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EDITORIAL

By Sue Daly, Business Manager, VCACI

Clinical Guidelines

A key focus in this edition of our Newsletter is Parenteral Drug Administration in the HITH setting. Over the last few months we have finalised Clinical Guidelines for Parenteral Drug Administration in HITH Programs. These guidelines have been reproduced within this Newsletter and are intended to be a useful guide in development and revision of policies and procedures that cover this topic. The guidelines have been developed in consultation with medical, nursing and pharmacy staff and address key differences between in-hospital and home environments. We hope you find the guidelines useful and we welcome any feed-back that you may have to inform the future development of this work and the annual revision of the guidelines themselves.

HITH Seminar

In association with the Department of Human Services, we convened the inaugural HITH Service Development Seminar on the 19th November 1998 at the Investment Centre. This forum provided the opportunity for Programs that have undertaken specific HITH development projects funded through the DHS to present their work. Presentations included:

- Development and testing of HITH clinical indicators by Michael Montalto, Frankston Hospital
- Assessment of a portable INR instrument for home monitoring of anticoagulation by Fran Chambers, Monash Medical Centre
- Development of HITH services for children with chronic health care needs by Robyn Hayles, Royal Children's Hospital



Helen Hamilton, (Box Hill Hospital) and Di Richards, (The Alfred)
networking in between sessions.

- HITH for patients with uncomplicated acute myocardial infarction by Lisa Jenkins, Monash Medical Centre
- Establishment of the Carer Training Centre by Nick Santamaria, The Alfred
- The role of the HITH nurse by Joanne Moss, Royal Melbourne Hospital
- Costing hospital in the home care by Michael Montalto, Frankston Hospital
- General Practitioner participation in HITH care by Helen Wadsworth, Geelong Hospital
- HITH shared care protocols by Denise Ruth, Royal Melbourne Hospital
- Complication rates of peripherally inserted central catheters - a national surveillance program by Kaveri Stanley, Monash Medical Centre
- Developments of protocols and services for CAPD, chemotherapy, paediatrics and after hours service provision by Dianne Wicks, Wodonga Hospital
- Nurse exchange program by Pamela Dolley, Geelong Hospital
- The HITH Cultural Diversity Project by Elwyn Davies, Western Hospital.

The information presented, subsequent discussion and opportunities for networking provided for a day that was regarded as highly successful from the feedback that we have received. I would like to extend our thanks to those individuals who presented their work at this important meeting. Further to this I would like to thank the following industry sponsors whose support assisted in making this a very worth-while day:

- Cytomix
- Hoechst Marion Roussel
- Roche
- Tuta Laboratories
- Baxter and
- Pharmacia and Upjohn

DHS - On the Move

Over recent months there have been significant changes in the Victorian DHS staff associated with the HITH Program. Significantly, Tass Mousaferiadis and Danny Wong who have been associated with the Program since its inception, have moved on to new challenges within the DHS and we wish them well in their new roles.

We have 'the good oil' on new staff to the HITH program, Vivien Adler and Amos Lee.

VIVIEN ADLER

**MANAGER,
AMBULATORY SERVICES DEVELOPMENT, DHS**

Vivien trained as a social worker and has worked in a variety of health settings. To gain experience in policy and program development, she moved to the Victorian Accident Rehabilitation Council and held several positions including Manager of Grants & Community Liaison and Manager of Research & Planning.

In 1992, Vivien took up a short term contract with the Alfred Group of Hospitals as Community Liaison Manager. As part of her role, she undertook the groundwork to establish the Inner South East Melbourne Division of General Practice, and when funding became available in 1993, Vivien took on the position of CEO.

After 5 years, it was time for a new challenge and at the end of July 1998, Vivien moved to the Department of Human Services as Manager of Ambulatory Services Development. Vivien is excited by her new position which includes responsibility for HITH, Post Acute Care, Effective Discharge, and a variety of other programs. She views the position as enabling her to bring together her knowledge and experience from the field to this most important and emerging development in health care.



AMOS YEE

**HITH SPECIAL PROJECTS
AMBULATORY SERVICES DEVELOPMENT, DHS**

Amos Yee has recently joined the Hospital in the Home Program with responsibility for the day to day management of services and special projects funded by the Program. He was previously involved in Commonwealth/State Programs, service redevelopment projects and establishment of new services.

Amos believes that the HITH Program has introduced significant changes in the way health services are delivered and that this transition is at a critical juncture. The key issues relate to the continuation and expansion of HITH services through increasing consumer, clinician and institutional support. He looks forward to working closely with these people to build on the progress to date.



We welcome Vivien and Amos to their respective roles and look forward to working with them at this important stage of HITH development in Victoria.

INTRODUCING THE HOSPITAL IN THE HOME COSTING STUDY

Alison Yum, Project Coordinator.

In May 1998, the North Western Health Consortium successfully tendered to conduct the Hospital in the Home Costing Study for the Department of Human Services.

The project team, based at the Clinical Epidemiology and Health Services Evaluation Unit at the Royal Melbourne Hospital, will undertake a comparative cost analysis of episodes of care in Hospital in the Home (HITH) and matched episodes in hospital (non-HITH).

The project team are Assoc Prof Don Campbell, Assoc Prof Raina McIntyre, Dr Denise Ruth, Alison Yum, Jason Wasiak and Craig Williams.

Study Aims

1. Define and identify health care costs and outcomes associated with HITH and non-HITH episodes of care.
2. Assess the extent to which HITH and its services can be sustained within our existing health care model.
3. Recommend strategies to ensure the maintenance and viability of HITH programs within a fluctuating health care system.

Data Collection

We have commenced site visits to collect HITH program, medical record and costing data. Site visits for checking sample matching and data collection will continue until March 1999. The need to review patient records and collect patient

data has been approved by the DHS Ethics Committee, Royal Melbourne Hospital Ethics committee, and the Minister for Health. The data collected will be used strictly for the purposes of this study as outlined above.

