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In this last issue of the HITH Review for 2006 we have selected some abstracts from recent publications that may be relevant to those offering oncology services or contemplating introducing them. These include two abstracts on stem cell transplantation managed at home, one of which provides some preliminary results from an Australian HITH program and an abstract on home infusion of zoledronic acid, a biphosphonate. A previous article on zoledronic acid infusions in breast cancer patients can be found in the August edition of the HITH Review along with another article on self-administered immunoglobulin.

Most of the articles listed in this review are available either 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 and we would welcome any contributions or any feedback.

Ambulatory Care Australia (ACA)

The Alfred
Commercial Road, Melbourne, Vic 3004

Telephone: (03) 9276 3535
Facsimile: (03) 9276 6901
Email: aca@alfred.org.au
Website: <http://www.health.vic.gov.au/aca/>

Editor:

Lisa Demos, B Pharm, PhD

Assistant Editor:

Kaylene Fiddes, RN

Relevant abstracts from Medline and Cinahl

A RCT of Home IV Steroids

Chataway J, Porter B, Riazi A et al. Home versus outpatient administration of intravenous steroids for multiple-sclerosis relapses: a randomised controlled trial. *Lancet Neurol* 2006; 5:565-71. ★

Intravenous steroids are routinely used to treat disabling relapses in multiple sclerosis, and can be administered in an outpatient or home setting. We developed a rating scale that allowed us to compare the two strategies formally in a trial setting.

Methods Patients who had a clinically significant multiple-sclerosis relapse within 4 weeks of onset were randomly assigned administration of a 3-day regimen of intravenous methylprednisolone either in an outpatient clinic (n=69) or at home (n=69). The MS relapse management scale (MSRMS) was developed to measure patients' experiences of relapse management as the primary outcome. Efficacy of the two treatment modalities was compared in terms of traditional measures and economic cost. A cost-minimisation analysis was also done. Analysis was by intention to treat.

Results Of 149 eligible patients, 138 consented to participate in the trial and were randomly assigned to a treatment group. Coordination of care was significantly better in the home-treatment group (median score 4.5 [IQR 3.0-11.4]) than in the hospital-treatment group (12.1 [3.0-18.6]; $P=0.024$). The other dimensions of the MSRMS did not differ between groups ($P>0.10$). Administration of steroids was equally safe and effective in either location, and cost was either the same or cheaper when delivered at home than when delivered in hospital.

Conclusion Treatment of relapses in multiple sclerosis with intravenous steroids can be effectively and safely administered at home, from both patient and economic perspectives. Moreover, the trial indicates the importance of explicit and valid outcome measures of all aspects of service delivery when making decisions about health policy. This finding has implications for

complex service delivery care models for long-term diseases.

Stem Cell Transplantation

Home versus Hospital Care

Fernandez-Aviles F, Carreras E, Urbano-Ispizua A et al. Case-control comparison of at-home to total hospital care for autologous stem-cell transplantation for hematologic malignancies. *J Clin Oncol* 2006; 24:4844-61. ★

Purpose One of the most significant limitations of at-home autologous stem-cell transplantation (ASCT) is the necessity for hospital readmission. We developed an at-home ASCT program in which prophylactic ceftriaxone and treatment of febrile neutropenia with piperacillin and tazobactam was introduced to minimize the readmission rate.

Patients and Methods Between November 2000 and February 2005, 178 consecutive patients underwent ASCT for a hematologic malignancy. Of these, 50 patients fulfilled the requirements for at-home ASCT. Results were compared with those observed in a control group of 50 patients individually matched to the group of patients treated at home for age, sex, diagnosis, stage of disease, conditioning, and source of stem cells.

Results Febrile neutropenia occurred in fewer patients in the at-home group as compared with the hospitalized group (76% vs. 96%, $P=0.008$), and duration of fever was also shorter in the at-home group (median, 2 and 6 days, respectively; range, 1 to 11 and 1 to 20 days, respectively; $P=0.00003$). Hospital readmission in the at-home group was required in only four cases (8%). This resulted in a reduction of 18.6 days of hospitalization per patient. Likewise, total median charges were approximately half in the at-home group as compared with the in-hospital group (€3,345 and €6,250, respectively; $P < 0.00001$).

Conclusion Results of at-home ASCT with prophylactic administration of ceftriaxone and domiciliary treatment of febrile neutropenia with piperacillin and tazobactam are highly satisfactory and

significantly cheaper compared with those obtained with conventional in-hospital ASCT.

