



The HITH Review

Volume 2, Number 4 - November 2000

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This sixth issue of the HITH Review includes a second article from the JAMA Users' Guide to the Medical Literature, information on the Cochrane Collaboration and two relevant Cochrane Systematic Reviews. There are also articles ranging from pharmacy issues to quality and outcomes.

Most of the articles listed in this review are available from libraries in Australia with some available from journal websites. Articles with an asterisk (★) can be requested from VCACI for educational or research purposes, if you are having difficulty obtaining a copy from your library. A charge will apply for each article requested.

Medline access is available from the NIH Web site at www.ncbi.nlm.nih.gov/PubMed/. As the articles are no longer listed on our website, please contact the VCACI if you would like us to conduct a search of our database on a particular topic of interest.

We would appreciate receiving your feedback on The HITH Review and would welcome any contributions you may wish to share with other practitioners. Please contact us if you wish to be included on our mailing list. The HITH Review is available free of charge in hard copy from the VCACI or can be accessed on the VCACI Web page. Those preferring to receive The HITH Review in electronic format should forward their e-mail address to us.

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Users' Guide to the Medical Literature

Christopher Fairley

Hayward RS. Wilson MC. Tunis SR. Bass EB. Guyatt G. **Users' guides to the medical literature. VIII. How to use clinical practice guidelines. A. Are the recommendations valid? The Evidence-Based Medicine Working Group.** *JAMA* 1995; 274:570-4. (<http://jama.ama-assn.org/>) ★

Wilson MC. Hayward RS. Tunis SR. Bass EB. Guyatt G. **Users' guides to the Medical Literature. VIII. How to use clinical practice guidelines. B. what are the recommendations and will they help you in caring for your patients?** *The Evidence-Based Medicine Working Group.* *JAMA.* 1995; 274:1630-2. (<http://jama.ama-assn.org/>) ★

We thought the next most useful topic to draw to readers attention, after assessing a randomised controlled trial, may be the ability to assess clinical practice guidelines. A simple method for evaluating clinical practice guidelines is provided in two articles published in this useful JAMA series.

The first article provides a useful and systematic approach to answering the question "are the recommendations valid?" The second article addresses the issue of "what are the recommendations and will they help you in caring for your patients?"

We think you will find the table of particular use. This table guides you through a series of questions, including; were all important options and outcomes clearly specified, was an explicit and sensible process used to identify, select and combine evidence and so on.

Cochrane Database of Systematic Reviews

Rachael Addicott

The Reviews can be accessed from the Clinicians Health Channel at <http://www.hcn.net.au/> or abstracts can be accessed at <http://cochrane.co.uk/>

The Cochrane Collaboration is an international network of individuals and institutions guided by six principles: collaboration, building on people's existing enthusiasm and interests, minimising duplication of effort, avoidance of bias, keeping up to date, and ensuring access.

The Cochrane Database of Systematic Reviews includes regularly updated full text systematic reviews of the effects of healthcare prepared by The Cochrane Collaboration. The reviews are presented either as:

- Regularly updated complete reviews prepared and maintained by Collaborative Review Groups.
- Protocols of reviews being currently prepared with expected date of completion.

Each issue of the Cochrane Review contains both new and updated reviews and protocols. The Collaboration uses explicit methods to produce reviews so they are useful to users and encourages comments and criticisms intended to improve the validity and usefulness of Cochrane Reviews.

Relevant Cochrane Reviews

Shepperd S, Iliffe S. **Hospital-at-home versus inpatient hospital care (Cochrane Review).** *In: The Cochrane Library, Issue 3, 2000. Oxford: Update Software.* ★

Summary

The objective of this review, which was updated on 26 October 1999, was to assess the effects of hospital-at-home compared with inpatient hospital care for patients from randomised trials. The outcomes were mortality, clinical complications, readmissions, cost (to the patient and family, general practice, the hospital and to the community), hospital days saved from the provision of hospital-at-home, discharge destination from hospital-at-home, general and disease specific health status, functional status, psychological well-being, patient satisfaction, carer satisfaction, carer burden, and staff views (including the satisfaction of doctors working in primary care).