Sample: The study begins with a retrospective examination of 1604 consecutive HITH episodes of care in 38 Victorian hospitals between the months of July and December 1997. The sample of HITH episodes of care has been selected from the Victorian Inpatient Minimum Database (VIMD) and matched with equivalent non-HITH episodes of care.

Medical record review: Successful matching of HITH to non-HITH will occur if both episodes of care meet the following criteria on review of the medical record: age within five years, same treating hospital, identical principal diagnosis, and equivalent or alike medical and nursing treatments. Following the successful match, all patient care related activities will be established and identified via the medical record review

Costing data: Costs associated with each episode of care will be linked to a financial record data base (eg transition where it exits) and then analysed for the episode of care. Costs to be examined include: investigative procedures ie radiology, pharmacy supplies, pathology tests, the utilisation of medical supplies ie dressings, and the employment of allied health in health care delivery.

Qualitative data: In depth interviews will be conducted with health care clinicians and managers at four sites to examine what factors influence their decisions to include and/or exclude patients from HITH, and what internal and external forces affect the utilisation of HITH services. Findings from the interviews will be incorporated with the costing data to determine the degree of accuracy, viability, and maintenance of HITH within the existing case mix funding model.

Study Outcomes:

Outcomes will be knowledge of:

1. Differences between the cost of HITH treatment and in hospital treatment for different clinical conditions.
2. The types of conditions and treatments which are suitable for HITH and result in maximal cost-effectiveness.
3. Financial and other factors which impact on decision making to use HITH.
4. The best models of HITH care to use in current funding climate, based on projected patterns of utilisation for the next three years, and sensitivity analysis of models.

A large part of the success of this project relies on our ability to collect the various data as outlined above, and I wish to thank relevant HITH sites in anticipation of their involvement and cooperation.

Please contact me on 9342 2162 if you want further information on the study.

REGULAR FEATURES

In future issues of the Newsletter we plan to include regular features such as . . .

- HITH Pharmacy issues
- HITH Case Studies
- HITH Program Showcase
- Summaries of relevant publications
- Recent Research Findings
- New Product Information
- Relevant conferences, short courses, workshops and seminars

ASHP HOME CARE '98

August 1998, Navy Pier, Chicago, Illinois

Lisa Demos

Senior Research Officer VCACI

Supported in part by SHPA DBL Grant

After adjusting to the humidity and the time difference I registered for the American Society of Hospital Pharmacists (ASHP) HomeCare'98 Meeting. The following associations collaborated with the meeting: The American Society for Parenteral and Enteral Nutrition (ASPEN), The Intravenous Nurses Society (INS) and The National Association of Vascular Access Networks (NAVAN). A further 58 organisations were invited to participate.

The opening presentation was by Audrey Kinsella an author, journalist and research specialist on Telemedicine in Home Care: Current and Future Applications. Ms Kinsella has written a book Home Healthcare: Wired and Ready for Telemedicine. She spoke of the emerging technology and the range of applications that included:

- closer and more timely tracking of patients to prevent the onset of difficult episodes requiring acute care services
- helping patients to self manage
- enhanced communication between patients and health professionals and
- extending to patients with chronic diseases eg asthma

The tools for telehealthcare should be easy for patients and health professionals to use. Tools that are available for telemedicine include:

- touch-tone telephone with on/off switch for yes/no responses
- vital sign monitoring equipment with telecommunication capability eg BP cuff
- web-based television set-top boxes that enable a patient to use the television set to video-visit with the clinician and
- complete telehealth workstations with vital sign monitoring, infusion pumps, video-visiting, internet access.

The opening presentation was followed by the opening Gala in the Exhibit Hall which was strictly policed by security guards and had exhibits from industry of equipment, products and services and information booths from various health-care organisations.

The following two days of the meeting included concurrent sessions on:

- advanced concepts in nutritional support,
- home care reimbursement,
- a range of short presentations with practical tips entitled Home Care Pearls,
- managing patients in hospice care,
- paediatric patients in the home,
- ambulatory infusion centres,
- business planning,
- an update on Joint Commission on Accreditation of Health Care Organisations (JCAHO) and Oryx Initiative for Home Care Organisations,
- new drugs update,
- vascular assess complications, and
- practical approaches to care planning.

Innovative presentations included an industry exhibit of a disposable electronically programmable infusion pump from Microjet and a poster on a remote access infusion pump system used to reduce home nursing visits from Michael Akahoshi, Health Integration Strategies, Pasadena and Margie Chung, Option Care, Rockwall.

JCAHO held a series of presentations on the new requirements for accreditation in home care. JCAHO has developed Comprehensive Accreditation Manuals for Ambulatory Care (1998) and Home Care (1997). The 1999 Comprehensive Accreditation Manual for Home Care will include several changes including a review of standards, participation in a performance measurement system (ie Oryx) and more of a health outcomes focus. This will result in data-driven evaluation and accreditation, demonstrated improvement in performance and public disclosure of meaningful outcomes data. JCAHO has various resources available to assist health professionals including seminars, audiotapes, videotapes and an internet site: <http://www.jcaho.org>.

An example of the use of performance measures was given by Debbie Cain from Springfield (email: chps@coxnet.org or resource information on web site

www.StrategicHP.com). The performance measuring system collects 19 indicators but could collect up to 33 without additional effort and is comparable to Oryx listed systems. The information collected can be utilised to:

- summarise types of therapies and compare to national data enabling identification of areas for expansion,
- staff feedback,
- verify quality of services provided,
- identify negative outcomes,
- quantify infection control, patient satisfaction, clinical outcomes and
- evaluate corrective actions.

Information on new drugs included advances in the following four areas:

- recombinant DNA technology,
- Monoclonal antibiotic technology,
- Gene therapy, and
- emerging technologies.

