Name of the speaker: BIRGITTA LYTSY, SWEDEN

☑️ I have no link of interest.
CATHETER ASSOCIATED URINARY TRACT INFECTIONS

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Uppsala University Hospital Hospital
Sweden
Closing the gap between best practise and actual practise in the wards to reduce catheter-associated urinary tract infections (CAUTI)
Uppsala, Sweden

- 10 million inhabitants
- 10 university hospitals
- 120 regional hospitals
- 25,000 hospital beds

Majority (>95%) of hospitals is public and funded by taxes
Uppsala University Hospital

Region of 3 million inhabitants

1100 beds

80 wards 20-25 patients

5 intensive care units
Prevalence HAI UUH 10-12%
Prevalence HAI

• Low and middle income countries
  10-15 %

• High income countries
  5-10%

www.who.int
Swedish HAI

Every year:

- Prevalence 11%
- Incidence 6%

65,000 Swedish patients

650,000,000 million Euro

10% of budget for somatic care in Sweden

1,500 patients die every year (4 patients every day)

www.skl.se
Sweden

✓ Clean water
✓ Good ventilation
✓ Safe and organised sanitation, waste management and sharps
✓ One patient per bed
Standardised and organised in Sweden

Cleaning
Disinfection
Sterilization
Swedish laws

Basal hygien inom hälso- och sjukvården m.m.

First version 2007

Basal hygien i vård och omsorg

Revised 2015
This is a fact

"No country, no health-care facility even within the most advanced and sophisticated health care systems can claim to be free of the problem of health-care associated infections."

www.who.int
HAI
Preventable proportion?
Catheter-associated urinary tract infections (CAUTI) reduced by 70 %

Evidence based guidelines to reduce CAUTI
Gap

Evidence

Practical work

Adaped from Berenholtz, US ICPIC 2017
Is it enough to have evidence-based guidelines and laws?
What else must be done for closing the gap?

WHAT TO DO?
Suggestions?

• More guidelines?
• Education?
Major Article

Does educating nurses with ventilator-associated pneumonia prevention guidelines improve their compliance?

Sami M. Aloush *

*Adult Health Nursing Department, Faculty of Nursing, Al albayt University, Mafraq, Jordan
More guidelines?

Memo
Date: February 2012
To: All Staff
From: Management

Starting next Monday, all staff will be expected to implement the new procedure we just tested in the 3 West med/surg unit.

It worked there so in order to save time, everyone will now start doing the new procedure like 3 West. Thank you for your cooperation.

More written policies?
"The creation of written policies will not improve rates of infection if clinical practises are not ammended to reflect those policies” Hepburn-Smith, 2015
1. IPC programmes
   R1a Strong
   R1b GPS

2. Evidence-based guidelines
   R2 Strong

3. Education & training
   R3a Strong
   R3b GPS

4. Surveillance
   R4a Strong
   R4b Strong

5. Multimodal Strategies
   R5a Strong
   R5b Strong

6. Monitoring, audit & feedback
   R6a Strong
   R6b Strong

7. Workload, staffing & bed occupancy
   R7 Strong

8. Built environment, materials & equipment
   R8a GPS
   R8b Strong
Multimodal strategies

HAI ARE MULTIFACTORIAL – MULTIMODAL STRATEGIES ARE NEEDED
Close the gap

HCAI are multi-factorial

Several elements have to be addressed
Monitoring audit and feedback
Strategy (toolkit)

- Build it
- Teach it
- Check it
- Sell it
- Live it
Incidence HAI UUH 6%
Uppsala University Hospital 2016

- Four geriatric wards
- One orthopaedic ward
- 1 Jan – 31 Dec 2016
The “bundle” to reduce CAUTI

I. Find alternatives
II. Material and size
III. Aseptic insertion
IV. Aseptic maintenance
V. Daily review of removal
PPS urinary catheter at UUH in November 2015
Prevalence of urinary catheter at UUH 26%. No of indications: 38
50 guidelines for urinary catheters (80 words) at the beginning
Breakthrough Series Model for Improvement