Five studies were included, involving 866 patients. All studies were small and lacked power. No statistically significant differences were detected for patient health outcomes. Patients discharged early from hospital to hospital-at-home following elective surgery expressed greater satisfaction with care than those who remained in hospital. Carers however expressed less satisfaction with hospital-at-home compared with hospital care. Only one trial formally tested for a difference in cost, with no statistically significant difference detected for overall

health care costs.

The review found insufficient evidence to assess the effects of hospital-at-home on patient outcomes or the cost to the health service. The authors recommended that future research should clearly specify the type of service being provided, the specific patient groups treated, should measure health outcomes, patient and carer satisfaction, and costs and should be large enough to detect important differences.

Smith B, Appleton S, Adams R, et al. Home care by outreach nursing for COPD (Cochrane Review). In: The Cochrane Library, Issue 3, 2000. Oxford: Update Software. ★

Summary

The aim of this review of randomised control trials, updated on 31 May 2000, was to evaluate the effectiveness of outreach respiratory health care worker programs for patients with Chronic Obstructive Pulmonary Disease (COPD). Outcomes included improving lung function, exercise tolerance and health related quality of life of patient and carer, and reducing mortality and hospital service utilisation.

The intervention was an outreach nurse visiting patients in their homes, providing support, education, monitoring patient status and providing liaison with physicians. Interventions that used nurse practitioners who provided therapeutic intervention were also included.

Four relevant studies were found. Three assessed mortality following twelve months of care (n=96, 152 and 301), and one after seven months (n=75). Meta-analysis demonstrated that mortality was not significantly reduced by the intervention, Peto Odds Ratio 0.72 (95 % confidence interval 0.43-1.21). Post hoc subgroup analysis suggested that mortality was reduced by the outreach nursing program for patients with less severe disease. Significant improvements in health related quality-of-life were reported in one study in moderate COPD, but not in a study of patients with severe disease. No changes in lung function or exercise performance were found in the studies where data were available. Hospital admissions were reported in only one study for patients with severe disease and no benefit was observed.

Patients with moderate COPD may have mortality and health related quality of life gains from a nursing outreach program, but there are no data about reductions in hospital utilisation. Patients with severe COPD do not appear to have benefit from such programs and one large study found no reduction in hospital admissions in such patients.

HITH Pharmacy Articles

Lisa Demos

ASHP. ASHP guidelines on the safe use of automated compounding devices for the preparation of parenteral nutrition admixtures. Am J Health-Syst Pharm 2000; 57:1343-8. ★

Summary

These American Society of Hospital Pharmacists (ASHP) guidelines focus on parenteral nutrition admixtures but the safety issues are more broadly applicable. In the USA approximately 65% of hospitals use automated compounding devices for parenteral nutrition admixtures. The ASHP recommends that the guidelines be used in conjunction with the ASHP Guidelines on Quality Assurance for Pharmacy-Prepared Sterile Products and device manufacturers' instruction and training manuals.

Bing CM. Reference on the extended stability of injectable drugs for home care. Am J Health-Syst Pharm 2000; 57:1312-3. ★

Summary

This article merely serves to inform us that the American Society of Hospital Pharmacists is planning to release a reference on the *Extended stability for Parenteral Drugs* in late 2000. This list of 125 drug monographs will focus on drugs used in alternative sites and will include data for some of the devices specifically used in homecare.

Thompson M. Scott M. Thornton A. Honeywell M. Development of a pharmacy residency program

in home care. *Am J Health-System Pharm.* 2000;57:1786-1790. ★

Summary

The article describes a 12-month residency-training program developed by a college of pharmacy in conjunction with a home care company.