Specific drugs with potential application in home care management of patients included:

- Ampligen (for chronic fatigue syndrome),
- Infliximab for crohn's disease,
- Enbrel and Infliximab for rheumatoid arthritis,
- Synagis and RespiGam (gamma globulins for respiratory syncytial virus),
- Daclizumab and Basiliximab for transplant rejection,
- Lamivudine for hepatitis C,
- LJP 394 for lupus,
- connective tissue growth factor for scleroderma,
- expanded indications for colony stimulating factors to HIV/AIDS neutropenia, pneumonia and wounds as well as new growth factor products eg Ancestim, Keratinocyte Growth Factor, Vascular Endothelial Growth Factor,
- platelet stimulating factors for thrombocytopenia eg Thrombopoietin, and
- liposomal drug delivery of cytotoxics and prostoglandins.

The session on Vascular Access Problems included presentations by medical, pharmacy and nursing staff on:

- extravasation risks, drugs that may

cause serious tissue damage, recognition, potential outcomes, signs and symptoms, response and management issues for prevention, early detection and management of suspected or actual extravasation and collaborative considerations.

- theoretical considerations in the treatment of catheter infections and occlusions, and
- treating catheter occlusions and infections.

The Home Care Pearl presentations included:

- a multidisciplinary tool to select an electronic syringe pump for paediatric home infusions,
- monitoring aerosolised tobramycin therapy,
- clinical experience of VAD chemotherapy of multiple myeloma,
- simplifying competency assessment,
- controlling myoclonus caused by high dose morphine infusions, and
- evaluation of growth hormone therapy in home care population.

There was a poster display session and a bookstore with various pharmacy and home care publications including educational and training materials, videotapes and software. The SHPA Home Care Resources book was available through the bookstore and contains a section on international pharmaceutical abstracts, a medication teaching manual covering home infusion and cancer chemotherapy monographs and relevant ASHP Guidelines.

There were several interesting posters including:

- competency programs for pharmacists, nurses and multidisciplinary programs,
- an education program for bone marrow transplant patients,
- intrathecal drug administration in implantable pumps,
- use of databases for home care patients,
- OKT3 for patients with rejection,
- cost savings from the use of a remote access infusion pump,
- intravenous push antibiotics, and
- stability of a gentamicin plus vancomycin admixture.

Cancer, Culture and Clinical Innovation in Cancer Management

23rd-25th October 1998

Margaret McKenzie Carer Training Centre

Introduction

Cancer, Culture and Clinical Innovation in Cancer Management was the second oncology conference to be held by Creative Health Seminars from Geelong. After a successful first program run on their home ground in 1997, this three day conference was held on Hamilton Island. Two papers from this conference that have particular relevance in the ambulatory setting are summarised below.

High Dose Chemotherapy at Home. How it Can be Done.

Mandy Leather RN from the Royal Perth Hospital presented their experience with the delivery of high dose chemotherapy in the home. The Haematology Department's Home Bone Marrow Transplant Service commenced the delivery of high dose chemotherapy in the home in April 1995. Patients for the program are selected after consultation between the physician, home care nurse, patient and their carer. Once on the program all chemotherapy is delivered at home. After the chemotherapy is administered, the patient is subsequently visited on a daily basis until haemopoietic recovery has occurred. The supportive care provided by the nurse in this phase of the patient's treatment includes taking blood tests, physical assessment, care of venous access devices, emotional support of the patient and their carer and treatment of clinical complications. Clinical algorithms are used by the nurses in the management of nausea and vomiting, febrile neutropenia, stomatitis, diarrhea and hypertension. Communication between the home care nurse and the medical staff in the hospital is maintained by mobile phone. Supportive care of clinical complications at home ranges from cytokine

therapy to intravenous antibiotics and total parental nutrition. Mandy reported that this program has been both challenging and fulfilling for nursing staff and very beneficial to patients who have been able to receive an intensive treatment regimen at home.

Shared Care Oncology Project

Dr Michael Homewood presented the Shared Care Oncology Project that is a collaborative effort between the Andrew Love Cancer Centre in Geelong and the General Practice Association of Geelong. This was an interesting presentation that demonstrated the benefits of a combined approach to cancer management between the "cancer experts" and the general practitioners (GPs) who had an in depth knowledge of the patient and their family. The issues raised by Dr. Homewood are common to many programs that are seeking to integrate services and direct care increasingly into community settings. These include communication, education of stakeholders, co-ordination of care and financial considerations. The program in Geelong involves a rotation of GPs from the Geelong region through the Andrew Love Cancer Centre for the purposes of establishing a rapport with staff and increasing their knowledge of the management of oncological and haematological conditions.

Surveys have been taken of patient satisfaction with the scheme using an adaptation of the FACT questionnaire. To date the program has demonstrated benefits to patients, GPs and the Andrew Love Cancer Centre. Patients do not always have to travel to the Cancer Centre for their care and the relationship between GPs and the staff from Andrew Love is enhanced. The project coordinator at the Andrew Love Cancer Centre is research nurse, Anne Woollett.

Clinical Guidelines for Parenteral Drug Administration in the Home Care Setting

All hospital-in-the-home (HITH) programs should develop clear precise policies and procedures applicable for parenteral (intravenous, intramuscular and subcutaneous) drug administration in the home care setting by nurses. Policies and procedures should also be developed for patients and their carers in programs where they participate in drug administration.

Written policies and procedures should specifically address the following parenteral drug administration areas:

- Drug orders
- Checking of medications
- Administration of medications by nursing staff
- Administration of medications by patient or carer where relevant

In addition written policies and procedures should address the following related areas:

- HITH nursing staff
- Storage and transportation of medications
- Equipment storage and disposal
- Anaphylaxis
- Chemotherapy spill kits where chemotherapy is administered in the HITH program
- Use and care of devices and appliances
- Documentation

General HITH patient selection criteria are applicable including an assessment of the patient's home environment as adequate and safe for patient management and administration of parenteral drug therapy. Considerations include the availability of electricity, water, a refrigerator, storage and a telephone.

