Catheters

“Improving your practice”

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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

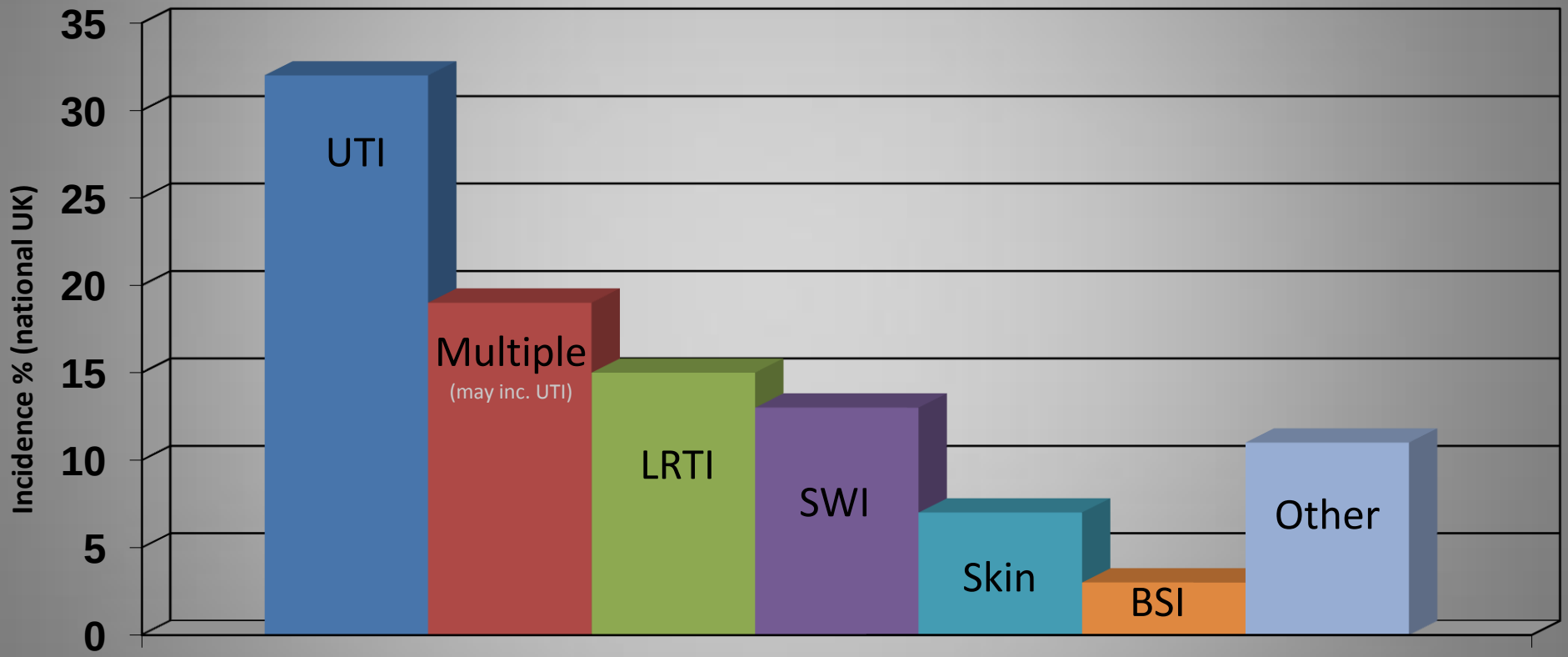
- Death
  - Rarely recorded
  - Coliform bacteraemia
  - Reduced mobility and falls

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

- A single UTI costs **£1327**[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