Ambulatory Care Pathways

19th & 20th April 2016

Summary Report
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</tbody>
</table>

Thank You!

The thoughts, ideas and actions of the event delegates are enclosed within this feedback document. The event Sponsors and Reform Managers involved would like to take this opportunity to thank everyone for their contribution, enthusiasm and innovation.

Contacts

If you have any queries or information relating to this document please contact:

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Introduction

**Background to Improvement Event**

Sunderland Clinical Commissioning Group (SCCG) Out of Hospital (OOH) Board commissioned a ‘Whole System’ Ambulatory Emergency Care (AEC) Work Program for 2016/17. The group is led by Natalie McClary, Service Reform Manager, Dr Tracey Lucas, Executive GP, and is supported by the National AEC Network. The work program consists of the following five key areas, further information regarding the work program is identified within appendix one:

1. **Ambulatory Care Pathways and Point of Care (PoC) Testing** – Review a number of ambulatory pathways across the whole unscheduled care system
2. **Ambulatory Until Proven Otherwise** - Senior Decision Making Pilot between GPs, Recovery at Home (RAH) and the AEC Unit – Patient to the right place at the right time
3. **Direct Access to CHS AECU** – Develop relationships between RAH, GPs and NEAS/Advanced Practitioners (APs) to pilot direct access for those professionals to bypass ED and go straight to AECU or RAH
4. **Patient Engagement** – Develop a patient and staff engagement strategy - How do we engage patients and staff across the whole system/pathways
5. **Primary Care IT Support** - Use Map of Medicine (MoM) technology - clinicians (GPs) to have instant access to locally customised pathways, centrally controlled referral forms and clinical information

The purpose of the event was to support the first key area identified within the above work program thus working within the programs vision, compact and method identified within figure one.

**Figure One**

**Vision**

“Clinical discussion between key partners to ensure the right patients benefit from AEC, in the right place, time and by the right professional thus providing a simple and seamless pathway to patients across different sectors - AEC is not a location but a philosophy of care”

**Compact**

- Innovation is a priority, how can things be different?
- Target patients that will most benefit from AEC
- Change hearts and minds

**Method**

Review and redesign of pathways/services to achieve improvement, maximising quality, patient experience and value for money.
The following scope and outcomes were identified for the workshop:

Workshop Scope
“Develop seamless AEC Pathways Deep Vein Thrombosis (DVT)/Chronic Obstructive Pulmonary Disease (COPD)/Cellulitis across acute, primary and community services, supporting the wider AEC Whole System Work Program”

Workshop Outcomes
 Patients to be treated in the right place, at the right time and by the right professional thus resulting in better patient and professional experience
 Patients having better management of their condition
 Value for money
 Support Workforce development
 Support Emergency Department (ED) and North East Ambulance Service (NEAS) performance targets
 Reduce patient Length of Stay (LoS)
 Reduce admissions and ED attendances

The workshop was not a Kaizen in its true sense but more of a visioning and engagement event however a number of LEAN tools and techniques were used to help review current patient flows and develop different ways of working:

 Process mapping
 Goal Setting (Specific, Measureable, Attainable, Realistic and Time-bound (SMART))
 COMPACT
 7 Wastes
 5 Whys
 Plan Do Study Act (PDSA)
 7 Flows of Medicine

Sponsors

A sponsor provides the support and sets the direction/challenge for the workshop; sponsors identified for this workshop are outlined below.

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debbie Burnicle</td>
<td>Deputy Chief Officer, Sunderland Clinical Commissioning Group</td>
</tr>
<tr>
<td>Michelle Arrowsmith</td>
<td>Chief Operating Officer, South Tyneside NHS Foundation Trust</td>
</tr>
<tr>
<td>Sean Fenwick</td>
<td>Director of Operations, City Hospitals Sunderland NHS Foundation Trust</td>
</tr>
</tbody>
</table>

At the beginning of the workshop Sponsors re-enforced and elaborated on the expected outcomes with team members:

 What the event is and isn’t – not a ‘true’ Kaizen but a visioning and engagement event to review and improve pathways, use it as an opportunity to try and resolve issues
- Review current state of pathways and map the ideal future state - identifying **roles and responsibilities** of each provider within the whole system pathway
- Some pathways have been reviewed and implemented previously – **why are they not working?**
- Think outside of silos 3am 'Vs' 3pm
- Identify products to get us to the future state (enablers) – some of which are expected to be developed during the event!
- Develop **action plans** for each pathway to go live that are Specific, Measurable, Attainable, Relevant and Timely (SMART):
  - **Commitment and ownership** from all providers to continue to work on pathway implementation
  - Ideas of how we **change culture and behaviour** of staff in relation to AEC
  - Expect healthy debate and challenge regarding **clinical governance and risk sharing** e.g. PoC and Safe Clinical Handovers within pathways
- **Use us** - tell sponsors about the barriers identified
- Use interfaces available – face to face discussions
- **Celebrate what is working well!**

## Team Leaders

The workshop and team leads are identified below alongside a summary of their role within the workshop.

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>RPIW Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natalie McClary</td>
<td>SCCG Service Reform Manager</td>
<td><strong>Workshop Lead</strong> - Responsible for data collection prior to the event, facilitate team work during the event and co-ordination of the event overall.</td>
</tr>
<tr>
<td>Angela Farrell</td>
<td>SCCG Service Reform Manager</td>
<td><strong>Team Lead</strong> – Provides much of the support throughout both the week and preparation for the workshop however works very closely with the workshop lead i.e. they are a team</td>
</tr>
<tr>
<td>Helen Turnbull</td>
<td>SCCG Continuous Improvement Manager</td>
<td></td>
</tr>
</tbody>
</table>

## Team Members

The most important role within the event are the team members i.e. the people who do the day to day work and can inform how future process can be improved

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Adams</td>
<td>Advanced Practitioner, NEAS</td>
</tr>
<tr>
<td>Graeme Allen</td>
<td>IT Digital Solutions Snr Analyst, Sunderland CCG</td>
</tr>
<tr>
<td>Catherine Baldrige</td>
<td>Medicines Management Lead, STFT</td>
</tr>
<tr>
<td>Daisy Barnetson</td>
<td>Senior Reform Manager, Sunderland CCG</td>
</tr>
<tr>
<td>Mark Beadling</td>
<td>GP Alliance</td>
</tr>
<tr>
<td>Raj Bethapudi</td>
<td>Executive GP, Sunderland CCG</td>
</tr>
<tr>
<td>Dave Bramley</td>
<td>ED Consultant, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Name</td>
<td>Position/Location</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>John Bulmer</td>
<td>IT Digital Solutions Snr Analyst, Sunderland CCG</td>
</tr>
<tr>
<td>Sandra Collinson</td>
<td>ED Nurse Practitioner, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Paul Cutler</td>
<td>Recovery at Home, STFT</td>
</tr>
<tr>
<td>Delwen Durham</td>
<td>RAH Nurse, STFT</td>
</tr>
<tr>
<td>Andrew Hawthorne</td>
<td>Acute Physician, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Libby Hodges</td>
<td>AECU Unit Manager, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Lisa Kempster</td>
<td>RAH Nurse, STFT</td>
</tr>
<tr>
<td>Jim Keyworth</td>
<td>Service Improvement Manager, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Fadi Khalil</td>
<td>Executive GP, Sunderland CCG</td>
</tr>
<tr>
<td>Tracey Lucas</td>
<td>Executive GP, Sunderland CCG</td>
</tr>
<tr>
<td>Jacqui McLoughlin</td>
<td>Operational Lead, NDUC</td>
</tr>
<tr>
<td>Elizabeth Mallett</td>
<td>Senior MO Pharmacist, Sunderland CCG</td>
</tr>
<tr>
<td>Ala Mohamed</td>
<td>ED Consultant, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Samuel Parker</td>
<td>GP, GP Alliance</td>
</tr>
<tr>
<td>Gill Potts</td>
<td>Pharmacist, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Rob Rutherford</td>
<td>Sunderland CCG</td>
</tr>
<tr>
<td>Jackie Spencer</td>
<td>Commissioning Manager, Sunderland CCG</td>
</tr>
<tr>
<td>Sharon Stothard</td>
<td>Respiratory Nurse Specialist, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Tracey Teasdale</td>
<td>GP Alliance</td>
</tr>
<tr>
<td>Anthony Watson</td>
<td>Strategic Lead AEC, City Hospitals Sunderland</td>
</tr>
<tr>
<td>Sharon Williams</td>
<td>Advanced Practitioner, NEAS</td>
</tr>
<tr>
<td>Hannah Willoughby</td>
<td>MO Pharmacist, Sunderland CCG</td>
</tr>
</tbody>
</table>
**Project Forms**

The project form summarises the event and scope, as well as identifying the ‘current state’ of pathways. There are three project forms in total, one for each process/pathway. Each form is identified within appendix two, the form below summarises common key issues and concerns across all three pathways.

