Improving the management of UTI in Nursing Homes: An antibiotic stewardship intervention

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Cornwall's Nurse Led ‘Bug and Drug Project’

- Innovative Joint venture with Local Authority Public Health and Royal Cornwall Hospitals Trust
- Funding from Health Education South West Innovation Scheme
- First of its kind in UK
- Part of Cornwall's response to the Governments 5 Year Antimicrobial Resistance Strategy which also includes Cornwall Antimicrobial Resistance Group (CARG)
- Two Lead Nurse Educators funded for 1 year until September 2017 then continuous funding from Royal Cornwall Hospital Trust
The Focus On UTI management...

- Antibiotic use is the single biggest driver for AMR and as such reducing unnecessary antibiotic use is key to slowing the evolution of AMR.

- UTI is the second most common clinical indication for antimicrobial treatment.

- Approx only 25% of patients treated for UTI have a UTI.

- Audits identified residents of care homes were frequently prescribed antibiotics (19% - 48% of residents per care home) based on use of urine dip sticking - which guidelines do not support.
1 hour teaching session to care homes
“To Dip or Not to Dip”  
(Elizabeth Beech, Bath 2015)

- 56% reduction in residents who had antibiotic for UTI
- 67% reduction in total number of antibiotic prescriptions
- 82% reduction in prescriptions of antibiotic prophylaxis
- Reduced unplanned admissions to acute setting for UTI, uro-sepsis, Acute kidney injury
• Achieve the objectives and ethos of project

• Make practice in line with evidence using SIGN 88 Guidance

• An aid for nursing home staff & confidence when dealing with relatives

• Make the G.P referral ‘conversation’ more concise and thorough

• Hopeful reduction in the amount of misdiagnosed UTI’s

• Education included preventing UTI’s and AMR awareness

To Dip or Not To Dip
**Results from the pilot**

<table>
<thead>
<tr>
<th></th>
<th>Pre intervention in 4 nursing homes (Oct-Dec 2016)</th>
<th>Post intervention in 4 nursing homes (Jan-March 2017)</th>
<th>Difference pre and post intervention in 4 nursing homes</th>
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<tbody>
<tr>
<td>N of acute course antibiotic prescriptions for UTI / all residents prescribed an acute course antibiotic for UTI</td>
<td>23/157 7.6%</td>
<td>8/157 0.6%</td>
<td>15 fewer antibiotic prescriptions (66% relative reduction)</td>
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<tr>
<td>N of residents prescribed antibiotic prophylaxis for UTI / all residents</td>
<td>12/157 7.6%</td>
<td>1/157 0.6%</td>
<td>7% absolute reduction in the proportion of residents prescribed prophylaxis (11 fewer residents)</td>
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Estimated cost saving in 4 nursing homes over 3 months - £3700
Cost modelling for 235 nursing and residential homes over 12 months - £500,000
The decision algorithm gives very robust guidance on what to look for in terms of number and type of symptoms and how to exclude other infections which may be from respiratory, gastrointestinal or skin/soft tissue issues.

The UTI Tool is clear and straightforward to use. The tick boxes give full guidance for all areas to assess and allow for evidence that these actions have been taken.

It would be incredibly useful if this same rationalised and detailed approach could also be established with the respiratory, gastrointestinal and skin use of antibiotics to guide and evidence the required actions in those areas.
What this sparked...

- Sharing work locally and nationally
- Nursing Times Award Finalist
- Publication in the Journal of Medicines Optimisation Dec 17
- Motivation to reduce dipstick to diagnose UTI in secondary care.
- Interest in the use of this strategic systematic approach to the management of other conditions
The future

- UTI tool widely used throughout Cornwall
- GP leads unanimous support to launch the tool countywide
- Added to the Care home standards
- The “LEAKING THE NEWS” Road Show
- CARG and Bug and Drug Project receiving national recognition.
- Use of e-learning: Video links and webinars for capturing a wider audience.

Care + Compassion | Inspiration + Innovation | Working Together | Pride + Achievement | Trust + Respect
Empowering carers and nurses in various settings, to make the link between basic nursing care not only to achieve measurable improvement in patient outcomes... but also to the wider global health challenge that AMR presents.
Thank you

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