Saving Lives H112 – Peripheral Intravenous Cannula Care Bundle

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Where we were

Lethal hospital bug cases rocket

The Plague 2004... Filthy NHS wards Kill 5,000 a year

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Frequent failure within organisations

- Isolation
- Antibiotic Control
- Peripheral Cannula Care
- Cleaning
- Standards of Care
- Training
- Escalation
- Organisational Focus
- Organisational Priority

- “Eye off the ball”
- Infection prevention not part of pre-registration training
- Lack of focus on assessing competence to perform clinical procedures
- Specialisation – IC team responsibility
- Infection happens!
- Belief it is just a clinical issue
A framework for transformation

- Diagnostic Review
- Support to Implement Best Practice
- Performance Management
- Targeted Support to Equip and Unblock
Trusts Priorities on Review

- Diagnostics
- Infection Control
- Staff Shortages
- Operational Targets
- Finances
SO....WHAT HAVE WE LEARNED?
The journey to safe care

Clear Vision → Leadership → Accountability

Assurance ← Measurement ← Competence
• Trust intention to improve quality and safety around cannulas
• Strategy is clearly communicated to staff
• Culture of ‘zero tolerance’

• Effective Leadership
• Medical and Nursing team understand they have clear roles and responsibility
• Identify champions and implementation leads
Everyone understands what is expected of them: safe technique/practice

All organisations are subject to a number of legal, statutory and good practice guidance requirements

Clear accountability with consequences at every level

Training and development programmes
Development / Supervision
Competency framework
• Audit programme: Regular auditing – PVC care bundles
• Data used to drive performance / Know ‘hotspots’
• Root Cause Analysis done well
• Performance framework: set performance targets and metrics at ward/directorate level

• Assurance Framework
• Effective systems in place to improve reliability
• Learning from others
Changing and Challenging: Board to Ward

If anyone in your trust thinks *any* of these, you have much work to do

**Infection happens**

If everyone in your trust thinks *all* of these, you have established the required culture

**Infection is intolerable**

The Infection Control Team is responsible

**Everyone is responsible**

We only need to set specific infection targets

**Infection control is integral to patient safety**

We can take one-off actions on HCAIs

**Infection control is part of caring for patients**

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The Power of RCA

People
Believe it adds value
Understand its benefit
Want to use it

Root
Cause
Analysis

Practice
Findings shared and acted upon promptly

Process
Undertaken thoroughly

Learning through action to reduce infection

What is it for?
- To enable collaborative action to improve patient outcomes and reduce hospital associated infections
- To help the RCA process be embedded into your organisation

Why do it?
- To foster a culture of learning and improvement
- To increase patient safety

Who will it help?
- All staff are responsible for delivering high standards of patient care

How do we do it?
1. Identify the event
2. Capture observations
3. Establish a cause and effect analysis
4. Identify recommendations

Evaluate the recommendations

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Saving Lives Tools and Advice

• Practical measuring Tool: based on a care bundle approach

• Designed in way to enable Trusts to:
  – Obtain baseline
  – “traffic light” and prioritise
  – Develop plans to improve
  – Regularly audit against standards

• Provide High Impact Interventions to improve reliability of clinical procedures:
  – Peripheral venous catheter
  – Central venous catheter
  – Surgical site infections
  – Ventilated patients
  – Urinary catheter care

• What we are up against: Better idea of Assurance: improving quality and reducing risk

• Instant generation of progress graphs & charts

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Peripheral Intravenous Cannula Care Bundle
## Risk Nationally

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Caution advised in using this data
Cannulation Scenario 1

- 78 Year old Female, Suffered a fall
- PMH: CVA, L sided weakness
- Cannulated in R forearm by Paramedics, no access to chlorhexidine (1\textsuperscript{st} C)
- No cannula insertion record
- Second Cannula inserted into L forearm in A&E for bloods (2\textsuperscript{nd} C)
- No cannula insertion record for either device
- Patient moved to ward, cannula care plan commenced
- A&E cannula removed 5 days after MRSA bacteraemia identified

- No Chlorhexidine skin prep or assurance aseptic technique used by paramedics
- Cannula inserted without treatment commencing (Ambulance)
- Cannula inserted into affected arm
- No documentation to support PVC HII
- Care plan commence on ward for A&E cannula but Ambulance cannula overlooked
- A&E cannula removed after bacteraemic event
- Ambulance cannula not removed until 31 days after admission
- Patient developed second bacteraemia and died

RCA identified PVC infection as the primary cause
Cannulation Scenario 2

- 76 Year old Female, Suffered a fall
- Cannulated by Paramedic, no access to chlorhexidine (1st C)
- No cannula insertion record
- Cannula removed in A&E. No record of removal details
- Patient taken to theatre. Second cannula inserted (2nd C)
- Insertion details documented in the anaesthetic record
- Patient moved to ward. While on ward, no record of VIP scoring found
- Seven days later, theatre cannula was removed. No record of removal details
- New cannula inserted next to inflammation and swelling caused by 2nd cannula (3rd C)
- Twelve days after admission patient becomes ill and tests positive for MRSA