---

**Improvement Event Project Form**

**Improvement Event Name:** Whole System AEC Pathways – COPD/DVT/Cellulitis  
**Date:** 19 & 20 April 2016

**Sponsor:** Debbie Burnside, Michelle Arrowmith and Sean Fenwick  
**Workshop/Team Leader:** Natalie McGarity (Workshop Leader) Angee Farrell, Jeanne Henderson and Helen Turnbull (Team Leaders)  
**Process Owner:** Paul Gaunt, Anthony Watson, Tracey Lucas

**Team Members:**
- Hannah Wilkensburg: Medicines Optimisation Manager  
- Paul Hough: Executive GP  
- Sharon Williams: Advanced Practitioner  
- Jackie McLaughlin: NDCG  
- Jackie Science: Senior Reform Manager (CM Lead)  
- Samuel Parker: Care Start GP  
- Delwen Durham: RAH Representative  
- Lisa Kempster: RAH Nurse  
- Catherine Oldridge: Medicines Management Lead, STFT  
- Tracey Tindle: STFT  
- Andrew Hawthorne: Consultant Acute Physician  
- Elizabeth Hedges: Unit Manager – AECU, CHS  
- Jim Keyworth: Improvement Team, CHS  
- Sharon Stobbart: Respiratory Nurse Specialist  
- Al-R Moahmed: ED Consultant  
- Sanda Collinson: IT Digital Solutions Site Analyst  
- John Burner: IT Digital Solutions Site Analyst  
- Graeme Allen: South of Tyne GP  
- Stephen Chappell: South of Tyne GP  
- Tracey Lucas: GP  
- Delyth Berrett: Senior Reform Manager – COG  
- Anthony Watson: AEC Management Lead  
- Paul Gaunt: RAH Representative

**Process Flow:**

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**Current Situation:**

AEC is part of a wider improvement project plan for unscheduled care in Sunderland which also focuses on the Emergency Department (ED), integrated care, RAH, discharge and flow. There are a number of AEC conditions (50+) as well as the overarching AEC concept, 'ambulatory care until proven otherwise'. The AEC Work Programme has aimed to tackle both pathways as well as the general concept.

From the vast number of specific ambulatory pathways, the following three conditions have been selected for development (COPD/Cellulitis/ED). Conditions are amongst the highest HES for non-elective activity.

From the three pathway project forms the following common themes run throughout:
- Cellulitis and DVT pathways have previously been developed but need improving and resourcing - why? Communication and buy-in? Resource?
- COPD will be new pathway for development
- Unnecessary ED attendances
- Unnecessary admissions, following which patients can move between a number of wards during their stay
- No direct access to AECU for advice etc (NEAS/GP/RAH)
- ED missing opportunities to discharge patients direct to RAH thus resulting in admissions
- No standard pathways or protocols between providers
- No advanced/technological solutions in use (e.g. telemedicine, etc.)
- Missing opportunities to review patient histories (P&Ps) to help decision making thus avoiding admission
- RAH directing patients for admission but on retrospective review patient may have been suitable to stay in the community if a home visit had taken place
- Patients unnecessarily attending AECU or ED for follow up appointments of their condition with a number of follow up appointments taking place for individuals
- GP sending patients direct for admission - missing opportunity to discuss patient with RAH
- NEAS unable to wait 2 hours resulting in patient admitted via ambulance
- Variation flow pathways within CHS

**Event Theme/Overview:** Develop seamless AEC Pathways DVT/COPD/Cellulitis across acute, primary and community services, supporting the wider AEC Whole System Work Programme

**Improvement Targets:**
- Patients will be treated in the right place, at the right time and by the right professional thus resulting in better patient and professional experience
- Patients having better management of their condition
- Value for money
- Support workforce development
- Support ED and NEAS performance targets
- Reduce patient LOS
- Reduce admissions and ED attendances

---
**Current State**

Information flow maps identify flow of patient information, patients, staff, medicines, equipment and supplies as well as defects within the current pathway – maps were developed with team members prior to the workshop following an audit undertaken by an MDT consisting of RAH nurses, GPs, Paramedics and AECU nursing staff. 20 patient pathways were audited - 10 COPD, 5 DVT and 5 cellulitis.

Table one identifies key issues and problems of each information flow map discussed within the workshop. Visual maps are identified within figures two, three and four.

**Table One**

<table>
<thead>
<tr>
<th><strong>Common Issues across all Pathways</strong></th>
<th><strong>Specific COPD Issues</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unnecessary ED attendances thus admissions - query the AEC concept within ED</td>
<td>Known COPD patients frequently attending ED resulting in admission.</td>
</tr>
<tr>
<td>No availability of PoC testing</td>
<td>ED missing opportunities to refer to RAH direct from ED</td>
</tr>
<tr>
<td>No telemedicine available</td>
<td>RAH directing patients for admission but on retrospective review patient may have been suitable to stay in the community if a home visit had taken place</td>
</tr>
<tr>
<td>NEAS missing opportunities to contact RAH to discuss patient cases thus avoiding admission</td>
<td>RAH not having the opportunity to review patient histories (frequent flyers)</td>
</tr>
<tr>
<td>AECU shut resulting in admission to Integrated Assessment Unit (IAU)</td>
<td>No evidence of Emergency Health Care Planning (EHCP) in place to support patient assessments</td>
</tr>
<tr>
<td>ED missing opportunities to discharge patients direct to RAH thus resulting in admissions</td>
<td>NEAS and RAH handovers not consistent (RAH response times/can patients be left at home unattended?)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Specific Cellulitis Issues</strong></th>
<th><strong>Specific DVT Issues</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulitis pathway previously developed but needs improving and re-launching</td>
<td>D-Dimer takes 1.5 hours within CHS and often results are returned out of hours to clinicians who have not seen the patient or have access to the patient history</td>
</tr>
<tr>
<td>GPs not familiar with pathway, duration of antibiotics and exclusions</td>
<td>Original work based on WELLS completed why is it not being adopted?</td>
</tr>
<tr>
<td>ED cellulitis follow up appointments have reduced - were four per day within ED - it is embedding</td>
<td>Inconsistency in use of WELLS score</td>
</tr>
<tr>
<td>Securing GP review appointments is difficult if patient initially seen within ED, thus patients on IV drugs longer than 48 hours – one patient is known to remain on treatment for 9 days!</td>
<td>GP OOH appointments are secured more easily</td>
</tr>
<tr>
<td>GP OOH appointments are secured more easily</td>
<td>Easier to secure a GP follow up appointment when the GP has been the referrer</td>
</tr>
<tr>
<td>Previous work to improve access to drugs (RAH) is working!</td>
<td>Previous work to improve access to drugs (RAH) is working!</td>
</tr>
<tr>
<td>Pathway clearer for staff using it regularly eg. RAH, ED however less clear for GPs as they use is less frequently</td>
<td>Pathway clearer for staff using it regularly eg. RAH, ED however less clear for GPs as they use is less frequently</td>
</tr>
<tr>
<td>Patient going back to AECU or ED for multiple follow up appointments</td>
<td></td>
</tr>
</tbody>
</table>
- Patients going back to AECU or ED for multiple follow up appointments occurring transport costs etc
- GP’s cannot refer direct for scan. Currently go through AECU (Barrier)
- Variation in community INR services
- Governance issues – where does it sit for those who are scanned
- Waste - overuse of blood tests
- Potential DVT, doesn’t need admission as treatment can be started in community and go to CHS next day for scan if required
- Blood collections variable across practices
- No WELLs on EMIS template
- Issue with patients out of hours in particular - who gives the drugs? How do we link this with NDUC?

