A regional root cause analysis of major diabetes-related lower limb amputations in the North East of England

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Total major and minor amputation rates: North East 2008 - 2014

Note: Incomplete data for 2007/8
Major amputations per 1,000 adults with diabetes

Network CCG

Major amputation - surgical removal of the leg above the ankle (usually below, through or above the knee)
Aims

• Perform a root cause analysis of all diabetes related major lower limb amputations in the North East of England
• To examine the factors contributing to major diabetes-related lower limb amputation
• Investigate preventable causes of amputation
• Reduce major diabetes related amputations
• Long-term project
Methods

- Northern Diabetes Foot Care Network
- Trialled, developed and agreed data collection tool
- MDT case note review of all major amputations ASAP following amputation
- First interim analysis
- 1 November 2013- 31 October 2014
### Results - demographics

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<table>
<thead>
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<tbody>
<tr>
<td>Amputations (n)</td>
<td>84</td>
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<tr>
<td>BKA (%)</td>
<td>63</td>
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<tr>
<td>Male (%)</td>
<td>78</td>
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<tr>
<td>Type 2 diabetes (%)</td>
<td>86</td>
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<tr>
<td>Renal Failure (%)</td>
<td>27</td>
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<tr>
<td>Partially sighted (%)</td>
<td>12</td>
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<td>Non-elective admission (%)</td>
<td>64</td>
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<td>Previous minor amputation (%)</td>
<td>34</td>
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Results – treatment timeline

Median 18.5 (5-33) days
Results – process of care

- 19% not seen by diabetes foot MDT within 6 months of major amputation
- 21% antibiotics not given in accordance with trust protocol/ microbiological sensitivities
- 26% not seen by member of diabetes foot MDT within 24h
- 10% not seen by member of diabetes foot MDT within 1 week
- 36% no foot imaging performed
- 38% patient concordance contributed
Areas in which care thought to be suboptimal

- Late referral to MDT
- Antibiotic issues
- Poor attendance at podiatry
- Late presentation
- Lost to follow up
Preventable amputations (n=8, 14%)
Conclusions

• Proof of feasibility
• Local & regional lessons
• Early referral to MDT
• Antibiotics
• Ongoing process
Collaborators

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