The program involves one- to eight-week rotations (e.g. acute care, paediatric care, pain management, total parenteral nutrition, antibiotic therapy, chemotherapy, hydration therapy, multiple sclerosis, patient education and counselling, infusion control devices, home visits and administration and practice management) with the objective of achieving skills in direct patient care, drug information and drug policy development, and practice management. Residents gain experience in pharmaceutical services, research, care planning and monitoring and by undertaking the program are able to function as a competent clinician and manager.

Triller DM, Hamilton RA, Briceland LL, et al. **Home care pharmacy: Extending clinical pharmacy services beyond infusion therapy.** *Am J Health-Syst Pharm* 2000; 57: 1326-31. ★

Summary

Describes the experiences of a pilot project to evaluate the opportunities beyond infusion therapy for clinical pharmacy services to an established home health care agency. Many of the patients were elderly (mean age 70 years), took a substantial number of medications and were at risk for drug-related problems and suboptimal therapy. The main pharmacy services provided were drug information, and pharmacotherapy assessments. Numerous opportunities were identified to improve patient care including:

- evaluating the appropriateness of cisapride therapy,
- weekly pharmacist home visits for patients with chronic heart failure to improve drug therapy,
- a pain management initiative involving education of staff and improved care plans and communication systems,
- improved adverse drug reaction reporting and input into clinical pathways and policies relating to medication use.

DVT - Clinical Pathways and Guidelines

Kaylene Fiddes

Gorski L. **A clinical pathway for Deep Vein Thrombosis.** *Home Healthcare Nurse* 2000; 18:451-461. ★

Summary

This article describes an American home care agency's experience in the development, implementation and evaluation of a clinical pathway for deep vein thrombosis (DVT). This has been designed for patients on home care services receiving low molecular weight heparin (LMWH). Patient self-administration is the ultimate goal.

The article provides a brief description of the development process and the extensive staff education process required. The pathway covers expected outcomes in focused areas including, assessment, activity, treatments, medication, tests and patient education.

The pathway was evaluated at six months and one year. The evaluation included patient demographics, percentages of patients eligible for the pathway and sources of referral. Just under half of the patients admitted to their service with a primary diagnosis of DVT were eligible for the pathway. The main reason for ineligibility was that LMWH was not prescribed. Two distinct patient groups were found from the LOS data- attributed to whether or not the patient was able to learn to self-inject. Pathway analysis found no clinical complications but did find inconsistency with patient teaching processes. The pathway and a patient teaching flowchart are included in the article.

commentary

This article highlights some key points about pathway development and implementation. This includes the need for an outcomes based pathway as opposed to a tasks checklist, the need for ongoing staff education, recognising the value in planning for and performing variance monitoring, and provision of ongoing feedback of the variance analysis to health professionals. Any quality improvement activities as a result of the variance analysis would have been useful to know. The article did not provide information on medical reception

to the pathway or the variance analysis, despite noting that the service covered many different physicians and therefore individual practices. It would also be interesting to know the time and resources allocated to develop, implement, evaluate and maintain the pathway since this an issue for many organisations. The patient teaching flowchart is a useful resource for those caring for patients with a DVT.

Carroll P. Physician group releases DVT guidelines. *Home Healthcare Nurse* 2000; 18:461. ★

This short article provides a summary and the author's viewpoint of the recently released guidelines for home treatment of deep vein thrombosis from the perspective of a home care nurse. The article briefly describes the components covered in the guidelines and cites the most valuable for home care nurses as the section covering patient or caregiver counselling. The author criticises the guidelines for listing only three references and not mentioning the role in home care agencies providing ongoing monitoring and patient teaching.

The guidelines referred to in this article are available from the American Academy of Home Care Physicians website listed in the current edition of VCACI Newsletter.