Figure Two – COPD Information Flow Map ‘current state’

Figure Three – Cellulitis Information Flow Maps ‘current state’

Figure Four – DVT Information Flow Maps ‘current state’
Improvement Event Supporting Information

Team members were provided with supporting information during the event to help progress work, below is a brief summary of the information.

Patient and Staff Involvement
A patient and staff engagement plan was developed to support discussions during the event thus providing feedback from patients experiencing current pathways as well as the staff who work within them. The plan:

- Engage patients and staff prior to the event between 21.03.16 – 04.04.16 (3 weeks)
- Identified patients via RAH or AECU with a diagnosis of COPD, Cellulitis or DVT
- Interview patients via telephone however other methods were available
- Launched a survey monkey questionnaire distributed to Urgent Care Centres (UCCs), GP Out of Hours (OOH), GPs, AECU, ED, RAH and NEAS APs

Patient Outcomes
Below summarises the patient experiences provided:

- 9 patients received a telephone interview (7 patients attended AECU and 2 visited by RAH)
- 4 patients who attended AECU didn’t fully understand its purpose/concept
- Patients felt their treatment was mostly good with 2 patients selecting fair and a further 2 selecting excellent!
- Although majority of patients felt they would prefer to be treated at home, some did comment they felt more confident within a hospital environment
- Unfortunately patients not very forthcoming regarding how experiences could be improved, however one patient would like better access to their GP for follow up of their condition

Staff Outcomes
Below summarises key themes from staff questionnaires in relation to all pathways, supporting earlier conversations regarding current issues within existing pathways:

1. What works well?
   - Cellulitis, easier to obtain drugs now

2. What doesn’t work well?
   - Communication issues between providers – Roles and Responsibilities e.g. chasing of scans, making follow up appointments
   - DVT patients going to ED

3. What is the most challenging part of the current pathways?
   - Lack of communication between teams regarding patient reviews and outcomes e.g. RAH visit when not required – middle of the night
   - Getting medication
   - No consistency
   - Mixed reviews regarding RAH – some staff have a ‘can do’ attitude but others are a battle

4. Are there seamless interfaces between teams?
   - Majority of staff said no

5. What are the key areas for improvement?
   - Clearer criteria, proforma, documents
   - Minimal paperwork
   - Communications to all providers e.g. RAH to attend individual practices/regularly
   - Work better together
   - Better links with specialist nurses e.g. COPD
   - Passports for chronic conditions
   - More pathways to treat patients at home
Data Walk

CHS Emergency Admissions
Table two identifies activity levels presented to team members to support discussions. All datasets are based on admission data collected from the previous two financial years (2013/14 and 2014/15). Across all three pathways an average of 88% of patients had a LoS <7 days, providing a potential patient group to try and manage differently.

There was great discussion regarding the low numbers of DVT patients recorded as all stakeholders felt these figures were much higher. To ensure all figures are correct this will be investigated further and identified within workshop action plans.

Table Two

<table>
<thead>
<tr>
<th>COPD Admissions</th>
<th>0 Day</th>
<th>1 Day</th>
<th>2-7 Days</th>
<th>Total of 7 days</th>
<th>Total of &gt;7 Days</th>
<th>Total Admissions (All Los)</th>
<th>% of &lt;7 days against total number of admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Ref for Admission</td>
<td>245</td>
<td>507</td>
<td>1043</td>
<td>1795</td>
<td>408</td>
<td>2203</td>
<td>81.5%</td>
</tr>
<tr>
<td>GP Ref for Admission</td>
<td>69</td>
<td>23</td>
<td>56</td>
<td>148</td>
<td>30</td>
<td>178</td>
<td>93.1%</td>
</tr>
<tr>
<td>‘Other’ Ref Admission</td>
<td>6</td>
<td>8</td>
<td>18</td>
<td>32</td>
<td>11</td>
<td>43</td>
<td>74.4%</td>
</tr>
<tr>
<td>Total</td>
<td>320</td>
<td>538</td>
<td>1117</td>
<td>1975</td>
<td>449</td>
<td>2424</td>
<td>81.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cellulitis Admissions</th>
<th>0 Day</th>
<th>1 Day</th>
<th>2-7 Days</th>
<th>Total of 7 days</th>
<th>Total of &gt;7 Days</th>
<th>Total Admissions (All Los)</th>
<th>% of &lt;7 days against total number of admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Ref for Admission</td>
<td>100</td>
<td>86</td>
<td>245</td>
<td>431</td>
<td>102</td>
<td>533</td>
<td>80.9%</td>
</tr>
<tr>
<td>GP Ref for Admission</td>
<td>154</td>
<td>43</td>
<td>47</td>
<td>244</td>
<td>33</td>
<td>277</td>
<td>88.1%</td>
</tr>
<tr>
<td>‘Other’ Ref Admission</td>
<td>27</td>
<td>10</td>
<td>26</td>
<td>63</td>
<td>8</td>
<td>71</td>
<td>88.7%</td>
</tr>
<tr>
<td>Total</td>
<td>281</td>
<td>139</td>
<td>318</td>
<td>738</td>
<td>143</td>
<td>881</td>
<td>83.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DVT Admissions</th>
<th>0 Day</th>
<th>1 Day</th>
<th>2-7 Days</th>
<th>Total of 7 days</th>
<th>Total of &gt;7 Days</th>
<th>Total Admissions (All Los)</th>
<th>% of &lt;7 days against total number of admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Ref for Admission</td>
<td>65</td>
<td>4</td>
<td>7</td>
<td>76</td>
<td>18</td>
<td>94</td>
<td>80.9%</td>
</tr>
<tr>
<td>GP Ref for Admission</td>
<td>143</td>
<td>4</td>
<td>7</td>
<td>154</td>
<td>11</td>
<td>165</td>
<td>93.3%</td>
</tr>
<tr>
<td>‘Other’ Ref Admission</td>
<td>17</td>
<td>0</td>
<td>2</td>
<td>19</td>
<td>1</td>
<td>20</td>
<td>95.0%</td>
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<tr>
<td>Totals</td>
<td>225</td>
<td>8</td>
<td>16</td>
<td>249</td>
<td>30</td>
<td>279</td>
<td>89.2%</td>
</tr>
</tbody>
</table>

CHS AECU Data
There is an average of 2,000 patients per quarter accessing AECU mainly via GP and ED methods of referral/pull. From those attendances 60% of GP referrals are discharged direct from AECU and 70% of ED referrals/pulled patients are discharged from AECU leaving only 30-40% of patients attending the unit to result in an admission for further investigation or treatment. The average LoS on the unit is 5 hours.

RAH Data
RAH data relates to initial face to face contact only; telephone advice and follow up appointments are not included as this is unable to be recorded onto the service current IT system. However there are plans for the RAH system to be transferred over to EMIS within coming months where there will be more opportunity to record this level of data. Multiple attendances can sit behind the initial patient contact. The dataset is collated just under the previous two financial years. Graphs one, two and three summarises the RAH activity for the three pathways.
- **COPD** - Self referrals (1348) are by far the highest referral source into RAH for COPD, followed by GPs and other Health Care Professionals as well as CHS

- **Cellulitis** - RAH received 292 referrals from CHS with an encouraging number from general practice, which is encouraging considering how long the pathway has been in operation

- **DVT** – RAH receive 212 referrals from CHS which can demonstrate the inaccuracies of the data

**Evidence and Research**

The workshop group were presented with evidence and research to help generate ideas and discussion. During the event the group also received a presentation regarding the Sunderland GP Alliance MoM IT project as well as being provided with PoC demonstrations which may be useful to consider within pathway re-design.