An Australian Experience

Johnson W, Kerridge I, Milton C et al. Hospital in the home (HITH) care following autologous stem cell transplantation for lymphoma and multiple myeloma. *Aust J Adv Nurs* 2006; 23:34-9. ★

Advances in outpatient and supportive care and increased pressure on hospital bed usage has led to the investigation of hospital in the home (HITH) management following autologous haematological stem cell transplantation (AutoHSCT) for patients with multiple myeloma or lymphoma.

Design The Newcastle Mater Hospital Haematology Unit together with the Mater Acute Care Community Service (MACCS) developed a protocol for HITH care following AutoHSCT.

Outcomes Clinical outcomes of the protocol were audited: 40% (13) of patients were suitable candidates for HITH care post transplantation. Of these 84.6% (11) were readmitted to the haematology unit within seven days of discharge from hospital.

Conclusion Our preliminary experience suggests that with adequate infrastructure support and rigorous patient selection this model of care is both safe and feasible.

Zoledronic Acid Infusions at Home

Italiano A, Ciais C, Chamorey E et al. Home infusions of biphosphonate in cancer patients: a prospective study. *J Chemother* 2006; 18:217-20. ★

The objective of the study was to determine outcome and satisfaction of cancer patients treated by home-infusions of biphosphonates.

Methods 107 patients entered the study and 97 of them chose to receive infusions of zoledronic acid in the home setting. Patient satisfaction and quality of care (QoC) were assessed by a 22-item questionnaire. Changes from baseline were determined for bone pain using a 0-10 cm visual analogue scale pain score (VAS).

Results Patients expressed a high level of satisfaction specifically with regard to nursing care. Seventy patients experienced a significant decrease in the median pain score during the home-therapy phase not due to an increased use of analgesic therapy ($P=0.03$). Zoledronic acid was well tolerated with no major adverse events.

Conclusion Home infusions of biphosphonates, on the condition that the supportive care team is well-organized, is a safe procedure that could be advantageous for patients by increasing satisfaction and compliance with treatment.

Immunoglobulin IV or SC?

Kittner JM, Grimbacher B, Wulff W et al. Patients' attitude to subcutaneous immunoglobulin substitution as home therapy. *J Clin Immunol* 2006; 26:400-5. ★

Since 2003, immunoglobulin preparations have been approved for subcutaneous (SC) use in Germany. Although all our adult patients on intravenous (IV) substitution were offered to switch to sc home therapy, approximately half of them refused to change.

Methods To evaluate patients' attitude towards sc home therapy, a questionnaire was developed and sent to 125 patients. Questions were answered using a Likert scale with numbers from 1 (not at all) to 8 (very much). Four scales of the Freiburg Personality Inventory (FPI) were added. From the 70 questionnaires returned (56%), 61 could be analysed (IV n=28; SC n=33).

Results The IV treated patients were afraid of being more busy with self-administration (6.9 ± 2.1). This was not a serious concern in the SC treated group (3.6 ± 1.8 , $p<0.001$). Many IV treated patients worried about severe adverse reactions at home (4.7 ± 2.8), but patients in the SC group did not (1.7 ± 1.0 , $p<0.001$). The statement "I dislike to puncture myself" reached 5.3 ± 2.7 points in the IV treated group, but only 2.0 ± 1.1 ($p<0.001$) in the SC treated patients. As main reason, patients on IV substitution considered SC therapy as inconvenient (48%). Secondly, they were afraid of side effects (31%). All patients on SC therapy appreciated the new treatment (7.2 ± 1.0). Main advantage for them was an increase of flexibility (6.6 ± 1.6). The FPI

displayed lower values for SC treated patients in the scales "Physical Complaints" and "Emotional Lability".

Conclusion Those patients who had changed to SC therapy were highly satisfied. However, others preferred to stay on IV treatment for different reasons. Perception of inconvenience, anxiety of side effects, but also personal traits may play a role.

Managing Heart Failure in Children

Price JF, Towbin JA, Dreyer WJ et al. Outpatient continuous parenteral inotropic therapy as bridge to transplantation in children with advanced heart failure. *J Cardiac Failure* 2006; 12:139-43. ★

Advanced heart failure in children is associated with high morbidity and mortality and is often refractory to standard medical therapy. The purpose of this study was to review our institutional experience with the use of outpatient parenteral inotropic therapy (PIT) for advanced chronic heart failure in children.