Quality, Indicators and Outcomes

Nick Santamaria

Collopy BT. Clinical indicators in accreditation: an effective stimulus to improving patient care. *Int. J. Qual Health Care* 2000; 12:211-216. ★

Summary

This article describes the evolution and outcomes of the Care Evaluation Program (CEP) which set out to develop and implement clinical performance measures. The CEP was established by Australian Council on Healthcare Standards (ACHS) and operated between 1993 to 1998. The process for developing clinical indicators and their role within the hospital accreditation process are discussed. Over 200 indicators have been developed by various medical disciplines for the CEP and these have been used at a number of levels including; within hospital monitoring and for between hospital com-

parison. The author suggests that the total number of indicators may need to be reduced, however, the emerging area of ambulatory care is an area where more clinical indicators may need to be developed.

Barrell J. Apples to apples. The complexities of health care outcomes reporting. *Infusion* 2000; 6:15-24. ★

Summary

This article presents the issue of health care outcomes reporting in the context of the American health care system. The legislative and political background of outcomes reporting is discussed and the relative strengths and weaknesses of different reporting systems are presented. Of particular value is the categorisation that is provided of types of outcome indicator together with specific examples of measures. The author provides a concise case for a greater emphasis on patient perception of quality health care and longer-term functional outcome. This is particularly relevant in countries where the emphasis is moving more towards the effective management of chronic illness. Specific examples are provided of outcomes based initiatives in both the acute hospital and the home care settings.

commentary

The above articles by Collopy and Barrell are an interesting combination due the differing approaches taken to the issue of outcome indicators and their relation to quality. The Collopy article describes a careful and well-executed approach to developing and using clinical indicators as part of the ACHS accreditation process. The indicators are process and outcome focussed and mainly designed for the acute hospital sector. By contrast, the Barrell article argues that the approach described by Collopy is only one component of the effective use of outcome measures in the American context. She argues for the need to significantly expand our view of outcomes to incorporate patient focussed outcomes as well as provider and organisation focussed indicators.

Remembering that there are significant differences between the Australian and American healthcare systems, Barrell brings a consumer (patient and insurer) driven perspective to this issue. This highlights the outcome measures used by Collopy as being at the organisation/clinici-

cian point of the continuum in monitoring health care quality. Barrell also makes the valuable observation that as a country moves its health care focus from the management of acute disease to a greater emphasis on chronic disease, the nature and use of outcome indicators needs to evolve accordingly.

Plotkin K , Roche J. **Linking interventions to outcomes.** *Home Healthcare Nurse*, 2000; 18:443-49. ★

Summary

This article explores conducting well-designed nursing research into patient outcomes in the home health care setting. The authors focus on both the structure and process of home care programs. Outcomes are divided into intermediate and end result where intermediate outcomes are defined as those that are necessary prerequisites to successful end result outcomes. A clear distinction is made between performance improvement processes and formal outcomes research projects. A useful diagram is included to assist the reader with this distinction.

A number of methodological issues are covered including; the designs and strengths of previous research in the area, appropriate designs, definitional aspects of outcomes research and sample size considerations. The authors also strongly support collaboration between home nursing programs and universities in conducting outcomes research.

Other related articles

Andrusko-Furphy, K and C. Arnold. **Outcomes. Burden, benefit or bust?** *Infusion*, 2000; 6(7):45-50. ★

Friedman, M. **Improving organizational performance standards: Data aggregation and analysis.** *Home Healthcare Nurse*, 2000; 18(7): 438-41. ★

Friedman, M. **Performance improvement: The final phase of an organization's performance.** *Home Healthcare Nurse*, 2000; 18(8): 505-6. ★

Chemotherapy at home

Lisa Demos

Rischin D, White MA, Matthews JP et al. **A randomised crossover trial of chemotherapy in the home: Patient preferences and cost analysis.** *Med J Aust* 2000; 173:125-7. ★

Summary

A trial was undertaken in 20 patients suitable to receive chemotherapy at home. Patients were randomised to either receive their first treatment at home or hospital and then the alternative setting for the second treatment. The main outcome measures were patient preference and costs.