Paul Batalden and Don Berwick, 1994  www.ihi.org
National project
2008-2009

Resultat VRISS Akademiska
Projekt 6 nov 2008 - 10 december 2009
Mål: att halvera andel VRI, dv till 5.6%
Resultatet är baserat på de teams som rapporterat i andel VRI (67%)

11.3% for November 2008
4.2% for November 2009
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Model for Improvement

Aim

Measures

Ideas

Act

Plan

Study

Do

Institute for Healthcare Improvement

www.sf2h.net
Five wards at UUH in 2016

• Specific aims:
  Reduce CAUTI
  Reduce catheter-days
  Increase compliance with hand hygiene
Teams in the five wards

1 doctor
1 nurse
1 nurse’s aid

Professionals
Experienced
Experts
Honor in saving lives

Respect
their knowledge

NOT NOVICES
It is the people in the system who best know what changes are needed

These people must meet to exchange ideas

Ideas!!!
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Model for Improvement

Act

Plan

Study

Do

Aim

Measures

Ideas

Test the ideas
Test changes in small scale

Repeatedly – refining the changes

Make one change at a time and evaluate, refine
Timeline 2016

Jan Data
Feb Data
March Data
April Data
May Data
June Data
July Data
Aug Data
Sept Data
Okt Data
Nov Data
Dec Data

LS 1 9/2
LS 2 22/4
LS 3 28/9
LS 4 9/12
Most important changes
Find alternatives to the catheter

• Avoid the catheter

• Alternatives:
  Intermittent catheterization
  Uridomes for men
  Inkontinens protections
  Help the patient to the toilet

Bladderscan
Clear medical indication

- Acute "stop" (urinary retention)
- Failure of vital functions
- Prolonged operations
- Urological and gynecological operations
• One guideline
• Clear medical indication
• Doctor’s responsibility
• Documentation

• Aseptic insertion and maintenance
Reminders every day

- **Ward 1**: screen saver
- **Ward 2**: one person responsible during every morning round
- **Ward 3**: yellow magnet on billboard in the corridor
- **Ward 4**: a new component on the checklist
- **Ward 5**: nothing
Changes must fit into the specific routines “the way we do things”
Result
Ward 1  Feb 2016-Feb 2017

42 % reduction of catheter-days in one year
Ward 2  Feb 2016-Feb 2017

61 % reduction of catheter-days in one year
Ward 3  Feb 2016-April 2017

20 % reduction of catheter-days in one year
Best measurement: Catheter-days

<table>
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<th>Datum</th>
<th>Antal patienter på avdelningen kl 07.00</th>
<th>Antal patienter med KAD på avdelningen kl 07.00</th>
<th>Hur många av dessa är kroniska?</th>
<th>Antal nya KAD under senaste dygnen</th>
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Defective system for measuring incidence CAUTI

30A

70C2

Tierp 2

Feb | Maj | Okt
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Incidens | Antal
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Feb | Maj | Okt
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Incidens | Antal
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Feb | Maj | Okt
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Incidens Antal

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Feb | Maj | Okt
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Incidens | Antal
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Feb | Maj | Okt
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Incidens | Antal
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One year later...

70C2

Feb  | Maj  | Okt  | Feb  | April
Patdagar | KAD-dagar

www.sf2h.net
One year later...

![Graph showing data for Patdagar and KAD-dagar over time from February to April.]
One year later...

![Graph showing data over time with Patdagar and KAD-dagar categories.]
Another medical ward

LE avd 1 2017-2018

Patdagar  KAD-dagar

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No of new catheters decreased by 50 % in one year
Improvement work is not research to develop new medical knowledge

.... it´s rather a way to put it into practice!
Closing the gap between best practise and common practise

MULTI-MODAL STRATEGY
PERSISTANT WORK
DATA FOR ACTION INCIDENCE, MORTALITY AND COST
Merci!