Specific requirements for parenteral drug administration in a HITH service, including consideration of differences between in-hospital and home environments are summarised below.

Drug Orders

- Written legible prescriptions by medical officers on approved prescription forms are dispensed by the pharmacy for individual patients in a HITH program as opposed to the supply of drugs to a hospital ward for the patient's use.
- Written drug orders for home parenteral administration that comply with hospital parenteral drug administration requirements ie include solu-

tion/medication, dos-age, rate and/or volume, frequency and route should be provided for the nurse to follow.

- Verbal drug orders are accepted in emergency situations. In the HITH situation where another healthcare professional is not present to verify the order, these orders should be repeated to the prescribing medical officer after recording on the patient's medication chart or prescription. Verbal orders should be followed by written prescription to the pharmacist, and written orders to the registered nurse, within 24 hours.
- Standing drug orders approved by the appropriate hospital committee may apply in some situations for HITH patients. These orders should be clearly printed on the medication chart eg the administration of adrenaline and other medications (eg corticosteroids and antihistamines) in accordance with a hospital endorsed anaphylaxis protocol.
- Hospital approved, drug specific parenteral drug administration protocols may apply to some HITH programs or specific protocols may need to be developed.

Checking of Medications

- Medication is dispensed by the pharmacy in accordance with the Drug, Poisons and Controlled Substances Regulations and the hospital's drug preparation, compounding and dispensing procedures.
- For patients in HITH programs the dispensing requirements may also need to take into consideration the use of appropriate containers and packaging and the attachment of appropriate information including warnings for storage and expiry.
- In a HITH program a registered nurse checks and administers medications without the opportunity for an additional check by another healthcare professional. The registered nurse is still required to identify the patient, check the drug order and the medication label including the expiry date. Where the patient is confused or cognitively impaired the patient identification should be confirmed with a responsible adult.

Administration of Medications by Nursing Staff

- Infection control procedures including good aseptic technique should be followed when preparing and administering intravenous medications in the home setting. These include thorough hand washing as a minimum requirement before and immediately after any clinical procedures. Gloves should be available and in some cases gowns, masks and/or goggles may be required. Where admixing is required in the patient's home a clean environment/surface should be selected, a dressing tray prepared and an aseptic technique employed. After preparation the intravenous admixture solution should be adequately labeled in circumstances where the solution is to be infused over time.
- The intravenous solution/medication should be inspected for particulate matter, precipitation or discolouration and the container should be inspected for cracks, leaks or punctures.
- Injection ports should be prepared ie swabbed with appropriate antiseptic prior to any procedure.
- Appropriate monitoring and precautions are to be undertaken during drug administration (eg to detect extravasation, adverse or allergic reactions) and any nursing interventions documented.
- Appropriate precautions are to be taken to minimise occupational exposure especially to hazardous materials.
- Appropriate disposal policies are to be followed for sharps, hazardous material and blood contaminated equipment.

Administration of Medications by Patient or Carer

- Intravenous drugs should only be administered by patients or carers when an educational program has been undertaken and their competency to safely administer intravenous drugs and handle contingencies has been assessed and appropriately documented.
- Comprehensive written instructions on all pertinent aspects and information regarding parenteral drug treatment are to be supplied to the patient or carer.

- Infection control procedures including sound aseptic technique (eg hand washing, gloves) are to be followed when preparing and administering parenteral medications in the home setting.
- Appropriate precautions are to be taken to minimise exposure especially to hazardous material.
- Appropriate disposal policies and procedures are to be followed for sharps, hazardous material and blood spills.
- Drug administration is to be appropriately documented and shown to the medical officer at review and the visiting nurse on home visits.

HITH Nursing Staff

Staff administering parenteral medication in HITH programs should have appropriate qualifications (ie minimum Registered Nurse, Division 1) and be certified as having basic competencies or demonstrate clinical competency to administer parenteral therapy. These should include a detailed understanding of:

- the technology used (access infusion devices, ports, pumps, and flow control devices),
- insertion of intravenous lines,
- cannula site care and dressings,
- maintenance of access devices, pumps, ports and catheters,
- procedures to ensure line patency,
- administration techniques and admixing of intravenous solutions,
- infection control procedures, occupational health and safety issues, and
- potential complications and interventions required.

Thorough knowledge of the medication, side-effects, normal dosage, preparation, storage, route and method of administration and contraindications is essential.

In the case of investigational drugs not approved by TGA, complete information on side-effects, normal dosage, preparation, storage, route and method of administration and contraindications should be available to nurses administering medication.

Demonstration of annual drug calculation competency is required for all nursing staff administering medication. Additional competencies may be required for some HITH services eg chemotherapy administration.

All staff administering parenteral medication should be familiar with and routinely follow individual HITH program procedures.

Storage and Transportation of Medications

Minimum storage and transport requirements should be developed for drugs requiring storage at room temperature, drugs requiring refrigeration, drugs requiring freezing and hazardous materials.

- Drugs should be transported safely and appropriately by the patient, carer or a registered nurse.
- Drugs should be stored safely and appropriately either by the patient, the HITH program or a registered nurse.
- The medication must be kept in a suitable container in a safe position out of the reach of children.
- Drugs requiring refrigeration should be stored in the body of the refrigerator (not the door).

The patient should be educated on the correct storage of the medication.

The nurse should assess the facilities available for the storage of drugs in the patient's home and ensure their suitability.

Equipment Storage and Disposal

It is essential that policies and procedures be developed and adhered to in relation to the safe storage and disposal of all parenteral drug administration equipment. These policies and procedures should comply with Occupational Health and Safety Regulations and should include information on:

- Minimum storage requirements for needles, sharps, anaphylaxis kits etc.
- The supply of appropriate, non-permeable, tamperproof containers for the disposal of blood contaminated and/or sharp items eg needles/ stylets, surgical blades and plastic syringes,
- The use of neutralising or decontaminating solutions, and
- The availability of non-permeable tamperproof containers for the disposal of hazardous wastes in the home setting (eg chemotherapy, blood/fluid spills).

