Catheters

“Improving your practice”

Tom Ladds

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In the next 60 minutes...

- The catheter conundrum
- Michigan experience
- Behaviour
  - Leadership
- Suggested strategies

- Questions & Discussion
The catheter conundrum...

• An essential part of the management of many patients...

BUT

• The most dangerous thing that we do to them?
Catheter related harm

- Death
  - Rarely recorded
  - Coliform bacteraemia
  - Reduced mobility and falls

- Extended stay
- Increased dependency
- Poor patient experience
- Body image
CAUTI Problems...

• Recognition of the scale of the problem
• Lack of consensus
  – Definition and identification
  – Management
  – Training
• Lack of data
• Complacency
HCAI Comparison 2000

Socio-Economic Burden of Hospital Acquired Infection - PHLS report 2000
CAUTI – The scale of the problem?

- 17.1\textsuperscript{1} - 31.6\%\textsuperscript{2} of acute patients are catheterised
- 20 - 30\% of acute catheterised patients will develop bacteriuria\textsuperscript{3}
- 8-10\% of acute catheterised patients will develop symptoms of urinary tract infection\textsuperscript{3}
- A UTI increases the length of patient hospitalisation by 75\% (8 to 14 days)\textsuperscript{3}

- A single UTI costs £1327\textsuperscript{3}

1 Showcase Hospital Project 2009
2 National HCAI Prevalence Study 2006
3 Plowman et al 1999
Risk profile

• The risk of CAUTI is approximately 5% (3-6) per day catheterised\(^1\)
• 3% (1-4) develop bacteraemia\(^1\)
  – Of these 20% (13-30) die\(^1\)
• May be a ‘flare’ in risk at insertion
• High risk patients are the most frequently catheterised
  – Acutely ill
  – Elderly
  – Major surgery
  – Poor mobility
  – Poor fluid intake
  – Polypharmacy

\(^1\) Pratt et al. The epic project. J Hosp Inf 2001
Risk/cost example:
1000 Bed General Hospital

- 1000 bed acute hospital
  - 171 - 316 catheterised patients
  - 8% symptomatic = 14-25 CAUTI per day
  - 5,110 - 9,125 CAUTI per year

- 153 - 274 bacteraemia
- 31 - 55 deaths

- Cost = £6,780,970 - £12,108,875 pa
Progress..?

“The hospital should do the patient no harm”
Florence Nightingale 1859
*Notes on Nursing*
(Cost £22.50)

“The NHS should work towards a zero harm policy”
Berwick Report 2013
(Cost £1.7m)
What is a UTI?

• Lots of conflicting definitions
  – Google 15,300,000 (in 0.17 seconds!)

• Bacteria in urine
• Symptoms
What is a CAUTI?

• UTI *associated* with a urinary catheter!
  – How long after insertion?
  – How long after removal?

• Varying definitions = inconsistent findings
What about the rest of the urinary tract..?

- Urethritis
- Prostatitis
- Nephritis
- Epidydimitis
Michigan experience

- “Hospitals recognize that UTIs are a common, preventable and costly health issue but still don’t routinely use practices proven to prevent them” Sanjay Saint

- “Every hospital has its own approach to catheter use that’s become ingrained into that specific institution’s culture of care” Sarah Krein

- USA national decrease in CAUTI 2008-2011 = 6%

- Michigan decrease in CAUTI 2008-2011 = 25%
Michigan – Barriers to success

• Difficulty engaging clinicians

• Patient and carer expectation

• Customary practices
  – ER, OR, ICU

• Lack of high-level management ‘buy in’
Michigan studies - Recurrent themes

1. Preventing CAUTI is a low priority in most hospitals

2. Those hospitals where UTI prevention is a high priority also focus on non-infectious complications [quality] and have committed advocates

3. External forces [public reporting, patient involvement] have a positive influence
Michigan – Key factors

- In 2008 Medicare/Medicaid stopped paying hospitals for treating preventable UTIs

- Bladder Bundle: Aim to optimize the use of catheters
  - Continual assessment
  - Early removal
  - Question indication
Michigan – Key factors

• Training
  – “Disseminating scientific evidence [alone] is ineffective in changing clinical practice”
  – Use the data as well as talk about it!

