in South London. Patients aged 65+ living in the hospitals' catchment area who died in the ED during a 1 year period (2006-2007) were included. Palliative care needs identified by diagnosis and symptoms, and problems likely to benefit from palliative care documented in clinical records 3 months prior to the final ED attendance were extracted.

RESULTS: Over 1 year, 102 people aged 65+ died in the ED, frequently following an acute event (n = 90). 63.7% presented out of hours. 98/102 were admitted by ambulance, over half (n = 59) from home. Half (n = 50) had attended the same ED or been admitted to the same hospital in the previous 12 months. Over half (58/102) presented with diagnoses that signalled palliative care need. Of these, 29 had recorded symptoms a week before death and 28 had complex social issues 3 months prior to death. Only eight were known to palliative care services.

CONCLUSIONS: There is considerable palliative care need among older people who ultimately died in the ED, of whom only a minority were known to palliative care services in this study. Previous ED and hospital admission suggest opportunities for referral and forward planning. More older people in need of palliative care must be identified and managed earlier to avoid future undesired admissions and deaths in hospital.

Full Text: Available from *Highwire Press* in [Emergency Medicine Journal](#)

Concentrating hospital-wide deaths in a palliative care unit: the effect on place of death and system-wide mortality.

Journal of Palliative Medicine, 2010, vol./is. 13/4(371-4)

Cassel JB, Hager MA, Clark RR, Retchin SM, Dimartino J, Coyne PJ, Riggins J,

Abstract: INTRODUCTION: We studied the impact of an 11-bed inpatient palliative care unit (PCU) on site of death and observed mortality in the health system, oncology, and palliative care units. Observers were concerned that an active PCU would attract dying patients and worsen comparative mortality rates for Medicare and U.S. News & World Report comparisons. METHODS: We reviewed 10 years of experience with all patients who died in the hospital before and after we opened our PCU in 2000. RESULTS: The PCU concentrated dying patients on the PCU but total deaths did not change over 10 years and remained approximately 3% of admissions. Within 2 years, one quarter of all health system decedents died on the PCU. The proportion who died on the oncology floor and general units declined, but the number of intensive care unit deaths did not change. CONCLUSIONS: An inpatient PCU did not increase the hospital-wide death rate. The PCU did change the site of death to a more appropriate venue for one quarter of patients.

Full Text:

Available from EBSCOhost in [Journal of Palliative Medicine](#)

Mortality in internal medicine. Importance of patients in terminal condition

[Spanish] Mortalidad en medicina interna. Importancia de los pacientes en situacion terminal

Medicina Paliativa, May 2009, vol./is. 16/3(143-147)

Gonzalez-Ruano Perez P., Serralta San Martin G., Saez Vaquero T., Pacheco

Abstract: Background and objectives: many patients with end-stage chronic illnesses are cared for in medical services, outside specific palliative care resources. This encouraged us to review the patients that had died in our department during 2006, describing their characteristics and the care they were given. Patients and methods: a retrospective descriptive study of the clinical records of patients who died during 2006 at Internal Medicine Service, Virgen de la Torre Hospital, Madrid, Spain. We analyzed their sociodemographic and clinical information, end-stage disease criteria, causes of death, type of care and treatments, degree of instrumentalization, and presence of a living will. The results were analyzed with the statistical program SPSS 14.0. Results: we obtained 172 clinical records of 188 deceased patients during this period (64.5% women, 35.5% males, mean age 85.76 +/-7.0); 69% of patients had end-stage disease, and diseases included dementia in 52%, cancer in 14%, COPD in 10%, and heart failure in 9%. Death was most commonly of respiratory (70%), neurological (52%), cardiovascular (35%), or septic (31%) cause. No patient had a living will; 81% of terminal patients were included in a palliative protocol. Conclusions: [a high percentage of the patients that had died in our service had a terminal chronic disease](#). Patient type was a woman of advanced age, with multiple chronic diseases, with a high level of dependency, cared after by her family, and with end-stage dementia. No patient had a living will.

End-of-life care in hospital: a descriptive study of all inpatient deaths in 1 year.

Palliative Medicine, October 2009, vol./is. 23/7(616-22). Abel J, Rich A, Griffin T, Weston Area Health Trust, Weston Hospice care, Weston-super-Mare, UK.

julian.abel@waht.swest.nhs.uk

Abstract: The objectives of this study are to ascertain [how many patients who died in a district general hospital in England might have been able to be cared for at home](#), to obtain the cost of each inpatient stay, to make an estimate of the maximum resource implications of care packages for these patients, and to calculate the savings in hospital admissions that could be used for the development of community services. These objectives are dependant on full implementation of the End of Life Strategy. A descriptive study of all inpatient deaths in one year in a district general hospital in the south west of England was conducted.

Data collection - case notes of all patients who died at the hospital from the beginning of June 2006 to end of May 2007. A total of 599 case notes of 627 patients who died in the study period were reviewed. A total of 331 patients (56%) were not assessed as being in the last year of life. Of the remaining 44%, 152 (26%) were clearly in the last year of life and 110 (18%) had significant co-morbidities and could probably have been recognised as being in the last year of life. A total of 399 (67%) of patients were appropriately admitted to hospital for their final illness, 194 (33%) could have been looked after at home. At least 119 (20%) clearly and 75 (13%) probably could have stayed at home. The mean cost of admission was 3173 pound per patient. A total of 77 (13%) of patients were admitted from nursing homes and 53 (69%) of these could have stayed in the nursing home to die. A total of 44% of all patients who died within the district general hospital had chronic life threatening illnesses. A maximum of one third of all hospital deaths could have been looked after at home if excellent end of life services were in place. When commissioning end of life care services, it is possible to calculate how many extra patients may need community care packages and the cost that could be redistributed from hospital to community for these services.

Full Text: Available from *EBSCOhost* in [Palliative Medicine](#)

Population-based study of dying in hospital in six European countries.