Methods and Results We reviewed the medical records of all patients treated with PIT as outpatients. Seven patients received outpatient PIT from 2/99 to 1/05 (mean age was 14.6 ± 3.7 years). Median duration of therapy was 10 weeks (range 4–84 weeks). The mean number of emergency department visits per patient was greater before starting PIT than after starting PIT (2.3 ± 1.8 versus 1.1 ± 2.2 , $P < 0.05$). The mean number of hospital admissions from exacerbation of heart failure symptoms decreased after starting PIT (2.1 ± 1.3 versus 0.6 ± 0.8 , $P < 0.05$). Mean EF% in patients with systolic dysfunction improved while on therapy ($30 \pm 14\%$ before versus $39 \pm 16\%$ after, $P < 0.05$). There was 1 death and 5 complications in 2 patients. Six patients were successfully bridged to transplantation.

Conclusion Outpatient continuous parenteral inotropic therapy may serve as a successful bridge to cardiac transplantation in selected pediatric outpatients.

List of Medline, Cinahl and other relevant published articles

Adverse Events

de Burgoa LJ, Seidner D, Hamilton C et al. Examination of factors that lead to complications for new home parenteral nutrition patients. *J Infusion Nurs* 2006; 29:74-80. ★

Gallant P, Schultz AA. Evaluation of a visual infusion phlebitis scale for determining appropriate discontinuation of peripheral intravenous catheters. *J Infusion Nurs* 2006; 29:338-45. ★

Anaphylaxis

Brown SGA, Mullins RJ, Gold MS. Anaphylaxis: diagnosis and management. *Med J Aust* 2006; 185:283-9. ★

Catheters

Gallant P, Schultz AA. Evaluation of a visual infusion phlebitis scale for determining appropriate discontinuation of peripheral intravenous catheters. *J Infusion Nurs* 2006; 29:338-45. ★

Hadaway L. Technology of flushing vascular access devices. *J Infusion Nurs* 2006; 29:137-45. ★

McDiarmid S, Hamelin L, Huebsch LB. Leading change. Retrospective evaluation of a nurse-led initiative in vascular access options for autologous stem cell transplant recipients ranging from Hickmans catheters to peripherally inserted central catheters. *J Infusion Nurs* 29:81-8. ★

Chronic Heart Failure

Price JF, Towbin JA, Dreyer WJ et al. Outpatient continuous parenteral inotropic therapy as bridge to transplantation in children with advanced heart failure. *J Cardiac Failure* 2006; 12:139-43. ★

Chung ES, Menon SG, Daly KA et al. Safety and tolerability of serial home infusions of nesiritide for advanced heart failure. *Am J Cardiol* 2006; 97:1370-3. ★

Corticosteroids

Harrison E, Porter B. IV steroids for MS relapse: clinical governance implications. *Br J Nurs* 2006; 15:716-21. ★

Chataway J, Porter B, Riazi A et al. Home versus outpatient administration of intravenous steroids for multiple-sclerosis relapses: a randomised controlled trial. *Lancet Neurol* 2006; 5:565-71. ★

Costs

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

Vergnenegre A, Decroisette C, Vincent F et al. Economic analysis of home based versus hospital outpatient chemotherapy in stage IV non small cell lung cancer. [French] *Revue des Maladies Respiratoires* 2006; 23(3 Pt 1):255-63.

Crohn's Disease

Clarke CA, Mehta BH, Pruchnicki MC et al. The pharmacist's role in teaching methotrexate injection for patients with Crohn's disease. *Am J Health-Syst Pharm* 2006; 63:1792-4. ★

Developing a New Service

Lees L, Dyer P, Knight J. Developing a new intravenous therapy service: part 2. *Emerg Nurse* 2006; 14:28-34. ★

Ethics

McCormick-Gendzel M, Jurchak M. A pathway for moral reasoning in home healthcare. *Home Healthcare Nurse* 2006; 24:654-61.