Home based chemotherapy was the preferred option by the 20 patients ($p < 0.0001$). There were no problems nominated by patients for home-based treatment and there were no significant complications associated with home administration. However home-based treatment resulted in an increase of \$83 for each chemotherapy treatment ($p = 0.0002$) compared to hospital treatment.

commentary

This small Australian study does not provide information on the type or range of chemotherapy administered to patients or the patient population. The cost comparisons presented are from the hospital perspective. The authors' note that the costs related to patient records, allied health, medical staff and pharmacy were excluded from the assessment.

The small sample size makes broader applicability difficult. Although the patient preferences for home chemotherapy appear favourable for this patient sample, there was a significant increase in costs associated with chemotherapy at home.

Is Tele-home Care Cost Effective?

Nick Santamaria

Johnston, B., L . Wheeler, J. Deuser, K. Sousa. **Outcomes of the Kaiser Permanente Tele-Home health research project.** *Arch Fam Med* 2000; 9:40-45. ★

Summary

This study compares quality of life, medication compliance, patient satisfaction and cost outcomes in two groups of home care patients. The patient population was mixed and included CHF, COPD, CVA, cancer, diabetes, anxiety and wound care. The intervention group received standard home care plus a video system to enable 24-hour remote consultation and monitoring. Whilst no difference was detected between the groups on the main outcome measures of quality of life, patient satisfaction or medication compliance, there was a reduction in the direct cost of home care in the intervention group once the infrastructure costs were removed.

The authors conclude that tele-home care is cost effective and well accepted by patients. It is unfortunate that the study population was relatively small and presumably this is the reason that the diagnostic categories were not analysed separately. It is therefore not possible to determine if one diagnostic group benefited from the intervention more or less than the others.

Cost savings in a home intravenous antibiotic program

Nick Santamaria

Dalovisio, JR, Juneau J, Baumgarten K, Kateiva J. Financial impact of a home intravenous antibiotic program on a Medicare managed care program. Clin Inf Dis 2000; 30:639-42. ★

Summary

This study describes the financial effect of the introduction of a home intravenous antibiotic (HIVA) program in the American managed care setting. Costs were calculated on the basis of daily direct variable costs between inpatient facilities, nursing facilities and home care. A total of 66 treatment courses spanning 1542 patient days of therapy formed the basis of the calculation. The authors report that they achieved a saving of between \$646,000 and \$834,000 through the HIVA initiative whilst maintaining complication rates on or below reported incidence rates for HIVA treatment.

Do you care for patients at risk of falling at home?

Kaylene Fiddes

Enevold G, Fleming N. Fall prevention program for community-dwelling older adults and their caregivers. Home Healthcare Nurse Manager. 2000; 4:22-28. ★

Summary

This article describes a program aimed at preventing falls in older adults in their homes. An overview of the extent and consequences of this problem covers statistics on incidence and costs of falls-related injuries. Factors, both internal and external, contributing to falls are also covered. Previous research on other falls prevention programs are noted. This program comprises of a self-administered home safety fall prevention checklist and an audio-visual falls prevention education program. This is presented at the first home visit by a home healthcare nurse and fall risk hazards are addressed. The article includes the questionnaire used to identify risks and some of the slides used for education.

commentary

This is a descriptive article, which acknowledges that this program has not been validated or tested for reliability. They note however that other research indicates that these types of programs may reduce or prevent falls of older adults in their homes. This article does not mention whether or not any type of evaluation has been done or the number of patients they have had on this program. A table of tips on reducing environmental and internal fall hazards in the homes of adults is provided. This, along with the questionnaire, would be helpful for HITH nurses caring for older adults.