**COPD**

- COPD National Standards and guidance e.g. NICE guidance and NHS service and outcome frameworks
- COPD NHS innovation Accelerator - ‘My COPD’
- Local and national areas of best practice e.g. AEC Network COPD pathway comparison, local community chest teams and mental health innovations
- Role of community integrated teams (CIT)

**Cellulitis**

- Evidence and knowledge from evolving local pathway
- National AEC cellulitis pathway comparisons
- NICE guidance – clinical knowledge summaries
DVT
- National AEC DVT pathway comparisons
- NICE guidance regarding medications used within pathways
- PoC testing available

**Ideas Generated**

Following discussion of current pathways, data, research and evidence as well as patient and staff engagement the group generated the following ideas for improvement.

**COPD**
- Possible use of GP extended hour appointments
- Share patient information across all services (‘clouds’ EMIS)
- Mapping of telephone contacts as initial entry point (felt to be due to Short of Breath presentation i.e. need help fast).
- Increase response times of RAH or use NEAS APs
- Learn from patients previous presentations
- Make the patients base line visible and known to clinicians to help treatment
- Make links to CIT so that professionals know or have access to patients usual baselines and historic information
- Learn from care homes pilot (NEWS) where RAH can view patients observations via web based portal
- Increase capacity of APs
- Explore the role of telemedicine particularly regarding desaturation (Note NEAS pilot currently underway with mobiles and pulse oximeters)
- Don’t forget carer education and link to EHCP
- Possible use of rescue packs

**Cellulitis**
- Use locality meetings/networks to engage practice managers
- Develop a systematic and robust communication plan - not just TITO! Consider sharing good news stories via ‘All Together Better’ newsletter
- Use MoM!
- Protect GP appointments for follow up
- Seamless referral – direct access to RAH and AEC from 111
- Have access to patient histories
- More prescribers
- Face to face reviews
- Criteria to include immunosuppression and diabetes
- Pathway to have more microbiology advice e.g. is it IV or not?
- Nursing staff to be the decision makers
- What is designed fits in strategically across all pathways
- Need more prescribers

**DVT**
- D-Dimer takes 1.5 hours within CHS and often results are returned OOH to clinicians who have not seen the patient or have an accessible history – use PoC Testing in patients with a WELLS < 2 - it is instant
- Use WELLS to determine need for bloods
- Explore alternative drugs (NOAC/DOAC)
- Develop IT solutions for WELLS within EMIS which could be used in EMIS community to ensure a WELLS score can be undertaken before a D-Dimer test
- Clinicians to use the WELLS score APP
- Use MoM
- Need more prescribers as that is a better solution than PGD’s due to cost and restriction of PGD’s
## Working Groups

Following idea generation the following working groups and areas of work were formed on day to further explore and progress future pathways.

### Day One - Themes and Group Work

#### Table three

<table>
<thead>
<tr>
<th>Group One – COPD</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To improve the COPD pathway a group were to focus on the following key areas:</td>
</tr>
<tr>
<td></td>
<td>- Patient information leaflet and base line triggers</td>
</tr>
<tr>
<td></td>
<td>- Develop standard clinical triggers and referral processes between teams – handover/referrals (CHS Respiratory Team, RAH, GP/OOH and NEAS)</td>
</tr>
<tr>
<td></td>
<td>- Extension of OPAL - What would be required if the existing OPAL service was extended to include COPD patients and not just frailty</td>
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<tr>
<td></td>
<td>- Review EMIS community and how it could be available sooner to RAH</td>
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<tr>
<td></td>
<td>- Review how ACPs could be a secured resource to RAH supporting response times to COPD patients</td>
</tr>
<tr>
<td></td>
<td>Group Members</td>
</tr>
<tr>
<td></td>
<td>Dave Bramley / Ala Mohamed</td>
</tr>
<tr>
<td></td>
<td>Fadi Khalil</td>
</tr>
<tr>
<td></td>
<td>Anthony Watson</td>
</tr>
<tr>
<td></td>
<td>Sharon Williams/Steve Adamson</td>
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<tr>
<td></td>
<td>Graeme Allen</td>
</tr>
<tr>
<td></td>
<td>Hannah Williams</td>
</tr>
<tr>
<td></td>
<td>Paul Cutler</td>
</tr>
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<table>
<thead>
<tr>
<th>Group Two – Cellulitis</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To improve the Cellulitis pathway a group were to focus on the following key areas:</td>
</tr>
<tr>
<td></td>
<td>1. Develop a communication plan to promote pathway e.g. ‘All Together Better’ newsletter, practice managers, TITO, quarterly locality meetings</td>
</tr>
<tr>
<td></td>
<td>2. MoM – what does the GP Alliance need to input pathway onto MoM</td>
</tr>
<tr>
<td></td>
<td>3. Review how the pathway could be tightened i.e. timing of first dose, difficult cannulation and ensure antibiotics aren’t continued for unnecessary reasons i.e. not able to obtain a GP appointment</td>
</tr>
<tr>
<td></td>
<td>4. Insert drug cardex onto EMIS</td>
</tr>
<tr>
<td></td>
<td>5. Explore use of PoC testing</td>
</tr>
<tr>
<td></td>
<td>Group Members</td>
</tr>
<tr>
<td></td>
<td>Delwen Durham</td>
</tr>
<tr>
<td></td>
<td>Sandra Collinson</td>
</tr>
<tr>
<td></td>
<td>John Bulmer</td>
</tr>
<tr>
<td></td>
<td>Mark Beadling</td>
</tr>
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<td></td>
<td>Jim Keyworth</td>
</tr>
<tr>
<td></td>
<td>Jacqui Mcloughlin</td>
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<tr>
<td></td>
<td>Samuel Parker</td>
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</table>

<table>
<thead>
<tr>
<th>Group Three – DVT</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To improve the DVT pathway a group were to focus on the following key areas:</td>
</tr>
<tr>
<td></td>
<td>1. Develop and finalise a DVT pathway to include WELLS scoring before completing a D-Dimer test as well as the best solution for follow up arrangements and availability of scanning slots for GPs via AECU</td>
</tr>
<tr>
<td></td>
<td>2. Explore what is needed to input the new pathway onto MoM</td>
</tr>
<tr>
<td></td>
<td>3. Review use/prescribing of DOACS in Primary Care</td>
</tr>
<tr>
<td></td>
<td>Group Members</td>
</tr>
<tr>
<td></td>
<td>Tracey Lucas</td>
</tr>
<tr>
<td></td>
<td>Libby Hodges</td>
</tr>
<tr>
<td></td>
<td>Andrew Hawthorn</td>
</tr>
<tr>
<td></td>
<td>Gill Potts</td>
</tr>
<tr>
<td></td>
<td>Catherine Balderidge</td>
</tr>
<tr>
<td></td>
<td>Jackie Spenser</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Mallett</td>
</tr>
<tr>
<td></td>
<td>Lisa Kempster</td>
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</table>
Day Two - Themes and Group Work

At the end of the first day workshop members were given the opportunity to ask sponsors questions to help progress group work. At the end of the first day facilitators asked sponsors the following questions and feedback to workshop members the next day.

Table Four

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Will sponsors support PoC testing, purchase and development (Potential D-Dimmer and CRP)</td>
<td>Happy to support if tests change decision making and use can be explicit within a business cases supporting change e.g. Laboratory costs/appointment tariff/admissions etc). Identifying saving and investment options.</td>
</tr>
<tr>
<td>2</td>
<td>Will sponsors support the use of NOAC’s and take on the cost of pre-labelled medication</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sponsors support (ring fencing) NEAS APs to sit within RAH away from 999</td>
<td>Yes</td>
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</table>

On the evening of the first day sponsors feedback they were happy with progress and impressed with proposed improvements and suggested products, however they wanted to push the group further to address the following issues:

- Specific roles and responsibilities of each provider/clinician within the pathway
- Clinical handover what would this look like – who owns the patient at each stage?
- IT solutions regarding frequent flyers and availability of patient information to crews. MoM great solution, what about other ways/use of IT?

**Group Work Outcomes**

Throughout the two days, each group worked collaboratively in addressing their area of improvement, incorporating challenges and information provided by sponsors. At the end of day two groups feedback the following outcomes to sponsors.

**Group One – COPD Pathway**

The problem was..............

