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contents

In this issue of the HITH Review we have selected four abstracts from the recent published literature. The first two abstracts from the Journal of the American Geriatric Society relate to elderly patients but are applicable to other age groups. The abstract from a Canadian article on the societal cost of cystic fibrosis care has been included as well as an article on Fabry disease. For those interested in the treatment of Fabry disease two previous articles on Agalsidase-beta therapy were included in the May 2006 edition of the HITH Review. Apart from these articles we would also like to draw your attention to the British Thoracic Society guideline on HITH for COPD which was recently published in Thorax.

Most of the articles listed in this review are available from libraries in Australia or journal websites. Copies of articles with an asterisk (★) can be requested from ACA if required for educational or research purposes by using the order form available on the website.

We hope you find the HITH Review to be a valuable resource. Any contributions or feedback is welcome.

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Relevant abstracts from Medline and Cinahl

Home IV Antibiotics

Cox AM, Malani PN, Wiseman SW et al. Home intravenous antimicrobial infusion therapy: a viable option in older adults. *J Am Geriatr Soc 2007; doi:10.1111/j.1532-5415.2007.01133.x* ★

Objectives: To determine whether older adults and younger adults are equally able to administer home intravenous antimicrobial infusion therapy (home IV antimicrobials) without intensive support from home care agencies.

Design: Retrospective cohort study.

Setting: Veterans Affairs Ann Arbor Healthcare System, a 100-bed tertiary care medical center.

Participants: All patients who received home IV antimicrobials from July 1, 2000, through December 31, 2003.

Measurements: Demographic data, underlying medical conditions, indications for therapy, antimicrobial agents administered, concomitant medications, frequency of patient visits and phone calls, adverse events, and outcomes of infections.

Results: A total of 205 patients received 231 courses of home IV antimicrobials, with 107 courses in patients aged 60 and older and 124 courses in patients younger than 60. For both groups, the most common indication for therapy was osteoarticular infections, and the predominant pathogens were *Staphylococcus aureus* and coagulase-negative *Staphylococcus*. Older patients were significantly more likely than younger patients to require the assistance of family members to help with the infusion and were more likely to be seen in urgent care or to call the infectious diseases pharmacist or physicians with questions. Overall, clinical outcomes and numbers of adverse events were similar in both groups, with the exception of nephrotoxicity, which was greater in the older group (*P=0.02*).

Conclusion: With appropriate support from a hospital-based home IV antimicrobials therapy team, home IV antimicrobial appears to be a viable option for older adults.

Satisfaction with Home Care

Leff B, Burton L, Mader S et al. Satisfaction with hospital at home care. *J Am Geriatr Soc 2006; 54:1355-63.* ★

Objectives: To examine differences in satisfaction with acute care between patients who received treatment in a physician-led substitutive Hospital at Home program and those who received usual acute hospital care.

Design: Survey questionnaire of participants in prospective, nonrandomized clinical trial.

Setting: Three Medicare-managed care health systems and a Department of Veterans Affairs Medical Center.

Participants: Two hundred fourteen community-dwelling elderly patients who required acute hospital admission for community-acquired pneumonia, exacerbation of chronic heart failure, exacerbation of chronic obstructive pulmonary disease, or cellulitis, 84 of whom were treated in Hospital at Home and 130 in the acute care hospital.

Intervention: Treatment in a Hospital at Home model of care that substitutes for treatment in an acute care hospital.

Measurements: A 40-question survey measuring nine domains of care for patients and a 37-question survey measuring eight domains of care for family members.

Results: A higher proportion of patients were satisfied with treatment in Hospital at Home than with the acute care hospital in eight of nine domains, and this difference was statistically different in four domains. Hospital at Home patients were more likely than acute hospital patients to be satisfied with their physician (adjusted odds ratio [AOR]=3.84, 95% confidence interval (CI)=1.32–11.19), comfort and convenience of care (AOR=6.52, 95% CI=1.97–21.56), admission processes (AOR=5.90, 95% CI=2.21–5.76), and the overall care experience (AOR=2.98, 95% CI=1.08–8.21). Family members of patients treated in Hospital at Home were also more likely to be satisfied with multiple domains of care.

Conclusion: Hospital at Home care was associated with greater satisfaction than acute hospital inpatient care for patients and their family members. These

findings support further dissemination of the Hospital at Home care model.

Fabry Disease

Banikazemi M, Bultas J, Waldek S et al. Agalsidase-beta therapy for advanced Fabry disease. *Ann Intern Med 2007; 146:77-86.* ★

Background: Fabry disease (α-galactosidase A deficiency) is a rare, X-linked lysosomal storage disorder that can cause early death from renal, cardiac, and cerebrovascular involvement.