- No documentation to support PVC HII
- No Chlorhexidine skin prep or assurance aseptic technique used by paramedics
- Anaesthetist documented insertion details in patient’s record but Trust-wide documentation sheet not used
- No assurance ward staff conduct VIP score every shift as no documented results
- Cannula not changed within 72 hours
- No insertion sheet/care plan or documented details of cannula removals
- Detail of cannula not transferred to care plan

RCA identified PVC infection as the primary cause
Current National Themes

Hand Hygiene

• Good hand hygiene when caring for peripheral cannulas
• Hands decontaminated before and after each patient contact and before applying examination gloves
• Use of correct hand hygiene procedure

Personal protective equipment & Practice

• Use of aseptic technique: single use gloves when cannulating, disposable tourniquet
• No more than two attempts of insertion by same HCP

Skin preparation & Cannula access

• Cannula sites cleaned prior to accessing, using 2% chlorhexidine gluconate in 70% isopropyl alcohol.
• If patient has a sensitivity use a single patient use povidone-iodine application

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Current National Themes

Dressing

- Use of a sterile, semi-permeable, transparent dressing
- An intact, dry, adherent transparent dressing should be present

Site inspection

- Regular observation for signs of infection
- Site check at least 3 times a day or at least daily

Continuing clinical indication

- All IV cannula assessed for continuing clinical indication
- Cannula prescribed in drug

Administration set replacement

- Immediately after administration of blood, blood products
- All other fluid sets after 72 hours
Current National Themes

Routine cannula replacement

- Replace in a new site after 72-96 hours or earlier if indicated clinically
- If venous access limited, the cannula can remain in situ if there are no signs of infection

Documentation

- Implementation of insertion and ongoing care record chart
- Develop, implement and use of VIP scores system
- Administration sets labeled with starts and end date
- Development of Trust wide device policy, guidelines, documentation
- Care plans: which include HII elements

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Current National Themes

Innovation

• DVD on best practice cannulation care featured on flat screens on hospital sites
• Set up of a group to review practice in cannulation care
• Development of cannulation packs for NHS Supplies
• Development of insertion and review date reminder site stickers

Training

• Formal training session or competency testing prior to practice
• Need for updates identified
• Participation on the basis of specific clinical need
• Use of simulation, video, eLearning training

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Current National Themes

Monitoring

• Regular observational audits and reviewing completed documentation (weekly / 2 weekly)
• Give instant feedback
• Not a secret process (findings shared)
• Improved compliance with guidelines

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Area for further work

Change in Management Practices

- Cannulas insitu for longer than 72 hours: patent and medical team approve
- Sites covered in bandages
- Cannula ports open and regularly used

Change in Attitude

- Insertion for ‘just in case’: A&E, Radiology
- Inserted next to inflammations and swelling
- Blocked cannulas left insitu alongside new one
- Fallen cannula attached to administration set
- Two cannulas but only one documentation available
- Changing dressing & review date rather than cannula
- Continuing clinical need for cannula not reviews
- Unconscious incompetence

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Area for further work

Documentation issues

• VIP scoring and site inspections completed but missing the point of action needed
• Cannula documentations only applicable to nursing team instead of all HCP and departments dealing with cannulas
• Poor and incorrect documentation

Training

• Lack of train-the-trainer type sessions for senior staff
• Training, competency checks and updates not applying to all HCP but nursing staff
• Emphasis of training on acquiring the appropriate skills but not the right behaviors
• Lack of increased competency check/training/supervision around and during medical staff rotation
• No competency register or follow up of non-attendance to courses

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Area for further work

Monitoring

- Measuring the right thing but findings not translated into actions
- Lack of peer review audits
- No systematic process of central collection and monitoring of audit results
- Performance not monitored against quality but numbers

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Where we would like to be....

Competency

• Total belief in ability to succeed
• Striving for the irreducible minimum
• Constantly drive improvement

Clear Access

Assessment

Documentation

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Where we would like to be….

Hospitals winning war on superbug

Superbug cases finally dropping

Hospital starts to win battle against MRSA

Fewer patients contract MRSA for third successive time

Number of superbug cases fall at hospital
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The front line of communication

All NHS staff have a duty to provide clean, safe and reliable care. The Clean, Safe Care website is an information resource designed to enhance your knowledge of good practice and give you access to the latest research and available tools.

Information on reducing HCAI
For use from Board to ward.

Shared learning
From colleagues across England and beyond.

Monthly e-bulletins
Sign up to receive the official HCAI news bulletin, packed with the latest information on how to reduce infection.

Community forum
Talk about the latest policies, ask questions and broaden your expertise with colleagues from across the NHS.

Case studies
How are other trusts using their experience and knowledge? What works? What doesn’t? The Learning Zone is packed with examples.