- No clear pathway
- Broad scope and complex condition
- No standard work/everyone working differently
- Lack of clarity within clinical roles / teams / areas of responsibility
- Preventable attendances / admissions
- Increased LoS
- APs not secured to RAH service
- Lack of prescribers, reliant upon PGDs
- Governance regarding safe handover between GPs, NEAS and RAH. RAH not an emergency service (2 hour response following triage)
- Nothing done in hospital that couldn’t be done in the community
- No one NEWS score was >5 from mapping

Our solutions were..............

- Increase the use of EHCP, smoking cessation, pulmonary rehabilitation and self-management
- Increase awareness and utilisation of available services (RAH)
- I.T solutions
- Patient held info (Specific COPD baseline for patient)
- Better coding in GP Practice
- Extension of OPAL service – not just frailty but COPD and to be a visible resource (1-2 nurses) pulling from the hospital 24/7
- EMIS community in RAH - ASAP
• Shared nebulisers across OOH Services
• Further integration within RAH (RAH & in hour GPs)
• Possible use of Telemedicine and IT solutions to share data
• Clinical conversations / clinical challenge (telephone call)

Which has resulted in…………..
Recognition of how far we’ve come and identification of the following actions:

1. Agreement to undertake further work regarding information for patients to self-manage in collaboration with EHCP i.e. patient education, guidance and direction, as well as a visual aid for clinicians to review the patients ‘last’ or ‘base line’ saturation level thus supporting decision making and treatment for known COPD patients! (figure five)
2. Further development of EHCP
3. Better use of smoking cessation and pulmonary rehabilitation, which are currently under-utilised (preventative measures)
4. Standard clinical triggers and referral processes between teams to be reviewed – handover/referrals (CHS Respiratory Team, RAH, GP/OOH and NEAS)
5. Extending the OPAL service to include COPD
6. Push for EMIS community to be available ASAP and the possible testing or use of ‘cloud based health care’ i.e. patient information cloud for all organisations to access to help support EHCP and exacerbation
7. APs to be part of the RAH service, protected from 999 responses thus allowing rapid response to COPD as well as other suitable patients identified by the RAH service
8. Introduction of ambulatory care as a concept to prevent admission / pull from EACU (OPAL)

Figure Five - Draft Patient Education Leaflet (In progress)
Group Two – Cellulitis Pathway

The problem was…………..

- Pathway was fit for purpose but needed modifications
- Lack of understanding of pathway
- Patients continue to be referred to ED instead of RAH by GP
- Patients on IV antibiotics for a prolonged period of time
- Difficult cannulation for a small proportion of patients
- Inappropriate treatment of some patients
- GP Practices not familiar with pathway duration of antibiotics and exclusions
- Duration of antibiotic (evidence Pharmacists) at what point do we include microbiology

Our solutions were…………..

- Utilise the opportunity of MoM given this is not a common pathway amongst practices i.e ED see patients with this condition daily however some practices may only have 1 patient per week
- Use EMIS better
- Protect GP appointments for follow up
- Pathway to have more microbiology advice
- Ensure organisations roles and responsibilities were clearly visible to avoid confusion going forward e.g. who makes the follow up appointment ED or RAH

Which has resulted in…………..

- A continuously improved pathway (figure six) specifically identifying the roles and responsibilities of partners throughout thus supporting the reduction of ED attendances/admission for IV antibiotics unless - septic, requires surgery, addicts, facial cellulitis etc
- GP information pack
- Short term include an EMIS template for drug cardex completion to support and encourage GP referrals
- Completed pathway ready for adoption of MoM (long term)
- Developed a set of metrics to measure progress
- Developed a GP communications plan in line with DVT
Figure Six - Improved Cellulitis Pathway

Group Three – DVT Pathway

The problem was..............
- Inappropriate ED attendances
- XDP
- No WELLS being recorded
- Access to Low Molecular Weight Heparin (LMWH) in community
- Lack of PoC testing
- Variability in practice
- Poor patient experience
- Over use of AECU for follow up appointments

Our solutions were.........
- IT solution for recording WELLS
- Develop a less complicated pathway
- Introduce PoC Testing
- Standardise medications used
- Reduce nursing time
- Provide easy access to scan appointments for GPs via AECU
- Reduce patient contacts/follow ups by changing drugs used or environment patient is reviewed within e.g. AECU or Pharmacy INR clinics

Which has resulted in............
- WELLS template in EMIS/Adastra/NEAS EPRG/MoM
- Brand new simplified pathway (figure seven)
- Information pack for all partners to launch the pathway identifying the roles and responsibilities of partners throughout thus supporting the reduction of ED attendances/admission
- Prescribing DOACS by GP’s
- Introduce qualitative D-Dimer PoC testing
- Development of a joint education and engagement strategy (cellulitis)
- Direct booking of scans 24/7 (GP and GP OOH services)
- Developed a set of metrics to measure progress
Sponsor Feedback

Following team feedback to sponsors provided the following advice/comments:

Sean Comments
- DVT and Cellulitis pathways were fully developed apart from a few tweaks and was not surprised development of the COPD pathways didn’t progress as vast as others due to its complexities
- Going forward need to ensure partners don’t ignore pathways and that sponsors provide challenge to those who do, especially general practice who are key in initiating pathways
- In relation to the DVT pathways there is the
  - Possibility for CHS to use d-dimer testing to ensure consistency across ED and community services, which would support reduction in treatment and LoS
  - Would support anti-coagulant clinics to be held in the community as they are not suitable within a AECU setting

Michelle Comments
- Agree and support the ‘pull’ and ‘push’ element of pathways between CHS and Community
- Support suggestions regarding the OPAL service pulling from CHS into RAH
- Will support the push and challenge of obtaining IT solutions for RAH

Debbie Comments
- Full expectation of RAH and OPAL to be as one
- Echoed comments from other sponsors
- Asked the group to identify key areas which would help progress for all three pathways, which sponsors could support:
  - RAH to have access to EMIS community as soon as possible
  - GPs to be informed of the importance of pathways and use them
Future State
The current state information flow maps were developed to describe and clarify the current state of COPD, Cellulitis and DVT pathways supporting the ideas generated from the group. The ideas, solutions and products developed were then mapped i.e a future state to demonstrate improvement.

Figures eight, nine and ten provide the new and improved pathways developed by the group, cellulitis group amended the existing map/identified pathway.

Figure eight - COPD Future State Information Flow Map

Figure nine - Cellulitis Future State Information Flow Map

Figure ten - DVT Future State Information Flow Map
Action Planning/Next Steps

Action plans and further development of pathways will be monitored and progressed through the CCG Whole System Ambulatory Care Project Group from June – October 2016 as identified within Table Five where sponsors and key colleagues will review and support progress.

Apart from COPD, cellulitis and DVT pathways will have a soft launch across the system in July followed by a formal launch in September in alignment with MoM. Following the launch of pathways (July) a formal six month review will take place (December) in collaboration with the AEC Senior Decision Making Pilot, as referenced within the AEC work program (appendix one), with the purpose to evaluate both specific AEC pathways as well as the overall concept amongst clinical teams.