Published Abstracts from the Literature

Davies L, Wilkinson M, Bonner S, et al. **"Hospital at home" versus hospital care in patients with exacerbations of chronic obstructive pulmonary disease: Prospective randomised controlled trial.** *Br Med J* 2000; 321: 1265-8. ★

Objectives: To compare "hospital at home" and hospital care as an inpatient in acute exacerbations of chronic obstructive pulmonary disease.

Design: Prospective randomised controlled trial with three months' follow up.

Setting: University teaching hospital offering secondary care service to 350 000 patients.

Patients: Selected patients with an exacerbation of chronic obstructive pulmonary disease where hospital admission had been recommended after medical assessment.

Interventions: Nurse administered home care was provided as an alternative to inpatient admission. **Main outcome measures:** Readmission rates at two weeks and three months, changes in forced expiratory volume in one second (FEV₁) from baseline at these times and mortality.

Results: 583 patients with chronic obstructive pulmonary disease referred for admission were assessed. 192 met the criteria for home care, and 42 refused to enter the trial. 100 were randomised to home care and 50 to hospital care. On admission, FEV₁ after use of a bronchodilator was 36.1% (95% confidence interval 2.4% to 69.8%) predicted in home care and 35.1% (6.3% to 63.9%) predicted in hospital care. No significant difference was found in FEV₁ after use of a bronchodilator at two weeks (42.6%, 3.4% to 81.8% versus 42.1%, 5.1% to 79.1%) or three months (41.5%, 8.2% to 74.8% versus 41.9%, 6.2% to 77.6%) between the groups. 37% of patients receiving home care and 34% receiving hospital care were readmitted at three months. No significant difference was found in mortality between the groups at three months (9% versus 8%).

Conclusions: Hospital at home care is a practical alternative to emergency admission in selected patients with exacerbations of chronic obstructive pulmonary disease.

Egerer G, Goldschmidt H, Salwender H et al. **Efficacy of continuous infusion of ceftazidime for patients with neutropenic fever after high-dose chemotherapy and peripheral blood stem cell transplantation.** *Intern J Antimicrob Agents* 2000; 15: 119-23. ★

This prospective study evaluates the safety of a continuous infusion of ceftazidime in neutropenic patients after HDCT and peripheral blood stem cell transplantation (PBSCT). From September 1995 to October 1999, 81 patients received a 2 g intravenous bolus of ceftazidime, followed by a 4 g continuous infusion per 24 h of ceftazidime using a portable infusion pump. If the fever persisted for 72 h, a glycopeptide antibiotic was added. The median patients' age was 44 years. Fifty-two of 81 patients (64%) responded to the monotherapy with ceftazidime. After addition of a glycopeptide antibiotic, a further 17 patients (21%) became afebrile. The causes of fever were septicaemia in 11 patients, pneumonia in two and fever of unknown origin in 68 patients. Fifty-eight episodes (72%) were successfully managed by outpatient treatment alone. The reason for admission to hospital was the change to imipenem/cilastin, which had to be administered three times per day (12 patients), severe mucositis with parenteral nutrition (eight patients), or a Karnovsky index less than or equal to 60 (three patients). In six of these cases, outpatient treatment was resumed after a brief period of in-patient care. In no case was the treatment terminated because of failure of the pump. With daily follow-up and close monitoring for development of complications, it is possible to discharge patients earlier after HDCT and PBSCT, thereby decreasing costs.

Young JB, Moen EK. **Outpatient parenteral inotropic therapy for advanced heart failure.** *J Heart & Lung Transplantation* 2000; 19: S49-S57. ★

Background: Patients with advanced heart failure generally have hemodynamic perturbation characterized by low cardiac output and high ventricular filling pressures. This creates a clinical milieu with profound symptomatology that includes weakness, fatigue, and fluid-retention states causing peripheral edema, mesenteric congestion, and dyspnea syndromes. Great morbidity including hospital admissions and readmissions as well as high mortality rates ensue. Though medication and/or surgical intervention often attenuate heart failure symptomatology, morbidity, and mortality, some patients reach more advanced stages despite aggressive maneu-

vers. Indeed, patients presenting with acute decompensation of chronic congestive heart failure frequently receive parenteral inotropic drugs during their hospitalization with clinical improvement. Because these agents generally increase cardiac output and reduce pre-load and afterload, they can be lifesaving. Some patients, however, have symptomatic and hemodynamic rebound to worsened heart failure states during or shortly after inotrope weaning.