Geriatrics

Caplan GA, Coconis J, Board N et al. Does home treatment affect delirium? A randomised controlled trial of rehabilitation of elderly and care at home or usual treatment (The REACH-OUT trial). *Age Ageing* 2006; 35:53-60. ★

Immunoglobulin

Duff K. You can make a difference in the administration of intravenous immunoglobulin therapy. *J Infusion Nurs* 2006; 29:S5-S14. ★

Kirmse J. Subcutaneous administration of immunoglobulin. *J Infusion Nurs* 2006; 29(3S):S15-S20. ★

Kittner JM, Grimbacher B, Wulff W et al. Patients' attitude to subcutaneous immunoglobulin substitution as home therapy. *J Clin Immunol* 2006; 26:400-5. ★

Koski CL, Patterson JV. Intravenous immunoglobulin use for neurologic diseases. *J Infusion Nurs* 2006; 29:S21-S28. ★

Reid B, Van Allen D, LaGrange CA et al. Protocol recommendations for administration of intravenous immunoglobulin in Canada. *J Infusion Nurs* 2006; 29:158-64. ★

Speidel KR. Subcutaneous administration of immunoglobulin replacement therapy in the home care setting. *Infusion* 2006; 12:1-7. ★

Infections and Antibiotic Therapy

Bilton D, Henig N, Morrissey B et al. Addition of inhaled tobramycin to ciprofloxacin for acute exacerbations of *Pseudomonas aeruginosa* infection in adult bronchiectasis. *Chest* 2006; 130:1503-10. ★

Burkhardt O, Lehmann C, Madabushi R et al. Once-daily tobramycin in cystic fibrosis: better for clinical outcome than thrice-daily tobramycin but more resistance development? *J Antimicrob Chemother* 2006; 58:822-9. ★

Chary A, Tice AD, Martinelli L et al. Experience of infectious diseases consultants with outpatient parenteral antimicrobial therapy: results of an emerging

infections network survey. *Clin Infect Dis* 2006; 43:1290-5. ★

Fernandez-Aviles F, Carreras E, Urbano-Ispizua A et al. Case-control comparison of at-home to total hospital care for autologous stem-cell transplantation for hematologic malignancies. *J Clin Oncol* 2006; 24:4844-61. ★

Galperine T, Ader F, Piriou P et al. Outpatient parenteral antimicrobial therapy (OPAT) in bone and joint infections. [French] *Medecine et Maladies Infectieuses* 2006; 36:132-7.

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

Johnson W, Kerridge I, Milton C et al. Hospital in the home (HITH) care following autologous stem cell transplantation for lymphoma and multiple myeloma. *Aust J Adv Nurs* 2006; 23:34-9. ★

Kern WV. Risk assessment and treatment of low-risk patients with febrile neutropenia. *Clin Infect Dis* 2006; 42:533-40. ★

Oosterheert JJ, Bonten MJM, Schneider MME et al. Effectiveness of early switch from intravenous to oral antibiotics in severe community acquired pneumonia: multicentre randomised trial. *BMJ online* 2006 (7 November), doi:10.1136/bmj.38993.560984.BE ★

Stevens DL, Bisno AL, Chambers HF et al. Practice guidelines for the diagnosis and management of skin and soft-tissue infections. *Clin Infect Dis* 2005; 41:1373-406. ★

Polzien G. Home infusion therapy: first things first: the patient and the prevention of central catheter infections. *Home Healthcare Nurse* 2006; 24:681-4. ★

Legal Issues

Masoorli S. Home infusion clinical issues and legal consequences. *Infusion* 2006; 12:36. ★

Multiple Sclerosis

Chataway J, Porter B, Riazi A et al. Home versus outpatient administration of intravenous steroids for

multiple-sclerosis relapses: a randomised controlled trial. *Lancet Neurol* 2006; 5:565-71. ★

Nursing

Boan D. Changing culture in the home health setting. Strategies for success. *Home Healthcare Nurse* 2006; 24:662-9. ★

Lee EJ, Haddock M, Yu S et al. Developing and evaluation a nursing bag system for home care nurses using a participatory ergonomics approach. *Home Healthcare Nurse* 2006; 24:591-7. ★

Masoorli S. Home infusion clinical issues and legal consequences. *Infusion* 2006; 12:36. ★

Wright LD. Professional boundaries in home care. *Home Healthcare Nurse* 2006; 24:672-5. ★

Oncology

Fernandez-Aviles F, Carreras E, Urbano-Ispizua A et al. Case-control comparison of at-home to total hospital care for autologous stem-cell transplantation for hematologic malignancies. *J Clin Oncol* 2006; 24:4844-61. ★

Italiano A, Ciais C, Chamorey E et al. Home infusions of biphosphonate in cancer patients: a prospective study. *J Chemother* 2006; 18:217-20. ★

Johnson W, Kerridge I, Milton C et al. Hospital in the home (HITH) care following autologous stem cell transplantation for lymphoma and multiple myeloma. *Aust J Adv Nurs* 2006; 23:34-9. ★

Kern WV. Risk assessment and treatment of low-risk patients with febrile neutropenia. *Clin Infect Dis* 2006; 42:533-40. ★