Palliative Medicine, 2008, vol./is. 22/6(702-10)

Cohen J, Bilsen J, Addington-Hall J, Lofmark R, Miccinesi G, Kaasa S, Onwuteaka-

Abstract: This study examined the proportion of deaths taking place in hospitals in six European countries in relation to demographic, epidemiologic and healthcare factors. Retrospective analyses were performed on a database integrating death certificate data of all deaths in 2002 in Sweden and 2003 in Belgium, England, Scotland, the Netherlands and Wales (N = 891,780). Data were linked with regional healthcare statistics. Of all deaths, from 33.9% (the Netherlands) to 62.8% (Wales) occurred in hospital. Large country differences in hospital deaths were partly explained by the availability of care home and hospital beds. Differences between countries were strikingly large in older patients and cancer patients. Older patients had a higher probability of dying in hospital in Sweden, Scotland, England and Wales than in Flanders and, in particular, in the Netherlands. Cancer patients often died in hospitals in Sweden but less frequently so in the Netherlands and England. Country differences in the proportion of patients dying in hospital are only partly the result of differences in health care provision, and are in particular larger for certain patient categories, suggesting country-specific end-of-life practices in these categories. These findings can contribute to rational public health policies aimed at reducing hospital deaths.

Full Text:

Available from *EBSCOhost* in [Palliative Medicine](#)

Hospitalisations at the end of life: using a sentinel surveillance network to study hospital use and associated patient, disease and healthcare factors.

BMC Health Services Research, 2007, vol./is. 7/(69)

Van den Block L, Deschepper R, Drieskens K, Bauwens S, Bilsen J, Bossuyt N,

Abstract:

BACKGROUND: Hospital deaths following several hospital admissions or long hospital stays may be indicative of a low quality of dying. Although place of death has been extensively investigated at population level, hospital use in the last months of life and its determinants have been studied less often, especially in Europe and with a general end-of-life patient population. In this study we aim to describe hospital use in the last three months of life in Belgium and identify associated patient, disease and healthcare factors.

METHODS: We conducted a retrospective registration study (13 weeks in 2004) with the Belgian Sentinel Network of General Practitioners, an epidemiological surveillance system representative of all GPs in Belgium, covering 1.75% of the total Belgian patient population. All registered non-sudden or expected deaths of patients (aged one year or older) at the GPs' practices were included. Bivariate and regression analyses were performed.

RESULTS: The response rate was 87%. The GPs registered 319 deaths that met inclusion criteria. Sixty percent had been hospitalised at least once in the last three months of life, for a median of 19 days. The percentage of patients hospitalised increased exponentially in the last weeks before death; one fifth was admitted in the final week of life. Seventy-two percent of patients hospitalised at least once in the final three months died in hospital. A palliative treatment goal, death from cardiovascular diseases, the expression of a wish to die in an elderly home and palliative care delivery by the GP were associated with lower hospitalisation odds.

CONCLUSION: Hospital care plays a large role in the end of patients' lives in Belgium, especially in the final weeks of life. The result is a high rate of hospital deaths, showing the institutionalised nature of dying. Patients' clinical conditions, the expression of preferences and also healthcare characteristics such as being treated as a palliative care patient, seem to be associated with hospital transfers. It is recommended that hospitalisation decisions are only made after careful consideration. Short admissions in the final days of life should be prevented in order to make dying at home more feasible.

Full Text:

Available from *National Library of Medicine* in [BMC Health Services Research](#)

Who is dying in our critical care units? A single center's experience.

Journal of Nursing Care Quality, 2006, vol./is. 21/1(78-85)

Lindgren VA, Barnett SD, Bloom RL

Abstract: Are deaths that occur in critical care expected or unexpected? The objective was to illustrate the incidence of deaths in adult critical care units. We also wanted to discover if our patient population fit the norm of those who die in these units in the United States. Are the patients with many comorbid conditions? Could they benefit from advance care planning? A prospective chart review was completed on all deaths that occurred in our 5 critical care units. Most deaths (76.6%) were expected. Patients had an average of 3.3 comorbidities. Greater public knowledge about advance care planning is needed and must include education about the full range of options in end-of-life care.

Available from *EBSCOhost* in [Journal of Nursing Care Quality](#)

Predictors associated with the place of death in a country with increasing hospital deaths. *Palliative Medicine*, June 2006, vol./is. 20/4(455-61)

Yun YH, Lim MK, Choi KS, Rhee YS

OBJECTIVES: To evaluate the contribution of type of illness, socio-demographic factors, and area of residence to the place of death in a country with increasing hospital deaths.

DESIGN: Descriptive study of hospital deaths using a 10-year death registration database from the Korean National Statistical Office.

SETTING AND PARTICIPANTS: Through the National Vital Statistics System, 2,402,259 deaths were registered in Korea from 1992 to 2001.

MEASUREMENT AND MAIN RESULTS: There was a significant trend toward an increase in the proportion of hospital deaths, from 16.6% in 1992 to 39.9% in 2001. The proportion of deaths at home decreased over that period, from 72.9 to 49.2%. The risk of hospital death versus home death was lower for those aged 75 years and over (adjusted odds ratio: 0.212; 95% confidence interval: 0.210-0.214) compared with those <55 years, and for people who were highly educated (2.04; 2.02-2.06), had white-collar jobs (1.55; 1.54-1.57), and resided in areas with more available hospital beds (2.46; 2.42-2.51). Compared with other causes of death, the risk of dying in hospital was higher for patients with ischaemic heart disease (1.83; 1.79-1.86), cancer (1.25; 1.23-1.26) and chronic lower respiratory disease (1.21; 1.18-1.23).

CONCLUSIONS: Trends in place of death are influenced by available hospital beds, socio-demographic factors and the nature of the terminal disease, in a country with increasing hospital deaths. These associations should be viewed within the context of culture and local health care systems.