Anaphylaxis

A procedure for the management of anaphylaxis including the recommended drug therapy should be available. Refer to Anaphylaxis Protocol Guidelines for Hospital in the Home (VCACI Newsletter, April 1998; 2(2):6-8) for further information.

Chemotherapy Spill Kits

A chemotherapy spill kit and chemotherapy spill procedure should be available when chemotherapy is administered in the home.

Use and Care of Devices and Appliances

Policies and procedures should cover staff, patient and carer information pertaining to:

- the use of vascular access and infusion control devices in HITH patients,
- the care of catheters, infusion pumps, line flushing procedures and any specific infusion systems eg interlink needle-less infusion system.

A scheduled maintenance program should be included for all electrical equipment.

Documentation

A patient's allergy status must be recorded in a prominent area on the medication chart, ideally using an "Allergy Alert" label where relevant.

Drug administration must be as close to the prescribed administration time as possible. The actual time the dose was administered should be recorded on the drug administration chart and where significant variations occur between the prescribed and administered time the medical practitioner must be notified.

All reactions, observations and actions taken are to be recorded in the patient's medical record eg allergies, sensitivities, phlebitis and extravasation.

Incident reports along with any corrective action taken should be completed for administration errors or other incidents, injuries, spills or misadventures and forwarded to the appropriate hospital departments.

References

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- Intravenous Nurses Society.* *Intravenous Nursing Standards of Practice.* *J Intravenous Nurs* 1998; 21(suppl 1):1-90.
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HITH Showcase: Mercy Hospital for Women

The HITH program at the Mercy Hospital for Women - Special Care Nursery commenced in 1995. This program supports both premature and term infants. The program initially catered for babies that were oxygen dependent. In mid 1998 the program was expanded to include infants who:

- require intravenous antibiotics,
- require care following surgery,
- were to room-in but can now go home with progress monitored daily at home eg. weighs, observation of general condition, establishment of breastfeeding,
- require palliative care,
- are jaundiced and require phototherapy, and
- require the occasional gavage.

The program covers the Melbourne metropolitan area. The key people in the program are Diana Morgan, Clinical Director - Nursing, Neonates; Mara Langley, HITH Nurse; and Lesleyann MacGill, Case Manager.

The program offers home visits, emotional and practical support, as well as equipment when it is required.

In the last financial year the program treated 25 neonates on home oxygen therapy, 1 neonate requiring gavage feeding, and 2 neonates needing to establish breastfeeding.

The main issues that the program has faced to date have been the allocation of time spent with families versus travel time. This has meant that staff have become better users of the "Melway"! The staff are happy with the program and the challenges it brings.

Major advantages of this program include the establishment of breastfeeding, parents no longer having to travel to the hospital each day, and the development of the family relationship.

The program has received a lot of positive feedback from families. This has included comments regarding:

- excellent support and information

from the program,

- invaluable in establishing a relationship between parents and infant,
- helpful in establishing breastfeeding,
- saved numerous hours in travel to Mercy each day - perhaps twice a day, and
- felt comfortable taking baby home due to visits from the HITH nurse and knowing there was a backup service if concerned about the baby's condition.

The program has undergone process and outcomes evaluation, with positive results received so far.

Future developments for the program include the expansion of the program to include lower gestation and lower weight babies, and to offer services to other acute hospitals and community services.

Lesleyann MacGill Mara Langley
Case Manager HITH Nurse
Special Care Nursery
Mercy Hospital for Women

HITH CASE STUDY

Mercy Hospital for Women

An extremely premature baby was admitted into the neonatal HITH program weighing 784 grams with a gestation of 25.4 weeks. This was the mother's first baby. Baby J had numerous problems including Hyaline Membrane Disease, Patent Ductus Arterios, Apnoeas, Jaundice, Hypoglycaemia and Hypocalcaemia, Sepsis, Broncho Pulmonary Dysplasia (BPD), and severe Gastro Oesophageal Reflux (GOR).

The GOR was treated with thickening feeds and medications, Cisapride and Omeprazole to avoid fundoplication and gastrostomy. The BPD required intranasal oxygen at 1/4L continuously.

There have been no incidents or complications during treatment to date. At the time of discharge from HITH, the mother and baby were both well. The baby was gaining weight, the vomiting from reflux was under control, and the BPD was improving with oxygen ceased for short periods of time.

On the HITH program, the mother was pleased to finally be able to settle down at home with no travelling to hospital. To receive visitors at home after four months, instead of in the Special Care Nursery was an added bonus. The mother coped with

Baby J's reflux competently as well as his oxygen therapy, and had no problems giving all his medications. The parents were happy that he gained weight well. As the parents became more involved with their infant, attachment between parents and baby developed further.

The parents commented that they enjoyed being on the HITH program, and felt supported at home as they received regular visits by the HITH nurse and were able to contact the nurse by phone when they needed to. They felt that the baby settled into home well, and that baby, mother, and father were able to relax and settle into their own routine. Following the initial apprehension about oxygen therapy at home, the mother became more confident with this aspect of care.

This case study is a good example that babies are able to go home earlier with complicated conditions. Mothers and



Mara Langley, Mercy HITH nurse, supporting Mum, Dad and Baby J.

babies cope better at home than in the hospital setting as their decision-making and problem-solving skills are accelerated in their development at home. This case study also provides support for the expansion of the program to include lower gestation, and lower weight babies, and neonates with numerous complications.

