Next national HAI initiative
What should it be? CAUTI (of course)

Associate Professor Brett G Mitchell
Avondale College of Higher Education

Email: brett.Mitchell@Avondale.edu.au
Twitter: @1healthau
Disclosures

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For those that use Twitter, tweeting information and links during talk @1healthau #ACIPC16
Pre-poll

Brett Mitchell
@1healthau

Final session ACIPC conference. Your thoughts before you hear the argument. Next national HAI initiative should be:

- 47% Surveillance
- 47% Vascular device
- 6% CAUTI
Who would like a UTI / CAUTI?

- As a healthcare professional / ICP
  - High quality care provide
  - Avoid wherever possible preventable infections
  - Don’t want high rates of infection

- As a patient/consumer
  - Physical
    - Frequency (n=8), very painful (n=7), bleeding (n=6), cold/flu like (n=4), stinging (n=3)….
  - Emotional
    - Generally unwell (n=6), normal duties disrupted (n=3)….
  - n=27

(Leydon et al (2010). BMJ, 340, c279)
Why should a CAUTI prevention program be the next national HAI initiative?

1. Frequency
2. Antimicrobial resistance
3. Impact
4. Largely preventable
Why CAUTI?

1. Frequency
Why CAUTI?

1. Frequency
# CAUTI: Frequency

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Author, date</th>
<th>Rank (HA-UTI)</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>Durlach et al, 2012</td>
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<td>Vrijens et al, 2012</td>
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<td>Gordts, 2010</td>
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<td>Belgium</td>
<td>Taylor et al, 2016</td>
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<td>Gravel et al, 2007</td>
<td>2</td>
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<td>Canada</td>
<td>See et al, 2013</td>
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<td>Kanerva et al, 2009</td>
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<td>Lyytikainen et al, 2008</td>
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<td>Egypt</td>
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<td>Finland</td>
<td>Thiolet et al, 2008</td>
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<td>Floret et al, 2006</td>
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<td>Sartor et al, 2005</td>
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<td>French PPS Group, 2000</td>
<td>2</td>
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</tbody>
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For Greece / Cyprus:
- Kritsotakis et al, 2008
- Gikas et al, 2002

For Ireland/Northern Ireland:
- Fitzpatrick et al, 2008

For Hungary:
- Caine et al, 2013

For Iran:
- Lahsaeizadeh et al, 2008

For Italy:
- Lanini et al, 2009
- Durando et al, 2009

(Courtesy Jan Gralton)
CAUTI: Frequency

Australia
- Gardner et al (2014)
  - 6 hospitals
  - HAUTI 1.4% PP, CAUTI
  - 182 acute care facilities
  - HAUTI 1.4% PP
  - 8 hospital, 162,000+ admissions
  - 1.7% incidence

Extrapolate: 95,000 patient / year acquire HAUTI in Australian hospitals
Why CAUTI?

2. Antimicrobial resistance
CAUTI: Antimicrobial resistance

- E. coli is the predominant pathogen isolated in patients (Nicolle, 2013).
- E. coli is listed as a national priority organism "Organisms with high public health importance and/or common pathogens where the impact of resistance is substantial in both the hospital and community settings" (AURA, 2016).
- Antimicrobial resistance may also prolong the duration of illness and increase mortality in patients (World Health Organisation, 2014).
- Antimicrobial resistance has been identified as a predictor of treatment failure especially in patients with hospital-acquired UTI (Koningstein et al., 2014).

As AMR increases, UTIs will become more difficult to treat.
Why CAUTI?

3. Impact
CAUTI: Impact

• Morality…complex…probably not at present (but with AMR…)

• Length of stay
  – 8 hospitals, 162K admissions
  – Multi-state modelling
  – HAUTI associated with extra 4 days in hospital (95%CI 3.1-5.0)

380,000 extra bed days in Australia
Why CAUTI?

4. Largely preventable
CAUTI: Largely preventable

- CAUTIs are by their nature associated with urinary catheters
- Large number of catheters are inserted/used catheters
  - 26% of patients admitted to hospitals have urinary catheter inserted (Gardner et al, 2016).
- Catheter use is largely inappropriate
  - Reduction in catheter use => reduction in CAUTI
- Evidence to suggest that CAUTI initiatives work
CAUTI: Largely preventable

• Unnecessary catheter use and other strategies (e.g. reminder system, stop order etc) work
CAUTI: Largely preventable

- Can be sustained
CAUTI: Largely preventable

Among non-ICUs
- catheter use decreased from 20.1% to 18.8% (P<0.001)
- catheter-associated UTI rates decreased from 2.28 to 1.54 infections per 1000 catheter-days (P<0.001)
What could a CAUTI initiative look like?

- Look to other models…. NSW, Scotland, US
- Multifaceted programs
- Reduce catheter use
- Correct and standardised insertion
- Early removal
- Surveillance and feedback (you are right Phil, vote for me is a vote for Phil)
One nation, many States (& Territories)

But is possible
Conclusion

1. Frequency
2. Antimicrobial resistance
3. Impact
4. Largely preventable

CAUTI
Who would like a UTI / CAUTI?
Thank you
What should the next national HAI initiative be?

Discussion and time to vote via app.
Go to program, find this session and vote

Professor Marilyn Cruickshank
(Chair)
Professor Lindsay Grayson, Dr Phil Russo, A/Prof Brett Mitchell
References