Full Text: Available from *EBSCOhost* in [Palliative Medicine](#)

Hospital mortality league tables: influence of place of death

BMJ 2004;328:1235. Valerie Seagroatt, Michael J Goldacre

League tables that rank hospitals according to their death rates are now regularly published in England. The rationale for publication is that differences in death rates may indicate differences in quality of hospital care. Yet a hospital is not only a place for treatment and cure, it is also a place for care of the dying. Currently 55% of all deaths in England occur in NHS hospitals. Provision and use of different facilities for the care of the dying varies geographically. We investigated how this variation might influence the scale and ranking of hospital death rates.

Method and results

Dr Foster Ltd has published in-hospital death rates for 167 acute NHS hospital trusts (hereafter termed hospitals) in England over the three year period April 1999 to March 2002.¹⁻⁵ The denominators were the number of episodes of admission to each hospital, as recorded in the hospital episode statistics system, and the numerators were the number of these episodes that ended in death. The rates were standardised by age, sex, source of admission, length of stay, and diagnosis, expressed relative to the rate for all hospitals combined, multiplied by 100, and termed hospital standardised mortality ratios (HSMRs). The report highlighted 15 hospitals with the highest and 15 with the lowest mortality ratios. The investigators showed that the probability of these being in the top or bottom 15 was not attributable to random error. We used data on these hospitals for our analysis but excluded London hospitals because of difficulty in determining their catchment areas. This left 11 hospitals with high ratios and nine with low ratios.

Statistics on place of death (NHS hospital, hospice, home, etc) of residents of different areas are published routinely.⁴ These were available for two of the three years on which the published hospital league tables were based (1999 and 2000). We used hospital episode statistics to identify the individual health authorities that corresponded most closely to the catchment area of the 20 selected hospitals, and

we used the published figures on place of death to calculate the percentage of deaths of residents of each catchment area that occurred in NHS hospitals. We then adjusted the published HSMRs to allow for geographic differences in the percentages of deaths occurring in hospital in the hospitals' catchment areas. We did this by scaling down the values when proportionately more deaths of residents occurred in NHS hospitals compared with England as a whole and scaling up those when proportionately fewer deaths occurred in hospital. For instance, for every 1000 deaths of residents of Walsall Health Authority, on average 623 occurred in NHS hospitals. For England overall, the average was 546. We reduced the published HSMR for the Walsall hospitals, 126, by the scaling factor 0.88 (546/623), which gave an adjusted HSMR of 110.

The percentages of deaths of residents of health authorities that occurred in NHS hospitals varied from less than 45% in Plymouth and West Sussex to over 60% in Walsall and Sandwell (figure, and see table on bmj.com). In most cases the adjustment brought the HSMRs closer together and closer to 100. It also changed the rankings.

Comment

[Geographical differences in the provision of facilities for the dying are a plausible explanation for some of the differences between hospitals in their in-hospital death rates. Calculation of in-hospital death rates, aggregated across a wide clinical spectrum, including a mixture of admissions for treatment, cure, and palliative and terminal care, gives rates that are difficult to interpret as quality measures.](#)

Predictors of site of death of end-of-life patients: the importance of specificity in advance directives.

Journal of Palliative Medicine, 2004, vol./is. 7/1(9-17)

Pekmezaris R, Breuer L, Zaballero A, Wolf-Klein G, Jadoon E, D'Olimpio JT, Guzik

Abstract: Despite the compelling reasons for advance directives and their endorsement by the public and medical professions, little is known about their actual use and impact on site of death. This study was conducted to examine the role of advance directives and other "drivers" of hospitalization of the long-term care end-of-life patient. The medical records of 100 deceased consecutive nursing home residents, stratified by site of death (skilled nursing facility or acute care hospital), were reviewed by a team of geriatric researchers to obtain patient information in the following domains: sociodemographic, advance directives, transfer and death information, patient diagnoses at admission, discharge, and other time intervals; medication usage and signs and symptoms precipitating death. Severity of illness was assessed using the Cumulative Illness Rating Scale-G (CIRS-G). In testing for differences between patients by site of death, sociodemographic variables (gender, age, race, payer at discharge, cognitive capacity) did not significantly differ between the two groups of patients. Strong similarities between the groups were also found in terms of severity of illness and medication usage. Significantly higher proportions of patients dying in the nursing home had specific advance directives (do not resuscitate, do not intubate, do not artificially feed, do not hydrate, and do not hospitalize), as opposed to those dying in the hospital. The findings of this study demonstrate the impact of the explicit advance directive on the decision to transfer the patient to the acute care setting at the end of life.

Full Text: Available from *EBSCOhost* in [Journal of Palliative Medicine](#)

A one-day, hospital-wide survey of dying inpatients. *Journal of Palliative Medicine*, June 2002, vol./is. 5/3(363-74). Billings JA, Gardner M, Putnam AT

Abstract: We attempted to identify and briefly follow until discharge all terminally ill patients in a large general hospital. On 1 day, nurse case managers reviewed all hospitalized patients and identified those whom they believed were likely to die in the next 6 months (Category A) or whom might be considered terminally ill but with a longer prognosis (Category B). Twelve percent of all adult and pediatric medical-surgical inpatients were detected, equally divided between the two categories. In Category A, 63% were on the medical service, 7% were receiving intensive care, 54% had cancer, and 46% had do-not-resuscitate (DNR) orders. In Category B, 40% were on the medical service, 10% were in intensive care, 52% had cancer, and only 5% had DNR orders. Case managers expected 6% of identified patients to die in the hospital. After 1 month, at least 19% of identified patients had died (2.3% of the medical-surgical inpatient census on the day of the survey). The average length of stay in both categories, excluding outliers, was 24 days or approximately 4 times the average length of stay for the hospital. Patients who actually died in the hospital had an average length of stay of 62 days. This study presents a simple method for estimating the number of dying patients in a hospital--the target population for a palliative care program--and for determining their location, principal diagnosis, length of stay, and disposition. [We present information indicating that the survey underestimates the number of dying hospitalized patients.](#) We discuss possible policy implication of this study, primarily that general hospitals should consider developing specialized palliative care services for this substantial group of inpatients.