McDiarmid S, Hamelin L, Huebsch LB. Leading change. Retrospective evaluation of a nurse-led initiative in vascular access options for autologous stem cell transplant recipients ranging from Hickmans catheters to peripherally inserted central catheters. *J Infusion Nurs* 29:81-8. ★

Stevens B, McKeever P, Law MP et al. Children receiving chemotherapy at home: perceptions of children and parents. *J Pediatr Oncol Nurs* 2006; 23:276-85. ★

Vergnenegre A, Decroisette C, Vincent F et al. Economic analysis of home based versus hospital outpatient chemotherapy in stage IV non small cell lung cancer. [French] *Revue des Maladies Respiratoires* 2006; 23(3 Pt 1):255-63.

Paediatrics

Price JF, Towbin JA, Dreyer WJ et al. Outpatient continuous parenteral inotropic therapy as bridge to transplantation in children with advanced heart failure. *J Cardiac Failure* 2006; 12:139-43. ★

Stevens B, McKeever P, Law MP et al. Children receiving chemotherapy at home: perceptions of children and parents. *J Pediatr Oncol Nurs* 2006; 23:276-85. ★

Parenteral Nutrition

Baxter JP, McKee RF. Organization of managed clinical networking for home parenteral nutrition. *Curr Opin Clin Nutr Metab Care* 2006; 9:270-5. ★

de Burgoa LJ, Seidner D, Hamilton C et al. Examination of factors that lead to complications for new home parenteral nutrition patients. *J Infusion Nurs* 2006; 29:74-80. ★

Tu Duy Khiem-EI Aatmani A, Senesse P, Reimund JM et al. Home parenteral nutrition: a direct costs study in the approved centres of Montpellier and Strasbourg. *Gastroenterologie et Biologique* 2006; 30:574-9.

Ugur A, Marashdeh BH, Gottschalck I et al. Home parenteral nutrition in Denmark in the period from 1996 to 2001. *Scand J Gastroenterol* 2006; 41:401-7.

Patient Education

Clarke CA, Mehta BH, Pruchnicki MC et al. The pharmacist's role in teaching methotrexate injection for patients with Crohn's disease. *Am J Health-Syst Pharm* 2006; 63:1792-4. ★

Pharmacy

Baker K. Pharmacy compounding accreditation board. *Infusion* 2006; 12:35. ★

Clarke CA, Mehta BH, Pruchnicki MC et al. The pharmacist's role in teaching methotrexate injection for patients with Crohn's disease. *Am J Health-Syst Pharm* 2006; 63:1792-4. ★

Kastango ES. USP Chapter <797>: the next phase. *Infusion* 2006; 12:25-9. ★

Quality, Outcomes, Indicators and Standards

Chary A, Tice AD, Martinelli L et al. Experience of infectious diseases consultants with outpatient parenteral antimicrobial therapy: results of an emerging infections network survey. *Clin Infect Dis* 2006; 43:1290-5. ★

Gorski LA. Integrating standards into practice. Revised standards for home care infusion: what has changed? *Home Healthcare Nurse* 2006; 24:627-31. ★

Rehabilitation

Caplan GA, Coconis J, Board N et al. Does home treatment affect delirium? A randomised controlled trial of rehabilitation of elderly and care at home or usual treatment (The REACH-OUT trial). *Age Ageing* 2006; 35:53-60. ★

Kortke H, Stromeyer H, et al. New East-Westfalian postoperative therapy concept: a telemedicine guide for the study of ambulatory rehabilitation of patients after cardiac surgery. *Telemed e-Health* 2006; 12:475-83. ★

Telemedicine and Technology

Pearson WS, Bercovitz AR. Use of computerized medical records in home health and hospice agencies: United States, 2000. *Vital and Health Statistics - Series CDC. US Dept Health and Human Services* 2006; Series 13:161. ★

Kortke H, Stromeyer H, et al. New East-Westfalian postoperative therapy concept: a telemedicine guide for the study of ambulatory rehabilitation of patients after cardiac surgery. *Telemed e-Health* 2006; 12:475-83. ★

Wound Management

Guillett SE. Using a rehabilitation approach to wound care in the home setting: a case study. *Home Healthcare Nurse* 2006; 24:434-8. ★

Thrombosis

Scarvelis D, Wells PS. Diagnosis and treatment of deep-vein thrombosis. *Can Med Assoc J* 2006; 175:1087-92. ★

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