Lesleyann MacGill Mara Langley
Case Manager HITH Nurse
Special Care Nursery
Mercy Hospital for Women

UPCOMING CONFERENCES

The 3rd Annual Disease Management Congress
Outcomes Measurement & Quality Improvement
February 2-5, 1999, Pasadena, CA
Web Site: www.nmhcc.org

The Case Management Society of Australia
The Coming of Age & The Getting of Wisdom
11-12th February, 1999, School of Post Graduate Nursing
The University of Melbourne, Parkville, Victoria, 3052
Phone: (03) 9344 8811 Fax: (03) 9347 4172
Email: enquiries@nursing.unimelb.edu.au Web Site: www.nursing.unimelb.edu.au

Victorian Intravenous Nurses Society
Half-day Seminar, 8.30am - 1.00pm
February 20, 1999, Novotel Hotel, Melbourne
Phone: VINS Secretary (03) 9877 0139

Accrual Budgeting, Strategic Planning and Performance Measurement
To Achieve and Manage Outcomes in Government
February 17-18, 1999, Mercure Hotel, Brisbane
February 24-25, 1999, Rydges Hotel, Canberra
Phone: (02) 9923 5090 Fax: (02) 9959 4684

League of Intravenous Therapy Education (Lite 99)
Education - The Direction for the New Millennium
February 25-27, 1999, Marriott City Center, Pittsburgh, PA
Phone: 0011 1 412 678 5025 Fax: 0011 1 412 678 5025
Web Site: www.lite.org/LITE99.html

Queensland Intravenous Nurses Society (Inc.)
Inaugural Conference
"IV Nurses Make a Difference"
March 5-6, 1999, ANA Hotel Gold Coast, Surfers Paradise, Queensland
Phone: 0418 983 772

American Academy of Ambulatory Care Nursing
24th Annual Conference - "Embracing Expertise and Diversity: Pioneering Uncommon
Roles for Uncommon Times"
March 10-16, 1999, Hyatt Regency, San Francisco, CA
Phone: 0011 1 609 256 2350 Fax: 0011 1 609 589 7463
Email contact: aaacn@mail.ajj.com

The 11th National Managed Health Care Congress (NMH/IT)
The Driving Force in Managed Care Congress
March 29-April 1, 1999, Georgia World Congress Centre Atlanta, Georgia
Web Site: www.nmhcc.org/Spring99/welcome.html

5th International Qualitative Health Research Conference
April 7-10, 1999, The University of Newcastle NSW, Australia
The Conference Secretariat
5th IQHR Conference
c/- Newcastle Visitor & Convention Bureau
P.O. Box 489, Newcastle NSW 2300
Phone: (02) 4929 9434 Fax: (02) 4929 5948

Fraud, Ethics & Accountability in the Public Sector
April 19-20, 1999, Gazebo Hotel, Sydney
Phone: (02) 9923 5090 Fax: (02) 9959 4684

National Home Infusion Association
8th Annual Conference
May 19-22, 1999, Fort Lauderdale Convention Centre, Fort Lauderdale, Florida
Fax: 0011 1 703 683 1484 Email: infusion@vais.net

ISSUES IN INTRAVENOUS THERAPY

Hammond, D. HOME INTRAVENOUS ANTIBIOTICS, THE SAFETY FACTOR.

Journal of Intravenous Nursing. Vol 21, No.2 March/April 1998

Summarised by Kaylene Fiddes, Project Nurse, VCACI

Recommendations for the safe delivery of home intravenous antibiotic infusions are presented in an article printed in the March/April 1998 issue of the Journal of IV Nursing. The guide is mostly written with patient self-administration in mind and reiterates some already well known and practised advice. However, some of the considerations described may provide a useful and quick revision for interested readers in either self-administration or strictly nurse delivered infusion situations. The guide covers appropriate patient selection, education, care planning and device selection, and provides some examples of patient education sheets.

Patient Selection

The recommendations made for selecting appropriate patients for home infusions include ensuring the patient, or carer, is both responsible and capable of understanding all aspects of therapy. With patient self-administration, it is advised that patients be able to check the medication labels, learn aseptic technique, be able to determine any medication side effects and have good vision and dexterity. All patients or carers, however, should be able to recognise potential complications and understand the care required to prevent complications.

Another recommendation made for appropriate patient selection is the appropriate evaluation of the home environment. The article describes in detail the following components of performing a home environment evaluation: telephone availability, electricity, running water, cleanliness, refrigeration, and the ability for storage of equipment and supplies eg away from children or pets.

Device Selection

Determining device selection is discussed as a decision attributable to physician's orders, length of therapy, type of antibiotic, cost of device and patients' education level. Recommendations per-

taining to the length of stay state that antibiotic therapy of less than 7 to 10 days be administered via a peripheral line. Resiting of the catheter should be done according to the organisations policy. When more than 7 days of therapy is required, administration is recommended to be via a midline catheter, a PICC line or central line.

Midline peripheral catheters are described as appropriate for most antibiotics depending on the pH and osmolality of the solution. An x-ray for placement verification is not required. Midclavicular lines with tip placement in the subclavian vein are likewise described as appropriate for most antibiotics again depending on the pH and osmolality of the solution. The need for X-ray verification is varied amongst organisations depending on their policy.

In choosing the device for therapy, Hammond also suggests considering the type of therapy to be infused. One example cited to illustrate the point is the use of irritating solutions such as vancomycin. A midline catheter or a PICC line allows a lesser concentration of the drug which may prevent venous irritation and subsequent infection and therefore be a preferable choice for venous access in this case.

The choice of infusion via gravity or pump is also described as a necessary decision making requirement for safe delivery, with either suitable depending on the situation. Examples are given here. References in determining these recommendations are also given.

Patient Education

The recommendations made for patient education include covering all potential complications and any required alterations to activities of daily living. Information about the type of catheter, purpose of therapy, signs and symptoms of infection and infiltration and subsequent action, signs and symptoms to report, and prevention of "kinking" and

catheter dislodgment are also presented as patient education issues. Examples of different patient education sheets on PICC lines, peripheral catheters and midline catheters are provided as figures in the article.