Full Text: Available from *EBSCOhost* in [Journal of Palliative Medicine](#)

Dying in hospital: medical failure or natural outcome?. *Journal of Pain & Symptom Management*, 2001, 22/6(1035-41), Middlewood S, Gardner G, Gardner A

Abstract: The purpose of this study was to describe patterns of medical and nursing practice in the care of patients dying of oncological and hematological malignancies in the acute care setting in Australia. A tool validated in a similar American study was used to study the medical records of 100 consecutive patients who died of oncological or hematological malignancies before August 1999 at The Canberra Hospital in the Australian Capital Territory. The three major indicators of patterns of end-of-life care were documentation of Do Not Resuscitate (DNR) orders, evidence that the patient was considered dying, and the presence of a palliative care intention. [Findings were that 88 patients were documented DNR, 63 patients' records suggested that the patient was dying, and 74 patients had evidence of a palliative care plan.](#) Forty-six patients were documented DNR 2 days or less prior to death and, of these, 12 were documented the day of death. Similar patterns emerged for days between considered dying and death, and between palliative care goals and death. Sixty patients had active treatment in progress at the time of death. The late implementation of end-of-life management plans and the lack of consistency within these plans suggested that patients were subjected to medical interventions and investigations up to the time of death. Implications for palliative care teams include the need to educate health care staff and to plan and implement policy regarding the management of dying patients in the acute care setting. Although the health care system in Australia has cultural differences when compared to the American context, this research suggests that the treatment imperative to prolong life is similar to that found in American-based studies.

Oregon's low in-hospital death rates: what determines where people die and satisfaction with decisions on place of death? Tolle SW, Rosenfeld AG, Tilden VP, Park Y. *Annals of Internal Medicine*, 1999, vol./is. 130/8(681-5)

Where Americans die is much more influenced by what part of the country they live in than by what their preferences are for location of death. Although most Americans report a preference for death at home, a majority still die in acute care hospitals. We describe the experiences of patients who died in Oregon (the state that currently has the lowest in-hospital death rate in the United States--31%) and the views of their families. We examine the factors influencing respect for dying patients' preferred location of death. Data from Oregon studies confirm that decisions to avoid hospital admission are far more common than discharge of the actively dying. Do-not-resuscitate orders were reported for 91% of nursing home residents in one study and living wills were reported for 67% of a random sample of adult Oregon decedents in a second study. In the second study, decisions not to start treatment were far more common than decisions to stop treatment (79% compared with 21%). Only 2.4% of families reported that "too little" treatment was given. Throughout the United States, use and availability of beds in acute care hospitals have been confirmed to be the principal determining factors in location of death. Within that constraint, however, the availability of other resources and services both facilitates the process of arranging for patients to die outside the hospital and improves satisfaction with the quality of terminal care. **Full Text:** Available from *EBSCOhost* in [Annals of Internal Medicine](#)

Randomised controlled trial of effectiveness of Leicester hospital at home scheme compared with hospital care. *BMJ*, December 1999, vol./is.

319/7224(1542-6). Wilson A, Parker H, Wynn A, Jagger C, Spiers N

Department of General Practice and Primary Health Care, University of Leicester, **OBJECTIVE:** To compare effectiveness of patient care in hospital at home scheme with hospital care.

DESIGN: Pragmatic randomised controlled trial. **SETTING:** Leicester hospital at home scheme and the city's three acute hospitals.

PARTICIPANTS: 199 consecutive patients referred to hospital at home by their general practitioner and assessed as being suitable for admission. Six of 102 patients randomised to hospital at home refused admission, as did 23 of 97 allocated to hospital.

INTERVENTION: Hospital at home or hospital inpatient care.

MAIN OUTCOME MEASURES: Mortality and change in health status (Barthel index, sickness impact profile 68, EuroQol, Philadelphia geriatric morale scale) assessed at 2 weeks and 3 months after randomisation. The main process measures were service inputs, discharge destination, readmission rates, length of initial stay, and total days of care.

RESULTS: Hospital at home group and hospital group showed no significant differences in health status (median scores on sickness impact profile 68 were 29 and 30 respectively at 2 weeks, and 24 and 26 at 3 months) or in dependency (Barthel scores 15 and 14 at 2 weeks and 16 for both groups at 3 months). At 3 months' follow up, 26 (25%) of hospital at home group had died compared with 30 (31%) of hospital group (relative risk 0.82 (95% confidence interval 0.52 to 1.28)). Hospital at home group required fewer days of treatment than hospital group, both in terms of initial stay (median 8 days v 14.5 days, $P=0.026$) and total days of care at 3 months (median 9 days v 16 days, $P=0.031$).

CONCLUSIONS: Hospital at home scheme delivered care as effectively as hospital, with no clinically important differences in health status. Hospital at home resulted in significantly shorter lengths of stay, which did not lead to a higher rate of subsequent admission.

The illusion of end-of-life resource savings with advance directives. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment. Journal of the American Geriatrics Society, 1997, vol./is.

45/4(513-8) Teno J, Lynn J, Connors AF Jr, Wenger N, Phillips RS, Alzola C, Murphy

OBJECTIVE: [Would increasing the documentation of advance directives \(ADs\) lead to a reduction in resource utilization?](#) We examined this question by conducting three

secondary analyses: (1) we tested for a change in resource use among those who died in the hospital at a time before and after an intervention that increased the documentation of ADs in the medical record; (2) we replicated analyses of published studies that reported an association of chart documentation of ADs and hospital resource use; and (3) we examined whether a potential explanation of the observed association is biased documentation of ADs among patients who have completed an AD. DESIGN: Replication of analysis of previous published studies using data from a prospective cohort study and block-randomized controlled trial.

SETTING: Five teaching hospitals in the United States.

PATIENTS: A total of 9105 seriously ill patients were enrolled in the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT), including 4301 patients in the 2 years (1989-91) before the Patient Self-Determination Act (PSDA) and 4804 in the 2 years (1992-94) after the PSDA implementation, with 2652 patients receiving the intervention and 2152 serving as controls.