Table Five

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Must attend</th>
<th>Venue</th>
</tr>
</thead>
</table>
| 14th June  | 10.30-12.30hrs | Debbie Burnicle  
              Sean Fenwick  
              Michelle Arrowsmith  
              Natalie McClary  
              Anthony Watson  
              Paul Cutler  
              Dr Tracey Lucas  
              GP Clinical Lead (TBC)  
              Mark Beading  
              Jeannie Henderson  
              Hannah Willoughby  
              Jackie McLoughlin | SCCG, Pemberton House, Steve Cram Suite |
| 9th August | 11th October |                                                  |                                |

Event Group Expectations

Workshop members identified their expectations at the beginning of the event, when reviewing the event evaluation forms a number of these areas were met however there were further areas to improve upon:

- Enjoy event and everyone gets what they want from it!
- Don’t just talk, test and do – tangible products
- Joined up working across the healthcare system
- NEAS can do more – what can we do differently – we are a resource
- Event to deliver, many haven’t
- Patient right place - first time
- Unified approach to AEC
- Pathways to be embedded
- Use technology the best we can
- Break down red tape/politics
- Better pharmacy integration within pathways
- Improve patient experience
- Integration
- Joined up working in and out of hours – seamless
- Innovative IT solutions within pathways
- Continue to build pathways and relationships ED & AECU
- Better management of DVT patients (Elderly) within ED at night
- What the event develops is “GP” “user friendly”
- Reduce waste and have plans of how we get rid of it

Event Group Evaluation Forms

Members of the workshop were asked to complete an evaluation form to help facilitators continuously improve how improvement events are undertaken.
The majority of workshop members felt the workshop overall was good/excellent and that the aim and objectives of the workshop had been met with confidence that the outcomes will improve ambulatory care pathways. The following words were selected to best describe their experience of the workshop:

Interesting  Beneficial  Enjoyable  Exciting
Inspiring  Excellent  Valuable
Practical  Useful  Thought provoking  Worthwhile
Stimulating
Challenging  Rushed  Exciting  Over-ambitious

A number of team members noted gaps of primary care representation (GPs) and the Respiratory Team/specialists within CHS.

Summary

The three pathways developed are at very different stages of maturity, cellulitis leading the way in how whole system pathways can be developed, implemented and continuously improved, however DVT is now starting on that journey. COPD needs more scoping of the whole system as it doesn’t just have elements of ambulatory care but also a number of preventative areas of work which will complement the whole system pathway i.e. CIT

The workshop delivered its objectives, below, by producing new pathways and ways of working supported by necessary action plans and identified leads that have the commitment and ownership to progress work over coming months:

- Ensure patients are treated at the right time and place
- Reduce ED and AECU attendances thus reducing pressures on ambulance and transport services
- Increase GP referrals into community teams
- Reduce number of emergency admissions and LoS
- Patients to have better management of their condition

Outcomes will be achieved by implementing the following key areas:

- Development of new or improved pathways identifying the roles and responsibilities of all partners
- Joint communication plans of new pathways in line with the AEC work program
- Recognition of existing work streams where further progress of actions can be taken i.e. CIT (EHCP/Prevention etc)
- Identification of NEAS ACPs to be part of the RAH service i.e. removed from 999 – this is now achieved!
- Identifying improvement areas of OPAL for consideration; keep the same language – RAH. Widen scope and service resource e.g. extension of roles and responsibilities – RAH to pull patients from hospital

Which were only possible by team members reviewing:

- Key issues across all pathways relating to communication, workforce, I.T, governance, no standard work and the variety of behaviours and culture of all staff across the system and
- Adopting ‘blue sky’ thinking in generating solutions or ideas to improve future ways of working i.e. Joint communication initiatives, workforce development (prescribers) innovative use of I.T (telemedicine, PoC testing and MoM) and recognition that staff cultures and behaviours need to change across the system – the concept of AEC.

Action plans have been developed to ensure outcomes are delivered which are specific, measureable, attainable, realistic and time bound (SMART). Plans also include improvement metrics for each pathway to ensure improvement can be measured and continuously improved.
### SCCG Whole System AEC Work Program

<table>
<thead>
<tr>
<th>Priority No</th>
<th>Priority Area Summary</th>
<th>Priority Key Aims and Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ambulatory Care Pathways and Point of Care Testing</td>
<td><strong>1a. Kaizen Event (AEC Pathways)</strong>&lt;br&gt;- COPD&lt;br&gt;- UTI&lt;br&gt;- Cellulitis&lt;br&gt;- DVT&lt;br&gt;<strong>1b. Point of Care Testing</strong> CHS***/RAH/NEAS*** and Primary Care to potentially pilot the following point of care testing cartridges and receive training linking into Kaizen Event outcomes:&lt;br&gt;- INR&lt;br&gt;- U&amp;Es&lt;br&gt;- D-dimer&lt;br&gt;- CRP</td>
</tr>
<tr>
<td></td>
<td>Pathway work to support further pilot/project work:&lt;br&gt;- Point of Care Testing&lt;br&gt;- Primary Care pilots between RAH*, GP and AECU services (senior decision makers) to direct patients to the right place of care at the right time</td>
<td><strong>2a Assessment Criteria</strong>&lt;br&gt;Building upon NEWS develop a whole system assessment criteria/ethos.&lt;br&gt;Develop a form that can be electronically embedded within existing IT systems&lt;br&gt;<strong>2b GP, RAH and AECU Pathways Pilot</strong>&lt;br&gt;Building upon audit work, develop a pilot between GP practices or a practice to pilot pathways between RAH, AECU/GPAU**** (senior decision makers).&lt;br&gt;‘Test’ whole system assessment form within pilot.&lt;br&gt;<strong>2c Workforce</strong>&lt;br&gt;Develop workforce opportunities within CHS AECU. Possible GP opportunity to work within AECU as well as general practice or RAH.&lt;br&gt;<strong>2d Communication</strong>&lt;br&gt;Develop a communications strategy for RAH, Primary Care and CHS to promote project group and associated work streams</td>
</tr>
<tr>
<td>2</td>
<td>Communication and Stakeholder Engagement</td>
<td>Work with all stakeholders to implement principles of ambulatory care across the system.</td>
</tr>
<tr>
<td>3</td>
<td>AECU Direct Access</td>
<td>Develop relationships between RAH, GP/GP OOHs and NEAS/Advanced Practitioners to pilot direct access for those professionals to bypass ED and go straight to AECU or RAH. Initial scoping and pilot discussions held with RAH and NEAS partners. NEAS advanced practitioners would be suitable to initiate pilot, prior opening up to other partners i.e. primary care.</td>
</tr>
<tr>
<td>4</td>
<td>Patient Engagement</td>
<td>Opportunity for providers to align patient engagement strategies. Not just to look at patient feedback but also look at opportunities to review psychological factors that are condition specific e.g. COPD.</td>
</tr>
<tr>
<td>5</td>
<td>Primary Care IT Support</td>
<td>Use Map of Medicine technology - clinicians to have instant access to locally customised pathways, centrally controlled referral forms and clinical information during a consultation. Integrated within clinical workflow, healthcare professionals have relevant information at their fingertips and can save information directly to the patient’s record.</td>
</tr>
</tbody>
</table>
Appendix Two

Project Forms

Improvement Event Project Form - COPD

Improvement Event Name: COPD Pathway

Date: 19 & 20 April 2016

Sponsor: Debbie Earnnide, Michelle Arrowsmith and Sean Fenwick
Natalie McCloud (Workshop Leader), Angela Farrell, Jeannie Henderson and Helen Turnbull (Team Leaders)

Team Members

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor</td>
<td>Debbie Earnnide</td>
</tr>
<tr>
<td>Team Leader</td>
<td>Michelle Arrowsmith</td>
</tr>
<tr>
<td>Principal</td>
<td>Natalie McCloud</td>
</tr>
<tr>
<td>ED Consultant</td>
<td>Angela Farrell</td>
</tr>
<tr>
<td>ED Consultant</td>
<td>Jeannie Henderson</td>
</tr>
<tr>
<td>RAH Representative</td>
<td>Helen Turnbull</td>
</tr>
<tr>
<td>CKS Strategic Lead AEC</td>
<td>Catherine Albright</td>
</tr>
<tr>
<td>Respiratory Nurse Specialist</td>
<td>Dave Bradley</td>
</tr>
<tr>
<td>Senior MO Pharmacist</td>
<td>Elizabeth Mallett</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>Catherine Albright</td>
</tr>
</tbody>
</table>

Team Members

- Executive CP: Debbie Earnnide
- Advanced Practitioner: Natalie McCloud
- Senior Reform Manager: Angela Farrell
- ED Consultant: Jeannie Henderson
- RAH Representative: Helen Turnbull
- CKS Strategic Lead AEC: Catherine Albright
- Respiratory Nurse Specialist: Dave Bradley
- Senior MO Pharmacist: Elizabeth Mallett
- Pharmacist: Catherine Albright

Current Situation:

AEC is part of a wider improvement project plan for unscheduled care in Sunderland which also focuses on the Emergency Department (ED), integrated care, RAH, discharge and flow.