Other issues for inclusion in patient education are stated. These include drug information and side effects, the importance of maintaining an accurate administration schedule and supplies and storage.

Safety and infection control issues include handwashing, the disposal of equipment such as sharps in plastic bottles with lids, dressings, and self-monitoring skills such as site observation and temperature checks are also recommended for patient education.

In the setting of patient self-administration further patient education recommendations are made. These include education on the use of pumps including trouble shooting, connection and disconnection, and the administration of therapy including rate, flushing and catheter care. Further recommendations here include the teaching of patients to examine the infusion bags for floating particles and leaks, and the checking of medication labels for correct dosage.

Reinforcing the phone number for contacting the home care organisation, as well as emergency phone numbers, and patient rights and responsibilities are also advised here. Additionally, recommendations are made that education be provided in writing and left with the patient. An IV teaching checklist, which is signed by the nurse and the patient, is suggested. An example of a patient teaching checklist is also available in the article.

In instances of self-administration, Hammond suggests that the patient or carer demonstrate a satisfactory performance of self-administration one or more times prior to continuing with the therapy without supervision. Determining that therapy has been administered by the patient may be done, Hammond suggests, by placing a peel way label on the infu-

sion bag. When the bag is administered the label is peeled off and placed on a sheet of paper which is then collected by the nurse.

Anaphylaxis

Appropriate guidelines for anaphylaxis and home care are required. The author's organisation's policy for anaphylaxis is described.

Their policy includes informing the patient of the possible risks and checking for patient allergies. The doctor then orders the anaphylaxis protocol and agrees to be available by phone during first dose administration. Two RNs are sent to the home for "first dose infusions". An anaphylaxis kit is also available. Their standard orders are presented, which includes drug administration, doctor notification and the calling for emergency services.

Nursing Considerations

Some of the nursing considerations reinforced include knowing all aspects of therapy - Hammond revises the "right drug, right dose, right person, right time and properly prescribed manner" rule.

Further, collaboration with the pharmacist to obtain information on drug compatibility, side effects, appropriateness of therapy, safe handling and appropriate storage is advised. Knowledge of appropriate lab tests required to maintain adequate blood levels is also discussed here.

Other considerations suggested include appropriate patient clinical evaluation and reporting. Progress, or lack of progress, and signs and symptoms should be identified and reported to the doctor. Additionally, it is recommended that documentation include patients' tolerance to therapy, IV site condition and any untoward reactions.

Victorian Intravenous Nurses Society (VINS) Inc.

The process of developing VINS, and recent incorporation, has become a reality at last! Committee members were elected at the AGM in December 1997 and are working hard on various projects to provide a wider range of services and information to members of VINS Inc, and other healthcare professionals, who may be involved in intravenous therapy. We have also established a very good working relationship with the NSW INS and are keen to involve people who have similar interests.

The purposes for which VINS Inc. has been established include, (but are not limited to):

- To promote the highest standards of clinical, educational and administration practice directly and indirectly to intravenous nursing.
- To develop and maintain a common set of competency based standards for clinical practice, education, and administration related to intravenous management and patient care.

- To promote the professional development of Intravenous Nurses through regular meetings, study days, educational forums, and publication of newsletters.
- To communicate with other bodies whether professional or scientific, international or regional, which are interested in, or are impacting upon intravenous nursing.
- To represent the interests of intravenous nurses to other nurses in general, medical practitioners, the public at large, and governmental, and semi-governmental bodies, as well as professional organisations which relate directly or indirectly to the nursing profession.

For further information, including membership please contact:

Noline Burrell
Secretary VINS Inc.
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Carlton VIC 3053
Tel (03) 9877-0139

**Pam Bull, HITH Coordinator
The Royal Women's Hospital**

CONTACT US

We are keen to receive your feedback so that we can address areas of interest to you.

Please feel free to contact us if you:

- would like more information about the VCACI,
- wish to be added to our mailing list,
- have feedback, ideas or items for future Newsletters,
- would like to share details of forthcoming conferences, seminars or workshops,
- would like more information on HITH/ Acute Care in the Home Issues.