INTERVENTIONS: The SUPPORT intervention provided a nurse to facilitate communication among patients, surrogates, and physicians about preferences for and outcomes of treatments. Documenting existing advance directives was also one of this nurse's tasks. The Patient Self-Determination Act required that health care institutions inquire about and document existing advance directives at the time of hospital admission.

MEASUREMENT: Hospital resource use was derived from the Therapeutic Intensity Scoring System and hospital length of stay, converted into 1994 dollars.

RESULTS: Chart documentation of existing advance directives at the time of study admission increased with both the PSDA and the SUPPORT intervention. We found that intervention patients were more likely to have pre-existing ADs documented. Despite this increase, there was no corresponding change in hospital resource use for those who died during the enrollment hospitalization. Replication of analyses from published studies using data from the block randomized controlled trial found that ADs documented by the third day of serious illness were associated with a 23% reduction in hospital resource use among control patients (\$21,284 with ADs documented compared with \$26,127 without, 95% CI 1-48% reduction). However, this association was not observed among intervention patients, who had more pre-existing ADs documented in the medical record. Intervention patients with early documentation of ADs showed a trend toward greater cost (\$28,017 compared with \$24,178 among those without AD documentation, 95% CI 0-25% increase). The rate of documentation and characteristics of those with documentation differed between control and intervention patients. Intervention patients were more likely (as reported by patient or surrogate interview) to have ADs documented in the medical record by the third day (55% vs 32%, $P < .001$). In contrast to intervention patients, control patients who were older, less wealthy, less educated, more likely to prefer to forgo CPR, and more likely to want life-sustaining treatment limited had their ADs documented. These associations were not found among intervention patients when comparison was made between those with and those without an AD documented in the medical record.

CONCLUSION: Increasing the documentation of pre-existing ADs was not associated with a reduction in hospital resource use. ADs documented without further intervention by the third day of a serious illness were associated with decreased hospital resource use. However, we did not find this association with an intervention that increased AD documentation. One potential explanation of these findings is that classification of those with an AD was based on cha

Research - Hospitalisation of nursing home residents

Predicting the in-patient outcomes of acute medical admissions from the nursing home: the experience of St James's Hospital, Dublin, 2002-2010.

Geriatrics & gerontology international, 2012, vol./is. 12/4(703-13)

Romero-Ortuno R et al. St James's Hospital, Dublin, Ireland. romeror@tcd.ie

AIM: To identify predictors of negative in-patient outcomes (prolonged hospital stay and death) in nursing home (NH) residents admitted to the hospital as medical emergencies.

METHODS: This was a retrospective patient series set at St James's Hospital (Dublin, Ireland). The participants were all NH patients requiring acute medical admission under the on-call medical team between 1 January 2002 and 31 December 2010. Patient characteristics on admission, such as demographics, comorbidity level, major diagnostic categories, vital signs and laboratory profile, were measured. The outcomes of the study were prolonged hospital stay (≥ 30 days) and in-hospital mortality. The characteristics of NH patients were compared with those of non-NH patients aged ≥ 65 years. Multivariate analyses were based on generalized estimating equations and classification trees.

RESULTS: There were 55,763 acute medical admissions over the period, of which 1938 (3.5%) were from NH. As compared with non-NH patients aged ≥ 65 years, NH patients had greater acute illness severity. NH patients had a median length of stay of 7 days, and 17% had a prolonged admission. Their overall mortality rate was 23%. However, the classification analysis showed substantial patient heterogeneity; the subgroup with the highest mortality (54%, $n = 100$) had positive serum troponin and a respiratory major diagnosis. The lowest mortality rate (4%) was seen in those without positive troponin, urea of 12 mmol/L or less, and albumin of more than 37 mg/L ($n = 226$).

CONCLUSIONS: Simple serum markers, such as troponin, urea and albumin, might predict mortality in medically admitted NH patients. This might help health-care practitioners to anticipate their clinical course at an early stage.

Acute hospital admissions among nursing home residents: a population-based observational study.

BMC Health Services Research, 2011, vol./is. 11/(126)

Graverholt B, Riise T, Jamtvedt G, Ranhoff AH, Kruger K, Nortvedt MW

BACKGROUND: Nursing home residents are prone to acute illness due to their high age, underlying illnesses and immobility. We examined the incidence of acute hospital admissions among nursing home residents versus the age-matched community dwelling population in a geographically defined area during a two years period. The hospital stays of the nursing home population are described according to diagnosis, length of stay and mortality. Similar studies have previously not been reported in Scandinavia.

METHODS: The acute hospitalisations of the nursing home residents were identified through ambulance records. These were linked to hospital patient records for inclusion of demographics, diagnosis at discharge, length of stay and mortality. Incidence of hospitalisation was calculated based on patient-time at risk.

RESULTS: The annual hospital admission incidence was 0.62 admissions per person-year among the nursing home residents and 0.26 among the community dwellers. In the nursing home population we found that dominant diagnoses were respiratory diseases, falls-related and circulatory diseases, accounting for 55% of the cases. The median length of stay was 3 days (interquartile range = 4). The in-hospital mortality rate was 16% and 30 day mortality after discharge 30%.

CONCLUSION: Acute hospital admission rate among nursing home residents was high in this Scandinavian setting. The pattern of diagnoses causing the admissions appears to be consistent with previous research. The in-hospital and 30 day mortality rates are high. **Full Text:** [BMC Health Services Research](#)

Study of recent and future trends in place of death in Belgium using death certificate data: a shift from hospitals to care homes. BMC Public Health, 2011, vol./is. 11/(228) Houttekier D, Cohen J, Surkyn J, Deliens L

BACKGROUND: Since most patients prefer out-of-hospital death, place of death can be considered an indicator of end-of-life care quality. The study of trends in place of death is necessary to examine causes of shifts, to evaluate efforts to alter place of death and develop future policies. This study aims to examine past trends and future projections of place of death.