Methods: It was, then, a logical step to segue from acute inpatient inotrope infusion to long-term administration of these drugs in the outpatient setting when patients were dependent on these agents. Dopamine, dobutamine, and milrinone are all generally available inotropes that have been used singly or in combination in a chronic outpatient infusion setting.

Conclusions: Data from a few small clinical trials and anecdotal case experience suggest that these drugs result in both hemodynamic and clinical improvement that is generally sustained during chronic administration, and even noted long after discontinuation of infusions in some patients. Some reports have suggested that intermittent infusion therapy in outpatients (so-called pulsed therapy) is effective in attenuating congestive heart failure symptoms long term, with more data supporting chronic infusion of these agents. Though questions regarding safety of these agents have been raised, a reasonable compendium of data published to date supports the contention that inotropic drugs used in this fashion ameliorate symptoms. Legitimate concern may be raised regarding exacerbation of arrhythmias with subsequent sudden cardiac death syndrome; however, in severely symptomatic heart failure patients, the trade-off between symptomatic amelioration and the chance of sudden cardiac death may be worthwhile. Unfortunately, precise guidance regarding the best drug, dose, optimal administration technique, weaning protocol, and actual risk/benefit ratio are not well characterized. Practice as been guided, in large part, by anecdotal experience. However, it appears that chronic or pulsed outpatient parenteral inotropic infusion therapy is frequently prescribed and that this treatment option is an effective alternative for carefully selected patients with severely symptomatic and advanced heart failure. Formulating optimal protocols for home inotropic drug infusion therapy by conducting properly designed clinical trials will be an essential endeavor.

List of Medline, Cinahl and other published articles

Ambulatory Infusion Programs

Nolet BR. Office- and clinic-based ambulatory infusion programs. *J Intraven Nursing* 2000; 23:S32-41. ★

Anaphylaxis

Jowett NI. Speed of treatment affects outcome in anaphylaxis. *Br Med J* 2000; 321: 571. ★

Anticoagulation

Fitzmaurice DA, Hobbs R, Muray ET et al. Oral anticoagulation management in primary care with the use of computerized decision support and near-patient testing. *Arch Intern Med* 2000; 160:2343-8. ★

Heidinger KS, Bernardo A, Taborski U et al. Clinical outcome of self-management of oral anticoagulation in patients with atrial fibrillation or deep vein thrombosis. *Aust J Hosp Med* 2000; 98:287-93. ★

Chemotherapy

Rischin D, White MA, Matthews JP et al. A randomised crossover trial of chemotherapy in the home: Patient preferences and cost analysis. *Med J Aust* 2000; 173:125-7. ★

Clinical Coding

Sweeney J, Heaton C. Interpretations and variations of ISO 9000 in acute health care. *Intern J Quality Health Care* 2000; 12:203-9. ★

Clinical Indicators

Collopy BT. Clinical indicators in accreditation: An effective stimulus to improve patient care. *Intern J Quality Health Care* 2000; 12:211-6. ★

Cost

Chiu L, Tang K, Shyu W et al. Cost analyses of home care and nursing home services in the southern Taiwan area. *Public Health Nursing* 2000; 17:325-35.