Objective: To see whether agalsidase beta delays the onset of a composite clinical outcome of renal, cardiovascular, and cerebrovascular events and death in patients with advanced Fabry disease.

Design: Randomized (2:1 treatment-to-placebo randomization), double-blind, placebo-controlled trial.

Setting: 41 referral centers in 9 countries.

Patients: 82 adults with mild to moderate kidney disease; 74 of whom were protocol-adherent.

Intervention: Intravenous infusion of agalsidase beta (1 mg per kg of body weight) or placebo every 2 weeks for up to 35 months (median, 18.5 months).

Measurements: The primary end point was the time to first clinical event (renal, cardiac, or cerebrovascular event or death). Six patients withdrew before reaching an end point: 3 to receive commercial therapy and 3 due to positive or inconclusive serum IgE or skin test results. Three patients assigned to agalsidase beta elected to transition to open-label treatment before reaching an end point.

Results: Thirteen (42%) of the 31 patients in the placebo group and 14 (27%) of the 51 patients in the agalsidase-beta group experienced clinical events. Primary intention-to-treat analysis that adjusted for an imbalance in baseline proteinuria showed that, compared with placebo, agalsidase beta delayed the time to first clinical event (hazard ratio [HR] 0.47, 95% CI 0.21 to 1.03; P = 0.06). Secondary analyses of protocol-adherent patients showed similar results (HR 0.39, CI 0.16 to 0.93; P = 0.034). Ancillary subgroup analyses found larger treatment effects in patients with baseline estimated glomerular filtration rates greater than 55 mL/min per 1.73 m^2 (HR 0.19, CI 0.05 to 0.82; P = 0.025) compared with 55 mL/min per 1.73 m^2 or less (HR 0.85, CI 0.32 to 2.3; P = 0.75) (formal test for interaction, P = 0.09). Most treatment-related adverse events were mild or moderate infusion-associated reactions, reported by 55% of patients in the agalsidase-beta group and 23% of patients in the placebo group.

Limitations: The study sample was small. Only one third of the patients experienced clinical events, and some patients withdrew before experiencing any event.

Conclusions: Agalsidase-beta therapy slowed progression to the composite clinical outcome of renal, cardiac, and cerebrovascular complications and death compared with placebo in patients with advanced Fabry disease. Therapeutic intervention before irreversible organ damage may provide greater clinical benefit.

Cost of Cystic Fibrosis Care

Guerriere DN, Tullis E, Unger WJ et al. Economic burden of ambulatory and home-based care for adults with cystic fibrosis. *Treatments Resp Med 2006; 5:351-9.*

Objective: The purpose of this study was to measure costs associated with care for adults with cystic fibrosis, from a societal perspective.

Methods: Over a 4-week period, 110 participants completed the Ambulatory and Home Care Record, a self-administered data collection instrument that measures costs to the health system, costs to employers, care recipients' direct out-of-pocket expenditures, and time costs borne by care recipients and their family caregivers. Health system costs were based on the costs incurred through expenditures on physicians, hospital clinics, pharmaceuticals, and home care agencies. Out-of-pocket costs were obtained using self-reports by care recipients, and time losses were valued using the human capital approach.

Results: The annual mean societal costs of ambulatory care for cystic fibrosis was $Can29,885 per care recipient (year 2002 value). Time losses incurred by care recipients and their family caregivers accounted for the majority (72%) of these costs, and system costs accounted for the second highest percentage of costs

(21%). Although almost all participants (109) recorded out-of-pocket expenditures, these costs accounted for only a small proportion (3%) of total costs.

Conclusion: Measuring societal costs is necessary for practitioners, managers, and policy decision-makers, to ensure that care recipients and their families receive the necessary resources to provide care.

List of Medline, Cinahl and other relevant published articles

Adverse Events

Madigan EA. A description of adverse events in home healthcare. *Home Healthcare Nurse 2007; 25:191-7.*★

Anaphylaxis

Sheikh A, Shehata Y, Brown SGA et al. Adrenaline for the treatment of anaphylaxis with and without shock (Protocol). *The Cochrane Library 2007; 1. DOI:10.1002/14651858.CD006312* ★

Cellulitis

Auwaerter PG. Cellulitis, skin abscesses, and community-acquired methicillin-resistant staphylo-coccus aureus. *Adv Stud Med 2006; 6:62-70.* ★

Chronic Heart Failure

Bhat G. Predictors of clinical outcome in advanced heart failure patients on continuous intravenous milrinone therapy. *ASAIO Journal 2006; 52:677-81.*★