METHODS: Analysis of death certificates (decedents aged ≥ 1 year) in Belgium (Flanders and Brussels Capital region) 1998-2007. Trends in place of death were adjusted for cause of death, sociodemographic characteristics, environmental factors, numbers of hospital beds, and residential and skilled nursing beds in care homes. Future trends were based on age- and sex-specific mortality prognoses.

RESULTS: Hospital deaths decreased from 55.1% to 51.7% and care home deaths rose from 18.3% to 22.6%. The percentage of home deaths remained stable. The odds of dying in a care home versus hospital increased steadily and was 1.65 (95%CI:1.53-1.78) in 2007 compared to 1998. This increase could be attributed to the replacement of residential beds by skilled nursing beds. Continuation of these trends would result in the more than doubling of deaths in care homes and a decrease in deaths at home and in hospital by 2040.

CONCLUSIONS: Additional end-of-life care resources in care homes largely explain the decrease in hospital deaths. Care homes will become the main locus of end-of-life care in the future. Governments should provide sufficient skilled nursing resources in care homes to fulfil the end-of-life care preferences and needs of patients. **Full Text:** Available from *National Library of Medicine* in [BMC Public Health](#)

Decisions about transferring nursing home residents to hospital: highlighting the roles of advance care planning and support from local hospital and community health services. Journal of Clinical Nursing, October 2011, vol./is. 20/19-20(2897-906). Shanley C, Whitmore E, Conforti D, Masso J, Jayasinghe S,

AIMS AND OBJECTIVES: To explore current practice and opportunities to improve practice in decision-making about transfer of nursing home residents to hospital.

BACKGROUND: Nursing home staff are often faced with the decision of whether to send a resident to hospital for medical treatment. While many residents will benefit from going to hospital, there are also several risks associated with this. This study sought to add to the existing body of research on this issue by seeking the views of nursing home managers, who are the persons most frequently involved in making these decisions. **DESIGN:** Qualitative design using purposive, quota sampling.

METHOD: Qualitative interviews with 41 nursing home managers from south-western Sydney, Australia.

RESULTS: Factors affecting the decision to transfer a resident to hospital include acuteness of their condition; level and style of medical care available; role of family members; numbers, qualifications and skills mix of staff; and concern about criticism for not transferring to hospital. Two factors that have not featured as strongly in previous research are the roles of advance care planning and support from local hospital and community health services.

CONCLUSION: While transferring a nursing home resident to hospital is often necessary, there are many situations where they could be cared for in the nursing home; therefore, avoid complications associated with being in hospital. Apart from a range of factors already identified in the literature, this study has highlighted the important role that advance care planning and support from local health services can play in reducing unnecessary transfers to hospital.

Full Text: Available from *EBSCOhost* in [Journal of Clinical Nursing](#)

Improving end of life care for nursing home residents: an analysis of hospital mortality and readmission rates. Postgraduate Medical Journal, 2010, 86/1013(131-5). Ahearn DJ, Jackson TB, McIlmoyle J, Weatherburn AJ Royal Bolton Hospital, Farnworth, Bolton, UK. davidjahearn@gmail.com

Abstract: Despite concern that many nursing home residents who become acutely unwell are admitted to hospital for often futile and distressing treatment, no previous studies analysing survival and readmission rates of this cohort were found in the literature.

OBJECTIVE: To study survival and readmission rates of nursing home patients admitted acutely to general medicine.

METHOD: Analysis of all admissions to the acute medical unit of a busy district general hospital over a 94 day period, comparing nursing home residents with all admitted patients aged over 70 years.

RESULTS: Nursing home residents were significantly less likely to survive the admission than elderly people living in the community. 33.9% of nursing home residents did not survive the admission and 51.6% died within 6 weeks of admission. Of those discharged alive, 41.5% were readmitted or died within 6 weeks. Patients with a higher level of comorbidity were less likely to survive the admission or live to 6 weeks.

DISCUSSION: These findings raise the need for careful 'advance care planning'. This should become commonplace for nursing home residents to improve end of life care and reduce hospital admissions in patients unlikely to survive. The judicious use of 'Preferred Priorities for Care' documents, 'do-not-hospitalise' orders, and the establishment of a dedicated multidisciplinary team involving primary and secondary care is proposed to help achieve these aims.

CONCLUSION: Survival rates in nursing home residents admitted to an acute medical unit are low, and measures are suggested to reduce inappropriate admissions and facilitate improved end of life care.

Full Text: *National Library of Medicine* in [Postgraduate Medical Journal](#)

Predictors of in-hospital mortality among hospitalized nursing home residents: an analysis of the National Hospital Discharge Surveys 2005-2006.

Journal of the American Medical Directors Association, 2010, vol./is. 11/1(52-8) Ahmed AA, Hays CI, Liu B, Aban IB, Sims RV, Aronow WS, Ritchie CS, Ahmed A

OBJECTIVE: To determine the demographic and clinical predictors of in-hospital mortality among hospitalized nursing home (NH) residents.

DESIGN: Retrospective analysis of the public-use copies of the 2005-2006 National Hospital Discharge Survey (NHDS) datasets.

SETTING: Non-federal acute-care, short-stay hospitals in all 50 states and the District of Columbia.

PARTICIPANTS: Participants were 1904 and 1752 NH residents, 45 years or older, hospitalized in 2005 and 2006, respectively.

MEASUREMENTS: In-hospital mortality.

METHODS: A multivariable logistic regression model was developed to determine independent predictors of in-hospital mortality using the 2005 dataset. The model was then applied to the 2006 dataset to determine the generalizability of the predictors.