• Leadership and advocacy
  – “Leadership plays an important role in infection prevention...The behaviours of successful leaders in preventing CAUTI is adopted by others”
Institutional behaviour

- Team work
  - How good are we?
- Hierarchy
  - Standard procedures
  - Professional judgement
- Communication
  - ‘Joined up care’
- Accountability..? Openness..?
Accountability...?

Phone hacking inquiry
- 3 police investigations
- 113 arrests
- 15 criminal charges
- 4 public officials convicted
- 135 redundancies
- **ZERO DEATHS**

Mid Staffs inquiry
- 1 police investigation
- 3 arrests
- 3 criminal charges
- 0 convictions
- 3 job losses
- **1200 DEATHS**
Leaders and Leadership

• Who / where are the leaders?

• Who *should* be the leaders?
  – Nationally
  – Locally

• Who’s responsibility?
Strategies – National Initiatives

• QUIPP
• CQUIN
• CCGs
• Foundation Trust governors

– Opportunities to use finance and quality as leverage?
Existing tools

• National initiatives
  – HII
  – EPIC
  – Saving Lives  www.dh.gov.uk/publications

• Advice
  – EAUN  www.uroweb.org
  – BAUN  www.baun.co.uk
  – SIGN  www.sign.ac.uk
  – ACA  www.aca.uk.com
  – IPS  www.ips.uk.net
Best strategy

Don’t catheterise!

– Recognise the potential for harm
– Consent?
Strategies - Local

• Develop a policy
  – Indications
    • Minimize unnecessary catheterisation
    • Early removal
  – Correct products in each clinical area
  – Correct insertion technique
    • ANTT?
  – Ongoing care
  – Communication channels
Catheter should be MDT decision

• No routine catheterizations
  – Individualized decision
  – Discuss with patient/carers

• Alternative management
  – Drugs
  – Surgery
    • MITs
  – CISC
  – Sheath
  – (Pads)
ANTT Catheterisation

• Standardized insertion using ANTT principles

• Training
• Assessment
• Annual updates

• **ALL relevant** clinical staff
Conclusions 1

• CAUTI - Recognise scale of problem
  – High risk
  – Expensive
  – Significant negative impact on ‘quality’

• Foster good practice and behaviour
  – Leadership
  – Team work
Conclusions 2

• Multifaceted catheter policy
  – Indications
  – Insertion policy
    • Who should catheterise
  – Correct products
  – Education
  – Assessment
  – Update
  – Audit
    • Report and share

• Board-level support essential
Final Conclusions!

Start having conversations!
“Where there is no vision, the people perish”

*Proverbs 29:18*
Questions and Discussion

• National leadership?
  – Policy guidance
• Consent?
• Who should catheterize?
• How do we reduce catheterisations?
  – Complacency
• Breaking cycles of poor practice?
Additional references

• Coello R et al., J Hosp Inf 2003
• Rowley S, Nursing Times 2001
• Dodgson K et al., SHEA conference 2009
• Saint et al., Infect Cont Hosp Epid 2010
  Jt Comm J Qual Patient Sat 2009
  Infect Cont Hosp 2008
  Clin Infect Dis 2008
Urethritis

- 4 papers
- Mean 9%
- Range 1-18%
- FU Up to 3 years
Prostatitis

- Cuckier et al. 1976 5%
- Perrouin Verbe et al. 1995 33%

Mean 19% FU 5yrs
Nephritis

• No studies in live patients

  But

• Evidence of nephritis in 33% of long-term catheterised patients at post mortem

Gomlin & McCue 2000
Epididymitis

- 7 papers

- Mean 10%

- Range 1-28%

- FU up to 5 yrs