There are a number of ACS conditions (ED+) as well as the overarching AEC concept 'ambulatory care until proven otherwise'. The AEC work Programme has agreed to tackle both pathways as well as the general concept.

From the vast number of specific ambulatory pathways, the following four conditions have been selected for development (COPD/Calculis/DVT). Conditions are amongst the highest HRGs for non-elective activity.

From the COPD pathway mapping and audit the following areas of improvement are noted:

- COPD patients frequently attending ED resulting in admissions
- RAH directing patients for admission but on retrospective review patient may have been suitable to stay in the community if a home visit had taken place
- Unnecessary ED attendances
- Unnecessary admissions, following which patients can move between a number of wards during the stay
- RAH missing opportunities to review patient histories (FFs) to help decision making thus avoiding admission
- No availability of RAH testing to support admission and treatment plan thus avoiding admission
- No telemedicine options in place
- No evidence of ECPs in place to help patient assessments
- NEAS missing opportunities to contact RAH to discuss patient cases
- NEAS referrals accepted by RAH – no quicker response times allocated to NEAS e.g. 2 hours
- NEAS unable to wait 2 hours resulting in patient admitted via ambulance
- AECU shut resulting in admission to RAH
- ED missing opportunities to discharge patients direct to RAH thus resulting in admissions

Process Flow:

Event Theme/Overview: Development of a seamless AEC Pathways DVT/COPD/Calculis across acute, primary and community services, supporting the wider AEC Whole System Work Program

Improvement Targets:

- Patients will be treated in the right place, at the right time and by the right professional thus resulting in better patient and professional experience
- Patients having better management of their condition
- Value for money
- Support Workforce development
- Support ED and NEAS performance targets
- Reduce patient LOS
- Reduce admissions and ED attendances
Improvement Event Name: DVT Pathway  
Date: 19 & 20 April 2016

Sponsor: Debbie Burnicle, Michelle Arrowsmith and Sean Fenwick  
Workshop/Team Leader: Natalie McClay (Workshop Leader) Angela Farrell, Jeannie Henderson and Helen Turnbull (Team Leaders)

Team Members:
- Hannah Willoughby: SCCG Pharmacist
- Graeme Allen: IT Digital Solutions Program
- Gill Potts: CHS Pharmacist
- Tracey Lucas: GP
- Tracey Tisdale: GP Alliance
- Lisa Kempster: RAH Nurse
- Andrew Hawthor: CHS Acute Physician
- Jackie Spencer: SCCG LCM Lead
- Philip Rodgers: South of Tyne POC Testing Lead
- Elizabeth Hodges: CHS AECU Nurse Lead

Current Situation:
AEC is part of a wider improvement project plan for unscheduled care in Sunderland which also focuses on the Emergency Department (ED), integrated care, RAH, discharge and flow. There are a number of ACS conditions (50+) as well as the overarching AEC concept ‘Ambulatory care until proven otherwise’. The AEC work programme has agreed to tackle both pathways as well as the general concept.

From the vast number of specific ambulatory pathways, the following four conditions have been selected for development (COPO/Cellulitis/DVT). Conditions are amongst the highest HRGs for non-elective activity.

From the DVT pathway mapping and audit the following areas of improvement are noted:
- Cellulitis and DVT pathways have previously been developed but need improving and re-launching – why? Communication and Buy In? Resource?
- Unnecessary ED attendances
- No availability of POC testing to support assessment and treatment plan thus avoiding admission
- No telemedicine options in place
- ED missing opportunities to discharge patients direct to RAH thus resulting in admissions
- Patient going back to AECU or ED for multiple follow up appointments
- Explore how commissioned community INR services can be used in collaboration with GPs to undertake patient review rather than returning to CHS for review up to 5 times during treatment regime, reducing inconvenience for patient and ambulance transport costs.

Event Theme/Overview: Develop seamless DVT pathway across acute, primary and community services, supporting the wider AEC Whole System Work Program Improvement Targets:
- Patients will be treated in the right place, at the right time and by the right professional thus resulting in better patient and professional experience
- Patients having better diagnosis and management of their condition
- Value for money
- Support Workforce development
- Support ED and NEAS performance targets
- Reduce patient LOS
- Reduce admissions and ED attendances
Improvement Event Project Form - Cellulitis

**Improvement Event Name:** Cellulitis Pathway  
**Date:** 19 & 20 April 2016

**Sponsor:** Debbie Burnicle, Michelle Arrowsmith and Sean Fenwick  
**Workshop/Team Leader:** Natalie McClary (Workshop Leader) Angela Farrell, Jeannie Henderson and Helen Turnbull (Team Leaders)

**Team Members**
- Jim Keyworth: CHS Service Improvement Manager
- Samuel Parker: OP Career Start
- John Bulmer: DigitalIT Solutions
- Jackie McLaughlin: NDUCC Operational Lead
- Delwen Durham: RAH Nurse
- Sandra Collinson: ED Nurse Practitioner

**Current Situation:**
AEC is part of a wider improvement project plan for unscheduled care in Sunderland which also focuses on the Emergency Department (ED), Integrated Care, RAH, discharge and flow.

There are a number of ACS conditions (50+) as well as the overarching AEC concept ambulatory care until proven otherwise. The AEC work programme has agreed to tackle both pathways as well as the general concept.

From the vast number of specific ambulatory pathways, the following four conditions have been selected for development (COPD/Cellulitis/DVT). Conditions are amongst the highest HRGs for non-elective activity.

From the cellulitis pathway mapping and audit the following areas of improvement are noted:
- Cellulitis and DVT pathways have previously been developed but need improving and relaunching - why? Communication and buy-in?  
- Unnecessary ED attendances  
- Unnecessary admissions, following which patients can move between a number of wards during their stay  
- No availability of POCC testing to support assessment and treatment plan thus avoiding admission  
- No telemedicine options in place  
- NEAS missing opportunities to contact RAH to discuss patient cases  
- AEGU shut resulting in admission to IAU  
- ED missing opportunities to discharge patients direct to RAH thus resulting in admissions  
- Patient going back to AEGU or ED for multiple follow up appointments

**Event Theme/Overview:** Develop seamless AEC Pathways DVT/COPD/UTI/Cellulitis across acute, primary and community services, supporting the wider AEC Whole System Work Program

**Improvement Targets:**
- Patients will be treated in the right place, at the right time and by the right professional thus resulting in better patient and professional experience  
- Patients having better management of their condition  
- Value for money  
- Support workforce development  
- Support ED and NEAS performance targets  
- Reduce patient LOS  
- Reduce admissions and ED attendances
# Appendix Three

## Action Plans

<table>
<thead>
<tr>
<th>No</th>
<th>Action</th>
<th>Brief Summary</th>
<th>Owner</th>
<th>14th June Update</th>
<th>9th Aug Update</th>
<th>Completion Date</th>
<th>RAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharing of Patient Information</td>
<td>Push for EMIS community to be available ASAP within RAH Possible testing or use of ‘cloud based health care’</td>
<td>Debbie Burnicle Michelle Arrowsmith Paul Cutler CIT Vanguard/Kerry McQuade</td>
<td>N/A</td>
<td>N/A</td>
<td>June Handover</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Community Integrated Team Work</td>
<td>Preventative Measures - better use of smoking cessation and pulmonary rehabilitation, which are currently under-utilised (preventative measures) Patient information leaflet to support patients to self-manage in collaboration with EHCPI.e. patient education, guidance and direction, as well as a visual aid for clinicians to review the patients ‘last’ or ‘baseline’ saturation to help support decision making and treatment for known COPD patients! Further development of EHCP</td>
<td>CIT Vanguard/Kerry McQuade Hannah Willoughby</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Further Development of OPAL Service</td>
<td>Further develop the service to include the following: - Extend service hours 24/7 - Change terminology of service it is essentially RAH - Extend number of staff (2 members on different wards) - Extend scope of service to COPD not just older people - More education for ED Doctors and Acute Physicians and Nurse Practitioners regarding service - RAH staff to pull from ED, IAU and AECU – work with ED navigators to pull from ED Debbie Burnicle Natalie McClary Anthony Watson Paul Cutler</td>
<td></td>
<td></td>
<td></td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Clinical Conversation and Challenge</td>
<td>Standard clinical triggers and referral processes between teams to be reviewed – handover/referrals (CHS Respiratory Team,</td>
<td>Natalie McClary Anthony Watson Tracey Lucas</td>
<td></td>
<td></td>
<td>July – December 2016</td>
<td></td>
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</tbody>
</table>
RAH, GP/OOH and NEAS).
- Standard criteria or is this purely clinical relationships and change in culture and behaviour – Senior Decision Making Pilot.

