To Dip or Not To Dip – a patient centred approach to improve the management of UTIs in the Care Home environment

Sharing success AMS Workshop Leeds & London 2016

Elizabeth Beech
Pharmacist - NHS Bath and North East Somerset CCG
National Project Lead Healthcare Acquired Infection and Antimicrobial Resistance - NHS Improvement
elizabeth.beech@nhs.net    @elizbeech
To Dip or Not To Dip – a patient centred approach to improve the management of UTIs in the Care Home environment

• This is an evidence based systematic approach to improve the diagnosis and management of UTIs in residents in all 23 Nursing Homes in Bath and North East Somerset - Residential homes were not included

• It was delivered by the CCG care home pharmacist service working during 2015-16, aligned to the existing GP enhanced nursing home service, and funded by the CCG as a quality improvement project in 2014 - <£10K

• Why did we do this? Local clinical audit in 2013 identified residents were frequently prescribed antibiotics (19 - 48% of residents per care home) based on use of urine dip sticking
Scatter plot of both National Antibiotic QIPP indicators, Q2 Jul-Sep 2013-14, for all GP practices in England, with practices in NHS Bath and North East Somerset identified.
To Dip or Not To Dip – early results
please do not publish as submitted to RPS2016

Early evaluation shows

• 56% reduction in the proportion of residents who had an antibiotic for a UTI
  143 / 690 residents had at least one antibiotic for a UTI in 6 month period
  Jul-Dec 2015 after implementation

• 67% reduction in the number of antibiotic prescriptions – 153 fewer in 8 NH
  with pre and post data

• 82% reduction in the number of residents prescribed antibiotic prophylaxis
  13 / 690 residents had antibiotic prophylaxis in 6 month period Jul-Dec 2015
  after implementation

• Unplanned hospital admissions for UTI, urosepsis and AKI reduced in NH
  population following implementation
To Dip or Not To Dip - the what we did

- **Clever commissioning** – CCG incentivised nursing homes using a shadow CQUIN

- **The care home pharmacist team** – already existed, so extra funding was obtained to allow them to develop & deliver the intervention

- **Documentation and education** – used SIGN 88 guidance to structure documentation for UTI diagnosis, and implemented within an educational bundle in every nursing home delivered by the pharmacist

- **Communicated** with everybody – but could have done this better

- **Monitoring** – for unintended harm resulting in urosepsis

- **Evaluation** – pre and post audit occurred and a census
Older patients (>65) with suspected UTI (urinary tract infection)

**Guidance for Care Home staff**

- Complete 1) to 4) and patient details and fax to GP. Original to patient notes.
- **DO NOT PERFORM URINE DIPSTICK** – No longer recommended in pts >65 years
- CLEAR URINE – UTI highly unlikely
- Consider MSU if possible if ≥ 2 signs of infection (especially dysuria, Temp>38°C or new incontinence)

1) Signs of any other infection source?

2) Patients who can communicate symptoms: Y / N

3) All Patients:

<table>
<thead>
<tr>
<th>NEW ONSET Sign/Symptom</th>
<th>What does this mean?</th>
<th>Tick if present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysuria</td>
<td>Pain on urinating</td>
<td></td>
</tr>
<tr>
<td>Urgency</td>
<td>Need to pass urine urgently/new incontinence</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>Need to urinate more often than usual</td>
<td></td>
</tr>
<tr>
<td>Suprapubic tenderness</td>
<td>Pain in lower tummy/above pubic area</td>
<td></td>
</tr>
<tr>
<td>Haematuria</td>
<td>Blood in urine</td>
<td></td>
</tr>
<tr>
<td>Polyuria</td>
<td>Passing bigger volumes of urine than usual</td>
<td></td>
</tr>
<tr>
<td>Loin pain</td>
<td>Lower back pain</td>
<td></td>
</tr>
</tbody>
</table>