RESULTS: Significant independent predictors of in-hospital mortality in 2005 included age 85 years or older (adjusted odds ratio [OR], 2.53; 95% confidence interval [CI], 1.21-5.30; P=.013), acute respiratory failure (adjusted OR, 5.67; 95% CI, 3.51-9.17; P < .0001), septicemia (adjusted OR, 4.63; 95% CI, 3.08-6.96; P < .0001), and acute renal failure (adjusted OR, 2.11; 95% CI, 1.30-3.41; P=.002). The following baseline characteristics also predicted in-hospital mortality in 2006: age 85 years or older (adjusted OR, 2.45; 95% CI, 1.31-4.59; P=.005), acute respiratory failure (adjusted OR, 7.11; 95% CI, 4.46-11.33; P < .0001), septicemia (adjusted OR, 3.91;

95% CI, 2.64-5.80; $P < .0001$), and acute renal failure (adjusted OR, 2.75; 95% CI, 1.82-4.15; $P < .0001$). Chronic morbidities were not associated with in-hospital mortality.

CONCLUSION: Among hospitalized NH residents, age 85 years or older and several acute conditions, but not chronic morbidities, predicted in-hospital mortality. Elderly NH residents at risk of developing these acute conditions may benefit from palliative care.

A systematic review of mortality prediction models in unselected populations

Journal of General Internal Medicine, 2010, vol./is. 25/(S215-S216)

Abstract:

BACKGROUND: Decisions about palliative and hospice care hinge on physicians' abilities to predict 6-month mortality, yet this ability is limited. Several statistical prognostic models have been developed to assist in this task, but have not been subject to a systematic review. Such a review could help identify promising predictor variables and fruitful directions for future model development.

METHODS: We performed a systematic review of prognostic models for all-cause mortality in intermediate time frames (3 months to ≤ 4 years). We searched MEDLINE using the search terms: (prognostic index or prognostic score or prognostic model or prediction model or prediction rule or risk score or risk index) and (mortality [MeSH] or critical illness[MeSH] or terminally ill[MeSH] or palliative care[MeSH]). We also manually reviewed reference lists. We excluded studies of disease-specific populations (such as heart disease or cancer), pediatric populations, and clinical trials. Studies were abstracted for characteristics of the study population and the model, including the predictor variables and type of model evaluation. Predictors were categorized as demographic (e.g. age), comorbidity (e.g., history of diabetes), physiologic (e.g., albumin level), functional status (e.g., activities of daily living), health services utilization (HSU; e.g. hemodialysis), and medications (e.g. total number of medications).

RESULTS: This search yielded 1,145 studies, of which 17 met inclusion criteria and described a unique predictive model. The included models were derived from a total of 211,781 subjects, with a median sample size of 1,863 (range 123-71,921). The median age of study subjects was 78 (range 55-85), and study samples included community residents, outpatient clinic patients, HMO members, hospitalized patients, and residents of nursing homes and extended care facilities. 4 models predicted 6-month mortality; 1 predicted mortality at 3 months; 14 predicted mortality at 1-4 years; 5 included multiple time intervals. 6-month mortality rates varied from 13.5% to 48.2%. Only 5 models were validated in an external population. The C-statistic, a measure of the model's predictive strength, had a mean of 0.754 (range of 0.66 to 0.85). Predictive accuracy was inconsistently evaluated across studies. The models included an average of 9 variables (range 2-16). No model integrated all categories of predictors. Age was the most common predictor variable, appearing in 13 of the 17 models.

CONCLUSIONS: Few prognostic models focus on 6-month mortality, few (5 of 17) are externally validated, and their performance characteristics have been inconsistently evaluated and reported. Existing models are limited to specific domains of predictor variables, with few including HSU or medication variables. More powerful predictive models, integrating more domains of predictors, need to be developed and more rigorously evaluated. (Table presented).

Available from *National Library of Medicine* in [Journal of General Internal Medicine](#)

Reducing hospitalizations from long-term care settings

Medical Care Research and Review, 2008, vol./is. 65/1, 1077-5587

Konetzka, R Tamara, Spector, William, Limcangco, M Rhona

Abstract: Hospital spending represents approximately one third of total national health spending, and the majority of hospital spending is by public payers. Elderly individuals with long-term care needs are at particular risk for hospitalisation. While some hospitalisations are unavoidable, many are not, and there may be benefits to reducing hospitalisations in terms of health and cost. This article reviews the evidence from 55 peer-reviewed articles on interventions that potentially reduce hospitalisations from formal long-term care settings. The interventions showing the strongest potential are those that increase skilled staffing, especially through physician assistants and nurse practitioners; improve the hospital-to-home transition; substitute home health care for selected hospital admissions; and align reimbursement policies such that providers do not have a financial incentive to hospitalise. Much of the evidence is weak and could benefit from improved research design and methodology. Cites numerous references. [Journal abstract]

Do not hospitalize orders in nursing homes: a pilot study.

Journal of the American Medical Directors Association, 2005, vol./is. 6/1(22-6)

Culberson J, Levy C, Lawhorne L

Abstract:

OBJECTIVES: To determine (1) the point prevalence of do not hospitalize (DNH) policies in nursing facilities directed by members of the American Medical Directors Association (AMDA) Foundation Long-term Care Research Network, (2) the frequency with which physicians are writing DNH orders, and (3) respondent perceptions about the appropriateness of the number of DNH orders as too few or too many and reasons for such perceptions.

DESIGN: Online survey of members of the AMDA Foundation Long-term Care Research Network.

SETTING: Nursing facilities.

PARTICIPANTS: All members of the AMDA Foundation Long-term Research Network on July 1, 2003 were eligible for participation (N = 293).

MEASUREMENTS: Demographic information regarding census, region, setting, governance, presence of teaching and/or hospice affiliation, prevalence of DNH orders, and qualitative information regarding the use of DNH orders in each facility.