Cripe LH, Barber BJ, Spicer RL et al. Outpatient continuous inotrope infusion as an adjunct to heart failure therapy in Duchenne muscular dystrophy. *Neuromuscular Disorders 2006; 16:745-8.* ★

Gottlieb S, Blum K. Coordinated care, telemonitoring, and the therapeutic relationship: heart failure management in the United States. *Dis Manage Health Outcomes 2006; 14(Suppl1):29-31.*★

Martínez A, Everss E, Rojo-Álvarez J et al. A systematic review of the literature on home monitoring for patients with heart failure. *J Telemed Telecare 2006; 12:234-41.*★

Straub C, Haas A-K, Mex J. Telemedicine in heart disease: Role of remote patient management in guideline-based heart failure care. Future positioning of health insurance companies. *Dis Manage Health Outcomes 2006; 14(Suppl 1):15-8.* ★

van Montfort APWP, van der Helm MHJ. Telemonitoring of patients with chronic heart failure. *Dis Manage Health Outcomes 2006; 14(Suppl 1):33-5.* ★

Competency

Romeo C. Caring for culturally diverse patients: one agency's journey toward cultural competence. *Home Healthcare Nurse 2007; 25:206-11.*★

COPD

British Thoracic Society Guideline Development Group, Intermediate care - hospital-at-home in chronic obstructive pulmonary disease: British Thoracic Society guideline. *Thorax 2007; 62:200-10.* ★

Davison AG, Monaghan M, Brown D et al. Hospital at home for chronic obstructive pulmonary disease: an integrated hospital and community based generic intermediate care service for prevention and early discharge. *Chronic Resp Dis 2006; 3:181-5.* ★

Cystic Fibrosis

Guerriere DN, Tullis E, Unger WJ et al. Economic burden of ambulatory and home-based care for adults with cystic fibrosis. *Treatments Resp Med 2006; 5:351-9.*

Duchenne Muscular Dystrophy

Cripe LH, Barber BJ, Spicer RL et al. Outpatient continuous inotrope infusion as an adjunct to heart failure therapy in Duchenne muscular dystrophy. *Neuromuscular Disorders 2006; 16:745-8.* ★

Ethnic Diverse Patients

Romeo C. Caring for culturally diverse patients: one agency's journey toward cultural competence. *Home Healthcare Nurse 2007; 25:206-11.*

Fabry Disease

Banikazemi M, Bultas J, Waldek S et al. Agalsidase-beta therapy for advanced Fabry disease. *Ann Intern Med 2007; 146: 77-86.*

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Cox AM, Malani PN, Wiseman SW et al. Home intravenous antimicrobial infusion therapy: a viable option in older adults. *J Am Geriatr Soc 2007; doi:10.1111/j.1532-5415.2007.01133.x*

Locher JL, Kilgore ML, Morrisey MA et al. Patterns and predictors of home health and hospice use by older adults with cancer. *J Am Geriatr Soc 2006; 54:1206-11.*

Scott LM, Sharkey C. Putting the pieces together. Private-duty home healthcare and geriatric care management: one home health agency's model. *Home Healthcare Nurse 2007; 25:167-72.*

Smith KL, Soriano TA, Boal J. Brief communication: national quality-of-care standards in home-based primary care. *Ann Intern Med 2007; 146:188-92.*

Infections and Antibiotic Therapy

Cox AM, Malani PN, Wiseman SW et al. Home intravenous antimicrobial infusion therapy: a viable option in older adults. *J Am Geriatr Soc 2007; doi:10.1111/j.1532-5415.2007.01133.x*

Fisher DA, Kurup A, Lye D et al. Outpatient parenteral antibiotic therapy in Singapore. *Internat J Antimicrob Agents 2006; 28:545-50.*

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Mager DR. Medication errors and the home care patient. *Home Healthcare Nurse 2007; 25:151-5.*

Rodman B, Counce J. Trouble getting home. Study finds Medicare Part D hampers home infusion therapy access for dual-eligible patients. *Infusion 2007; 13:34-7.*

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Scott LM, Sharkey C. Putting the pieces together. Private-duty home healthcare and geriatric care management: one home health agency's model. *Home Healthcare Nurse 2007; 25:167-72.*

Multidisciplinary Care

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Quality, Outcomes, Indicators and Standards

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Rheumatoid Arthritis

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Kleinpell RM, Avitall B. Integrating telehealth as a strategy for patient management after discharge for cardiac surgery. *J Cardiovasc Nursing 2007; 22:38-42.*★

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