Dalovisio JR, Juneau J, Baumgarten K et al. Financial impact of a home intravenous antibiotic program on a Medicare managed care program. *Clin Infect Dis* 2000; 30:639-42. ★

Shepperd S, Iliffe S. Hospital-at-home versus inpatient hospital care (Cochrane Review). In: *The Cochrane Library, Issue 3, 2000. Oxford: Update Software.* ★

Education

Nussbaum GB. Educating the home health aide about the patient in pain. *Home Healthcare Nurse Manager* 2000; 4:8-10. ★

Ethics

Ladd RE, Pasquerella L, Smith, S. What to do when the end is near: Ethical issues in home health care nursing. *Public Health Nursing* 2000; 17:103-10. ★

Falls

Enevold G, Fleming Courts N. Fall prevention program for community-dwelling older adults and their caregivers. *Home Healthcare Nurse Manager* 2000; 4:22-8. ★

Febrile neutropenia

Egerer G, Goldschmidt H, Salwender H et al. Efficacy of continuous infusion of ceftazidime for patients with neutropenic fever after high-dose chemotherapy and peripheral blood stem cell transplantation. *Intern J Antimicrob Agents* 2000; 15:119-23. ★

Inotropic Therapy

Rapezzi C, Bracchetti G, Branzi A, et al. The case against outpatient parenteral inotropic therapy for advanced heart failure. *J Heart Lung Transpl* 2000; 19:S58-63. ★

Young JB, Moen EK. Outpatient parenteral inotropic therapy for advanced heart failure. *J Heart Lung Transpl* 2000; 19:S49-57. ★

Nursing

Tyburski LA. Transition from acute care to home care nursing: How can management help? *Home Healthcare Nurse Manager* 2000; 4:17-9. ★

Outcomes and Performance Standards

Andrusko-Furphy KT, Arnold C. Outcomes. Burden, benefit or bust? *Infusion* 2000; 6: 45-50. ★

Barrell J. Apples to apples. The complexities of health care outcomes reporting. *Infusion* 2000; 6:15-24. ★

Friedman MM. Improving organizational performance standards: Data aggregation and analysis. *Home Healthcare Nurse* 2000; 18:438-41. ★

Friedman MM. Performance improvement: The final phase of an organization's performance. *Home Healthcare Nurse* 2000; 18: 505-6. ★

Humphrey CJ. Measuring outcomes and satisfaction is increasingly important to consumers. *Home Healthcare Nurse Manager* 2000; 4:2. ★

Plotkin K, Roche J. Linking interventions to outcomes. *Home Healthcare Nurse* 2000; 18: 443-9. ★

Pain Management

Ackerman CJ, Turkoski B. Using guided imagery to reduce pain and anxiety. *Home Healthcare Nurse* 2000; 18:524-30. ★

Paediatrics

Fanurik D, Koh JL, Schmitz ML. Distraction techniques combined with EMLA: Effects on IV insertion pain and distress in children. *Children's Health Care* 2000; 29:87-101. ★

Pharmacy

ASHP. ASHP guidelines on the safe use of automated compounding devices for the preparation of parenteral nutrition admixtures. *Am J Health-Syst Pharm* 2000; 57:1343-8. ★

Bing CM. Reference on the extended stability of injectable drugs for home care. *Am J Health-Syst Pharm* 2000; 57:1312-3. ★

Sen SS, Thomas III J. Assessment of a patient-based pharmaceutical care scale. *Am J Health-Syst Pharm* 2000; 57:1592-8. ★

Thompson M, Scott M, Thornton A, et al. Development of a pharmacy residency program in home care. *Am J Health-Syst Pharm* 2000; 57:1786-90. ★

Triller DM, Hamilton RA, Briceland LL, et al. Home care pharmacy: Extending clinical pharmacy services beyond infusion therapy. *Am J Health-Syst Pharm* 2000; 57:1326-31. ★

Respiratory Diseases

Smith B, Appleton S, Adams R, et al. Home care by outreach nursing for COPD (Cochrane Review). In: *The Cochrane Library, Issue 3, 2000*. Oxford: Update Software. ★

Self-management

Stover B. Training the client in self-management of hemophilia. *J Intraven Nursing* 2000; 23:304-9. ★

Telemedicine

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