RESULTS: The response rate was 32% (n = 95). DNH policies were in place for 62% of facilities and the prevalence of DNH orders ranged from 12% to 23% when facilities were stratified by size. Percentage of residents with documented DNH orders ranged from 0% to 99% at individual facilities. No significant differences were found although trends were noted as follows: chain facilities had fewer DNH policies (RR = 0.8; 95% CI = 0.6-1.1) whereas rural facilities (RR = 1.1, 95% CI = 0.8-1.5) and those associated with a teaching institution (RR = 1.1, 95% CI = 0.8-1.5) were more likely to have a DNH policy. Of respondents, 80% indicated that physicians in their facilities were writing DNH orders but 77% believed that the number of DNH orders was too few. Respondents cited overly optimistic prognosis and lack of knowledge about DNH orders as barriers to writing more DNH orders.

CONCLUSION: The prevalence of DNH orders in this investigation is higher than previous estimates from national data samples. Most facilities had a DNH policy and although respondents indicated that physicians do write DNH orders, they believed that DNH orders were not utilized frequently enough. There is a large variation in prevalence of DNH orders across the facilities included in this survey. Barriers to use, as perceived by medical directors, included unrealistic expectations by family, fear of litigation, and staff discomfort with managing residents who experience clinical decline. Nevertheless, DNH orders are used extensively in some facilities associated with members of the AMDA Foundation Long-term Care Research Network.

Interface Audit - General

Evaluation of an interface audit programme Chawke, Margaret; Grellier, J.; Smith, Quality in Primary Care, Volume 13, Number 3, September 2005 , pp. 153-158(6)

Interface issues probably represent the most difficult areas where quality needs to be improved within the NHS. The issues relate to the way in which different cultures and working practices try to engage with each other.

In 2000, the Clinical, Audit and Effectiveness Network (CAEN) in southeast London responded to the need for dynamic support in implementing change across the local interfaces with the commissioning of an interface audit programme. The objective of this programme is to facilitate the implementation of change, in discrete areas of patient care, across the interfaces of local healthcare organisations and their partner organisations. The local clinical governance resource group (CGRG), on behalf of the partner organisations, manages the programme.

This study presents the findings of the evaluation of this programme (September 2000–June 2004), which includes five interface audit projects undertaken within the period. These are in the areas of stroke, coronary heart disease, antenatal education, deliberate self-harm and emergency contraception. All projects span two or more organisations, are multidisciplinary and involve primary and secondary healthcare teams.

The evaluation involves a retrospective analysis of the projects using quantitative and qualitative methods. Notwithstanding the very small sample size the findings of the evaluation provide significant insights that suggest modification of the project approach could enhance the programme's potential as a model for implementing change in this complex and dynamic environment.

Interface flow process audit: using the patient's career as a tracer of quality of care and of system organisation. Int J Integr Care. 2004 Apr-Jun; 4: e18.

Prof. Dr Jean-Pierre Unger, Dr Bruno Marchal, Dr Sylvie Dugas, Dr Marie-Jeanne Objectives

This case study aims to demonstrate the method's feasibility and capacity to improve quality of care. Several drawbacks attached to tracer condition and selected procedure audits oblige clinicians to rely on external evaluators. Interface flow process audit is an alternative method, which also favours integration of health care across institutions divide.

Methods

An action research study was carried out to test the feasibility of interface flow process audit and its impact on quality improvement. An anonymous questionnaire was carried out to assess the participants' perception of the process.

Results

In this study, interface flow process audit brought together general practitioners and hospital doctors to analyse the co-ordination of their activities across the primary-secondary interface. Human factors and organisational characteristics had a clear influence on implementation of the solutions. In general, the participants confirmed that the interface flow process audit helped them to analyse the quality of case management both at primary and secondary care level.

Conclusions

The interface flow process audit appears a useful method for regular in-service self-evaluation. Its practice enabled to address a wide scope of clinical, managerial and economical problems. Bridging the primary-secondary care gap, interface flow process audit's focus on the patient's career combined with the broad scope of problems that can be analysed are particularly powerful features. The methodology would benefit from an evaluation of its practice on larger scale.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1393263/>

A national survey of audit activity across the primary-secondary care interface

MP Eccles, M Deverill, E McColl, H Richardson

Centre for Health Services Research, University of Newcastle upon Tyne,

Abstract

Objective-To document the nature of audit activity at the primary-secondary care interface; to explore participants' experiences of undertaking such interface audit; to identify factors associated with these experiences; and to gather views on future interface audit activities.

Design-A three phase national survey by postal questionnaire with a cascade sampling approach.

Setting-England and Wales.

Results-Response rates were: 65% to the first questionnaire; 34% to the second questionnaire; and 45% to the third questionnaire. 56% of the audits covered some element of management of patients or disease; only 33% of the audits were within a single topic area. Most audits had more than one trigger: for 61% the trigger was a perceived problem; for 58% it was of mutual interest. Only 18% of audits were initiated collaboratively; doctors were the most frequent initiators (72%), and most audits (63%) involved collaborative groups convened specifically for the audit. 58% of groups had between three and eight members, 23% had 12 or more. Doctors were the most frequent group members. There was differential involvement of group members in various group tasks; the setting of guidelines was highly dominated by doctors. Of reportedly complete audits, only two fifths had implemented change and only a quarter had evaluated this change. There was widespread feeling of successful group work, with evidence of benefit in terms of the two sectors of care being able to consider issues of mutual concern. Levels of understanding of the group task and of participation were positively related to the duration of meetings. Joint initiation of audits facilitated greater understanding of the group task. Larger group sizes allowed primary and secondary carers to discuss issues of common concern; however, larger groups were more likely to experience disagreements. Having previously worked with group members increased trust and good working relations. The main lessons learnt from the experience included the importance of setting clear objectives and good communications between primary and secondary carers. Factors identified as important for future audit activity at the primary-secondary care interface included commitment, enthusiasm, time, and money.

Conclusions-Audit at the primary secondary care interface is taking place on a wide scale and has been an enjoyable experience for most of the respondents in this study.

Implications-Despite being a positive experience most audits stopped short of implementing change. Care must be taken to complete the audit cycle if audit at the primary-secondary care interface is to move beyond the roles of education and professional development and to fulfil its potential in improving the quality of care.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1393263/>