Victorian HITH Contact Names and Numbers

						Telephone	Fax
Angliss Health Services	Albert Street	Upper F'ree Gully	Mr Wayne	Massuger	(03) 9764 6242	(03) 9764 6114	
Austin & Repat Medical Centre	Studley Road	Heidelberg	Ms Helen	Fithall	(03) 9496 3378	(03) 9496 3359	
Austin & Repat Medical Centre	Studley Road	Heidelberg	Ms Lisa	Hill	(03) 9496 5775	(03) 9496 5772	
Austin & Repat Medical Centre	Studley Road	Heidelberg	Ms Kim	Lumsden	(03) 9496 3603	(03) 9459 0971	
Bacchus Marsh Memorial Hosp.	P.O. Box 330	Bacchus Marsh	Ms Jan	McEgan	(03) 5367 2000	(03) 5367 4537	
Bairnsdale Regnl Health Service	Day Street	Bairnsdale	Ms Gael	Traa	(03) 5152 0274	(03) 5152 6683	
Ballarat Health Services	P.O. Box 577	Ballarat	Ms Patricia	Twaits	(03) 5320 4676	(03) 5320 4549	
Benalla & District Memorial	P.O. Box 406	Benalla	Ms Robyn	Kelly	(03) 5760 2258	(03) 5760 2246	
Bendigo Health Care Group	P.O. Box 126	Bendigo	Ms Robyne	Fahy	(03) 5441 0222	(03) 5441 0916	
Box Hill Hospital	Nelson Road	Box Hill	Ms Helen	Hamilton	(03) 9895 3442	(03) 9895 4901	
Central Wellington Health Service	Guthridge Parade	Sale	Ms Paula	Hart	(03) 5144 4111	(03) 5149 6633	
Colac Com. Health Svces Hospital	Corangamite Street	Colac	Ms Marie Louise	Tucker	(03) 5230 0275	(03) 5230 1191	
Dandenong Hospital	Box 478	Dandenong	Ms Dana	Kiley	(03) 9554 8416	(03) 9554 8453	
East Grampians Health Service	P.O. Box 155	Ararat	Mr Ray	Elsworthy	(03) 5352 2221	(03) 5352 4612	
Echuca Regional Health	P.O. Box 25	Echuca	Ms Diane	Egan	(03) 5482 2800	(03) 5482 5478	
Geelong Hospital	P.O. Box 281	Geelong	Mrs Helen	Wadsworth	(03) 5226 7108	(03) 5226 7302	
Hamilton Base Hospital	P.O. Box 283	Hamilton	Ms Betty	Joosen	(03) 5571 0222	(03) 5571 0240	
Goulburn Valley Hospital	102 Corio Street	Shepparton	Ms Christine	Ryan	(03) 5831 6390	(03) 5822 2584	
Kyneton District Health Service	P.O. Box 34	Kyneton	Ms Judith	Bloomfield	(03) 5422 1177	(03) 5422 2373	
Latrobe Regional Hospital	Locked Bag No 1	Moe	Ms Rosemary	Nation	(03) 5127 0608	(03) 5127 0775	
Maroondah Hospital	P.O. Box 135	East Ringwood	Mr Ian	Jackson	(03) 9871 3712	(03) 9871 3716	
Mercy Public Hospitals Inc	Clarendon Street	East Melbourne	Ms Ann	Turnbull	(03) 9270 2237	(03) 9270 2777	
Mildura Base Hospital	P.O. Box 306	Mildura	Ms Sheena	Clark	(03) 5022 3333	(03) 5022 3470	
Monash Medical Centre	Locked Bag 29	Clayton	Ms Fran	Chambers	(03) 9550 2433	(03) 9550 6925	
Monash Medical Centre	246 Clayton Road	Clayton	Dr Lindsay	Grayson	(03) 9550 4564	(03) 9550 4533	
Peninsula Health Care Network	P.O. Box 52	Frankston	Dr Michael	Montalto	(03) 9784 7241	(03) 9784 7242	
Peter MacCallum Cancer Institute	St Andrews Place	East Melbourne	Dr Guy	Toner	(03) 9656 1190	(03) 9656 1408	
Peter MacCallum Cancer Institute	St Andrews Place	East Melbourne	Ms Cathy	Watty	(03) 9656 1055	(03) 9656 1415	
Peter MacCallum Cancer Institute	St Andrews Place	East Melbourne	Ms Helen	Fawns	(03) 9656 1312	(03) 9656 1922	
Portland & District Hospital	Bentinck Street	Portland	Ms Michelle	Henningsen	(03) 5521 0333	(03) 5521 0358	
Royal Children's Hospital	Flemington Road	Parkville	Ms Jann	Cooney	(03) 9345 6548	(03) 9345 6231	
Royal Melbourne Hospital	Grattan Street	Parkville	Dr Denise	Ruth	(03) 9342 8549	(03) 9342 8548	
Royal Melbourne Hospital	Room W224 - 2 W	Parkville	Ms Jane	Peirce	(03) 9342 7801	(03) 9342 7700	
Royal Melbourne Hospital	2 Grattan Street	Parkville	Ms Joanne	Moss	(03) 9342 8597	(03) 9342 8268	
Royal Women's Hospital	132 Grattan Street	Carlton	Ms Pamela	Bull	(03) 9344 2324	(03) 9348 1840	
St Vincent's Hospital	41 Victoria Pde	Fitzroy	Ms Tamara	Rowan	(03) 9288 3818	(03) 9288 3848	
Stawell District Hospital	P.O. Box 116	Stawell	Ms Jan	Sherwell	(03) 5358 8572	(03) 5358 4092	
Swan Hill District Hospital	P.O. Box 483	Swan Hill	Ms Dallas	Brown	(03) 5033 9310	(03) 5032 9528	
The Alfred	P.O. Box 315	Prahran	Ms Di	Richards	(03) 9276 3908	(03) 9276 2794	
The Northern Hospital	185 Coopers Street	Epping	Ms Anne	Bentley	(03) 9219 8000	(03) 9219 8633	
The Williamstown Hospital	P.O. Box 125	Williamstown	Ms Allison	Chircop	(03) 9393 0133	(03) 9393 0178	
Wangaratta District Base Hospital	P.O. Box 386	Wangaratta	Ms Cath	Hattersley	(03) 5722 0348	(03) 5721 9526	
Warrnambool & District Base Hosp	Ryot Street	Warrnambool	Mr Mark	Johnstone	(03) 5563 1433	(03) 5563 1627	
Werribee Mercy	300 Princes Highway	Werribee	Ms Vicki	Geytenbeek	(03) 9216 8700	(03) 9216 8777	
Werribee Mercy	300 Princes Highway	Werribee	Ms Wendy	Dunn	(03) 9216 8691	(03) 9216 8692	
West Gippsland Hospital	Landsborough Road	Warragul	Mrs Marie	Young	(03) 5623 0611	(03) 5623 0609	
West Wimmera Health Service	P.O. Box 231	Nhill	Ms Lynne	Fraser	(03) 5391 4222	(03) 5391 4228	
Western Hospital	Gordon Street	Footscray	Mr Elwyn	Davies	(03) 9319 6199	(03) 9319 6314	
Wimmera Health Care Group	Baillie Street	Horsham	Mrs Pat	Dodson	(03) 5381 9184	(03) 5381 9187	
Wodonga District Hospital	Vermont Street	Wodonga	Dr Andrew	Watson	(02) 6051 7470	(02) 6051 7477	
Wodonga District Hospital	Vermont Street	Wodonga	Ms Dianne	Wicks	(02) 6051 7334	(02) 6051 7319	



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