Benefits to Intravenous Teams
An IV Team is a group of specially trained and educated professionals who inserts IV cannulas.

Complementary service to Phlebotomy.
Most common form of vascular access in hospital is the insertion of a peripheral line.

- 60% - 80% of all inpatients will require some form of vascular access on admission to hospital. (Zingg & Pittet, 2009)
History

- PIVC- First reported in the 1850’s by medical personnel (Carr et al 2010)
- Progressively nurses perform the procedure in specific areas- e.g. Emergency Depts
- IV team in Our Lady's Childrens Hospital Crumlin(OLCHC) - established in March 1978
Advantages for patients

- Decreased pain and distress
- Psychologically beneficial
- Higher success rates on 1st attempts
- Timely delivery of infusions
- Decreased missed or delayed doses of medication
- Enhanced patient safety - due to good technique (INS 2014)
Advantages to hospital

- Reduced Complications
- Increased patient safety
- Quicker discharge, increased bed flow, reduced costs and maximum use of resources. (INS, 2014)
Advantages to Nursing staff

- More consistent standardised approach to cannula insertion
- Patient centred and focused approach to care
- A resource for other staff
- Documented care pathway - order-patient- rationale - site - inserter- remover
- Audit process
- Safe practitioner- decrease in sharp injury incidents (INS, 2014)
Financial Benefits

- 1990’s in USA (Scalley et al., 1992) reported savings of 17,000 Dollars
- Similarly Bolton, 2009 in the UK suggests potential savings of 270,000 pounds
- Shorter hospital stays, administration of timely medication and a reduction of HCAIs, reduction of equipment used, (Carr et al., 2010)
Roles and Responsibilities of IV Team in OLCHC

Registered Nurses who are;

- Highly trained, skilled, educated professionals
- Delivers evidenced based care
- Monitors life of cannula, audits sites, lengths of stays, elective resites, rationales
- Decreased discrepancies in blood results/ labs
- Reduced number of sharps injuries/ blood spillages

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Governing Bodies

- NMBI-Nursing Midwifery Board of Ireland
- HSE - National Guidelines (H.S.E., 2010)
- Yearly competence assessments to maintain standards - Local practices in OLCHC
- Governed by hospital standards, guidelines, policies and procedures
Advance Preparation

- Must gain verbal consent
- Must be ordered by doctor - it is a minor surgical procedure
- Rationale must be clear - antibiotics, fluids, procedure, access
Patient Preparation

- Plan in advance (HSE, 2010)
- Know the rationale
- Co-ordinate blood tests if requested
- Promote good venous Access e.g. warming techniques.
- Consider topical analgesia
- Completion of appropriate documentation
Topical Analgesia

- Ametop - 45 min application - adverse reactions: vasoconstriction, redness, swelling, itching. Remove gel/cream and clean with cold water

- Sucrose- infants- A natural plant extract

- Cold spray/ cryogesic spray - apply directly prior to cannulation. Adverse reactions: Vasoconstriction - rare

  (HSE, 2010/ OLCHC, 2013)
Hand Decontamination

- Is the cornerstone to preventing the spread of infection (SARI 2009)
- The use of personal protective equipment (PPE) does not replace the need for appropriate hand hygiene practices (Gould & Drey, 2008)
- Ensure hands are dried thoroughly ‘damp hands will transfer bacteria much more readily than dry ones’
Assessment

- Holding techniques, must not restrain
- Do not routinely use splints
- Name bands should not be on the same limb, loose, non restricting clothing
- Monitoring of cannula - each shift change minimally, hourly if infusion in progress
I.V Related Complications

Local

- Infiltration - swelling, coolness, discomfort, leakage at insertion site

- Extravasation - pain, burning sensation, ischaemia, necrosis

- Phlebitis/ thrombophlebitis - pain, swelling, tenderness, heat, erythema

Systemic - Rare - must be considered if there is a pyrexia of unknown origin. Septicaemia & Bacteraemia (R.C.N., 2010)
Phlebitis

3 Common causes

- Mechanical - Cannula is a foreign body
- Chemical - nature of infusion fluids/drugs
- Contamination - Poor adherence to infection prevention protocols (H.S.E., 2010)
INSERTION-SITE INFECTION

Causes:

- Poor Aseptic Technique
- Poor Cannulation Technique
- Improper Cannula-site Dressing
- Poor after-care
- Failure to remove cannula when treatment is discontinued
1. TROUBLESHOOTING

I.V. looks tissued: I’m not sure if it’s gone?

- ACTION - Stop infusion - Assess the area for redness, swelling or tracking?
- Compare with opposite limb, Use Saline flush - Is there Pressure or Increased swelling? Any Complaints of pain? Is the Skin cooler to touch?

Remove the line
2. TROUBLESHOOTING

Strapping is wet?

(a) Has the T-Connector become disconnected from the cannula?
(b) Is the Insertion site leaking?

ACTION:
(a) Re-secure T-Connector - Saline flush
(b) Remove cannula
INFECTION PREVENTION & CONTROL

- Hand Decontamination must be performed **Before and after**
- INSPECTING,
- PALPATING,
- CHANGING or
- REMOVING IV DRESSINGS

Line infections cost the patient and hospital 3-10 more days in hospital and more than 4,000 - 10,000 pounds, (DoH, 2008)
REMOVAL OF CANNULA

Peripheral cannula should be removed immediately if:

- Contamination is suspected
- Patient experiences constant discomfort/pain
- Infiltration/phlebitis is evident
- Treatment is discontinued
DOCUMENTATION

- ‘an integral part of nursing care’
- ‘the primary communication tool for multidiscipline teams’
- Date, time, location of cannula

(H.S.E., 2010)
Career

IV Cannulation team members, once they have a minimum of 3yrs experience and have reached Level 5 (Expert) of the Brenner's performance rating scale - can progress to Peripherally inserted Central Catheter insertions - once they have hospital, team and anaesthetic support.
References

- Our Lady’s Children’s Hospital (2013) Intravenous Cannulation Guidelines for Clinical Staff. OLCHC, Dublin.