ASSIST-CKD
A programme to spread eGFR graph surveillance for the early identification, support and treatment of people with progressive chronic kidney disease

ASSIST CKD:
Scaling up an intervention to improve the management of progressive chronic kidney disease

Dr Fergus Caskey
Lead for the quantitative evaluation

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UK Prevalent population on Renal Replacement Therapy

Late presentation rate for RRT

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### ASSIST-CKD

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<table>
<thead>
<tr>
<th>Consequences of late referral</th>
<th>Benefits of early referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low prevalence of permanent access</td>
<td>Greater proportion with permanent access</td>
</tr>
<tr>
<td>Delayed referral for transplant</td>
<td>Reduced need for urgent dialysis</td>
</tr>
<tr>
<td>Greater initial hospitalisation rate</td>
<td>Reduced hospital LOS and costs</td>
</tr>
<tr>
<td>Higher mortality</td>
<td>Improved survival</td>
</tr>
<tr>
<td>Reduced patient choice of RRT modality</td>
<td>Greater choice of treatment options</td>
</tr>
<tr>
<td>Anaemia and bone disease</td>
<td>Improved nutrition</td>
</tr>
<tr>
<td>Severe hypertension &amp; fluid overload</td>
<td>Better CVD and comorbidity management</td>
</tr>
<tr>
<td>Worse psychosocial adjustment</td>
<td>Delay need to initiate RRT</td>
</tr>
</tbody>
</table>

Overall 2-fold increased risk of death in group referred late (Chan Am J Med 2007)

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Additional costs associated with late referral

- Increased length of stay (8.7 days)
- Missed opportunities to delay/prevent ESRD
- No access to pre-emptive transplantation
The Intervention

Age ≤ 65y, eGFR ≤ 50ml/min/1.73m² OR Age > 65y, eGFR ≤ 40ml/min/1.73m²

Graph of eGFR over time reviewed and identified as “high risk” by lab scientist

Graph and tailored advice sent by post to primary care physician

Example graph
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Evaluation from pilot site (HEFT Birmingham)

Survey of Primary care physicians:
- 74% found the reports useful
- 41% changed management

- 370,000 eGFR results
- 12,000 eGFR graphs
- 60 per week ‘at risk’
- Odds ratio of mortality = 2.8
- Odds ratio of dialysis = 14

4 hours work per week by clinical scientist
£12,000 per year

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<table>
<thead>
<tr>
<th>Year</th>
<th>HEFT %</th>
<th>E, W &amp; NI %</th>
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</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>9.9</td>
<td>20.6</td>
</tr>
<tr>
<td>2010-11</td>
<td>9.1</td>
<td>20.1</td>
</tr>
<tr>
<td>2011-12</td>
<td>7.4</td>
<td>19.5</td>
</tr>
<tr>
<td>2012-13</td>
<td>5.7</td>
<td>18.6</td>
</tr>
<tr>
<td>2013-14</td>
<td>4.9</td>
<td>18.0</td>
</tr>
</tbody>
</table>
To implement and evaluate a programme reporting eGFR graphs to primary care

- Up to 20 renal units across the UK
- 1 year funding for all lab costs (Health Foundation)
- Mixed methods evaluation
  - Quantitative
  - Qualitative
  - Economic

Step Wedge Randomised Controlled Trial

Step 4 sites

Step 3 sites

Step 2 sites

Step 1 sites

Baseline  t=1  t=2  t=3  t=4

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In the medium-long term system will pay for itself if for every 2 million population served dialysis delayed for one year in a single person.

Greater use of home therapies.

Reduced LOS
Reduced transport costs
Reduced drug costs (EPO)

The following are important at all stages of the care pathway:
- Quality of life
- Shared information
- Choice for patients
- Continuing education
- Clinical care
- Nutritional support
- Medicines management
- Treatment with respect and dignity
- Psychological and social support for patients and carers

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Implications for Primary Care

• A simple but effective evidence-based intervention based in the pathology laboratory to highlight CKD patients at highest risk
• No major impact on workload, but enhances practice within current capacity
• Number of graphs received is low (2-3 per GP practice/month)
• Improved co-ordination between primary care and secondary care
• Better referral management (no significant increase seen at pilot site) and anticipated reduction in unplanned bed days (via reduced emergency starts on dialysis)
• We hope to see delays in kidney disease progression and a reduction in numbers developing end-stage kidney disease
Progress to date

- All first wave sites, except one, up and running
- Evaluation of set-up phase complete
- Learning events 30 November 2015 and 23 May 2016
- Qualitative evaluation of phase one sites about to commence (labs/primary care/renal unit staff)
- Communications – newsletters
- Publications, including protocol
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Project Structure

• **Core operational team:** Project Lead, Project Manager, 4 Work Stream leads and other critical personnel. Overall responsibility for project operations

• **Patient project team:** Lead plus 9 others UK-wide, provide patient leadership and cross-cutting patient involvement

• **Advisory and Dissemination Board:** provide directional stewardship to achieve spread and scale

• **Evaluation Advisory Group:** support and scrutinise the activities of the Evaluation Work Streams

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Kidney Research UK
Funding research to save lives
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In conclusion:
• Delivering better value by improving quality
• Importance of a long-term view
• Investing early in the pathway to deliver benefits throughout
• Integrated whole-system approach – intervention and economics
• Reduce variation and increase cost-effectiveness

Contact us: assist@kidneyresearchuk.org