4) Catheter

<table>
<thead>
<tr>
<th>Sign/Symptom</th>
<th>Tick if present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature above 38.3°C or below 36°C or shaking chills (rigors) in last 24 hours</td>
<td></td>
</tr>
<tr>
<td>Heart Rate &gt;90 beats/min</td>
<td></td>
</tr>
<tr>
<td>Respiratory rate &gt;20 breaths/min</td>
<td></td>
</tr>
<tr>
<td>Blood glucose &gt;7.7 mmol/L in absence of diabetes</td>
<td>Diabetic? Y / N</td>
</tr>
<tr>
<td>Bloods taken?</td>
<td>WCC:</td>
</tr>
<tr>
<td>WCC &gt;12/µL or &lt; 4/µL</td>
<td>CRP:</td>
</tr>
<tr>
<td>New onset or worsening confusion or agitation</td>
<td></td>
</tr>
</tbody>
</table>

If YES: Reason for catheter:

Temp / Perm

5) GP Management Decision - circle all which apply:

- Review in 24 hours
- Mid Stream Urine specimen (MSU) – if possible if ≥ 2 signs of infection (especially dysuria, Temp>38°C or new incontinence) or failed treatment
- Uncomplicated lower UTI
- Pyelonephritis

Prescribing guidance at [http://www.bcapformulary.nhs.uk/5-infecions](http://www.bcapformulary.nhs.uk/5-infecions)

Antibiotic prescribed:

Signed: ____________________________ Date: ____________________________

26/1/2015

Healthier, Stronger, Together
Do not send urine for culture in asymptomatic elderly with positive dipsticks.

Only send urine for culture if two or more signs of infection, especially dysuria, fever > 38°C or new incontinence.

Do not treat asymptomatic bacteriuria in the elderly as it is very common.

Treating does not reduce mortality or prevent symptomatic episodes, but increases side effects & antibiotic resistance.

Do not treat asymptomatic bacteriuria in those with indwelling catheters, as bacteriuria is very common and antibiotics increase side effects and antibiotic resistance.

Treatment does not reduce mortality or prevent symptomatic episodes, but increase side effects & antibiotic resistance.

Only send urine for culture if features of systemic infection. However, always:
- Exclude other sources of infection.
- Check that the catheter drains correctly and is not blocked.
- Consider need for continued catheterisation.
- If the catheter has been in place for more than 7 days, consider changing it before/when starting antibiotic treatment.

Do not give antibiotic prophylaxis for catheter changes unless history of symptomatic UTIs due to catheter change.

http://www.sign.ac.uk/guidelines/fulltext/88/index.html


26/1/2015 Mandy Slatter/Elizabeth Beech, BANES CCG. Contact Elizabeth.beech@nhs.net
To Dip or Not To Dip - what we do next

• **Commissioning** – the CCG will fund continuation of the model, and will adopt a similar approach for the AKI programme

• **The care home pharmacist team** – has extended to cover residential homes so we will now audit UTI management here now

• **Documentation and education** – need to review and improve use of the documentation and continue a rolling education bundle

• **Communicated with everybody** – but could have done this better and now need to share the results locally and nationally

• **Monitoring** – retrospective audit in all nursing homes every 6 months to produce a run chart for CCG care home quality dashboard

• **Evaluation** – need to continue to improve antimicrobial stewardship and documentation **lots still to do**
Antibiotic prescribing for UTI in all Nursing Homes over 6 month period post implementation

Antibiotic choice as a proportion of 204 antibiotic prescriptions for UTI in 143/690 residents in 22 nursing homes - after implementing use of Sign 88 diagnostic criteria 6 months Jul-Dec 2015

- Nitrofurantoin: 66
- Trimethoprim: 24
- Cefalexin: 8
- Co-amoxiclav: 2
- Ciprofloxacin: 23
- Amoxicillin: 81
To Dip or Not To Dip – a patient centred approach to improve the management of UTIs in the Care Home environment - Key messages for CCG reporting to NHSE

- Use of an evidence based algorithm to diagnosis UTI in nursing home residents does improves care
- 56% reduction in the number of residents prescribed antibiotics for a UTI based on a urine dip stick test
- 82% reduction in the number of residents prescribed antibiotics prophylactically
- 67% reduction in the number of antibiotic prescriptions
- Improved appropriate management of UTI
- Reduction in unplanned admissions for UTI, urosepsis and AKI
- Reduced calls to GP practices for inappropriately diagnosed UTI
- Include hydration messages within the educational content
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Published as an Innovation poster at RPS2015
Shared the concept with many CCGs, some are adopting/adapting
Submitted to RPS2016

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