5 COPD Ambulatory Care Metrics
- COPD OPAL activity
- ED COPD attendances
- AP COPD urgent RAH responses
- CHS COPD Admissions
- Number of AECU COPD referrals, discharges and admissions

6 Action Plan Sign Off
Action plan to be discussed and signed off at both OOH (25th May) and urgent care boards (7th June)
Natalie McClary
Debbie Burnicle
Tracey Lucas

Cellulitis

<table>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Drug Therapy Record</td>
<td>Drug Therapy Record EMIS Template for GPs prescribing and referring to community teams. Drug therapy card to automatically populate patient details when the template is used within EMIS.</td>
<td>Julie Hanson - NECS Data Quality Team Delwen Durham GP Clinical Lead TBC</td>
<td></td>
<td></td>
<td>June 2016</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Embedding New Cellulitis Pathway (Communications Plan)</td>
<td>In collaboration with the updated DVT pathway GP Education regarding new pathways and wider AEC reform program i.e how the program will develop over the next 12 months. Promote AEC Work Program including both cellulitis and DVT pathways regularly at TiTo events (July and September), ‘All Together Sunderland’ newsletter, quarterly locality meetings (nurse, practice manger &amp; GP) and monthly practice managers meeting. Tito Dates: 13th July and 14th September. Educate NEAS on updated pathway Educate UCCs and GP OOHs of updated pathway Educate RAH Team on updated pathway Educating CHS/AECU on new/updated community pathways</td>
<td>Tracey Lucas GP Clinical Lead TBC Jeannie Henderson Tracey Lucas GP Clinical Lead TBC Andrew Hawthorn Libby Hodges Natalie McClary</td>
<td></td>
<td></td>
<td>July – Sept 2016</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(Short Term) Electronic</td>
<td>Updated pathway/information pack for Cellulitis for primary care. Need to replace old document</td>
<td>GP Clinical Lead TBC Natalie McClary</td>
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</tbody>
</table>
information sheet/pathway with new within practices until MoM is implemented.

LCMs

4 (Long Term) Updated Cellulitis pathway to be uploaded onto Map of Medicine

In collaboration with the new DVT pathway, Cellulitis pathway to be finalised and forwarded to Map of Medicine for publication/processing.

Mark Beadling (MoM Publication)
Natalie McClary (Pathway Completion)
July 2016

5 Measurement Metrics i.e. Cellulitis new pathway

• Need to unpick Cellulitis coding, data recorded (HRGs) not providing accurate picture. Need to map patients to understand how they are recorded to obtain exact figures to target
  • Monitoring of GP referrals into RAH and ED/AECU
  • Monitoring of GP/ED admissions with a diagnosis of cellulitis under 7 days
  • Monitoring of ED attendance or AECU follow up appointments
  • Monitoring of GP follow up appointments within 48 hours or more despite point of entry onto pathway i.e. ED self presentation or GP referral to RAH

Natalie McClary
Mat Thubron
Libby Hodges
Sandra Collinson
Paul Cutler
June 2016

• Need to map DVT patients through BI systems to ensure DVT admission and ED attendance figures are accurate
  • Need to cross ref patient group with 1% integrated team work to ensure no duplication

Natalie McClary
Mat Thubron

6 Action Plan and Pathway Sign Off

Action plan and pathway to be discussed and signed off at both OOH (25th May) and urgent care boards (7th June)

Natalie McClary
Debbie Burnicle
Tracey Lucas
May – June 2016

DVT

<table>
<thead>
<tr>
<th>No</th>
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<th>19th Aug Update</th>
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<th>RAG</th>
</tr>
</thead>
</table>
| 1  | Finalise end of DVT pathway | Commissioners to review three options developed to complete the end of the DVT pathway in relation to follow up appointments and, testing and titration of medications. | Jeannie Henderson
Natalie McClary
Gill Potts | | | | | May 2016 |
<p>| | | | |</p>
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<thead>
<tr>
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<tbody>
<tr>
<td>Options</td>
<td></td>
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</tr>
<tr>
<td>Option 1 – Patient takes warfarin and has INR checks at AECU</td>
<td></td>
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<tr>
<td>Option 2 – Patient talks warfarin and has INR check by CHS pharmacy warfarin clinic</td>
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<tr>
<td>Option 3 – Patient takes a DOAC – Continued drug therapy for DVT’s is patient choice (NICE Guidelines). There is not one treatment which will be suitable for all patients.</td>
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</tr>
</tbody>
</table>

**Option 2** preferred option, costs and information to be scoped. Discuss new DVT pathway with Dave Miller and the options discussed regarding patients being transferred directly to the CHS pharmacy led warfarin clinic or RAH pharmacists instead of EACU for initiation and stabilisation of warfarin therapy.

<table>
<thead>
<tr>
<th></th>
<th>Change in medications (DOACS)</th>
<th></th>
<th>June 2016</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>Consider additional cost to OOH / UCC with a view of increasing pharmacy budget</td>
<td>Jeannie Henderson</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Ensure ED DVT pathways/treatment mirrors that of the community</td>
<td>Mat Thubron</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Check with local pharmacies that they stock DOAC’S</td>
<td>Hannah Willoughby</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Ensure Pharmacies stock new drug - ? potential agreement/cost reimbursement</td>
<td>Hannah Willoughby</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Review options appraisal for continued drug therapy and anticoagulant management review. <em>Continued drug therapy in DVT should be patient choice with advice from medic (NICE Guidelines)</em></td>
<td>Jeannie Henderson</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hannah Willoughby</td>
<td>June 2016</td>
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<thead>
<tr>
<th></th>
<th>D Dimmer Testing</th>
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<th>June 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Purchase of (pocked) d-dimers for primary care - £15 per test – need to review figures and cost how many will be required for the first 18 months, then review recurrent purchase from that point.</td>
<td>Jeannie Henderson</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Purchasing &amp; Distribution of D-Dimer to OOHs/UCCs/RAH.</td>
<td>Jeannie Henderson</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>CHS to adopt d-dimer testing (AECU and ED) to ensure consistency across the patch</td>
<td>Sean Fenwick</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Training for PoC Testing (Potential Training Dates with Sunderland University (6th, 8th, 10th or 14th June with an initial meeting on the 20th)</td>
<td>Jeannie Henderson/APS</td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karen Giles</td>
<td>June 2016</td>
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<tr>
<td></td>
<td></td>
<td>Paul Cutler</td>
<td>June 2016</td>
</tr>
</tbody>
</table>
|   | May) | Anthony Watson  
|GP Clinical Lead |
|---|---|---|
|4 | **GP Access to scanning slots (CHS AECU)** | Scanning slots are accessed as follows  
- In hours when AECU is open scan slots are booked by contacting AECU.  
- Out of hours when AECU is closed scan slots are booked by contacting IAU.  
| | Tracey Lucas  
|GP Clinical Lead TBC  
|Libby Hodges |
|   | May 2016 |
|5a | **WELLS Templates (Short Term Solution)** | **General Practice**  
Develop template in EMIS so referrals can’t bypass WELLS scoring  
EMIS & EMIS Community:  
- GP in consultation mode within EMIS writes “WELLS”  
- Template pops up  
- WELLS score completed and read coded.  
- GP follows DVT pathway manually  
| | Sarah Hayden |
|   | June 2016 |
|   | **GP OOHs**  
WELLS Template OOHs - Need Adastra solution in OOH period.  
| | Jacqui McLoughlin |
|   | **NEAS – Paper tool or template in new EPRF**  
Introduction of WELLS phone app for all providers to reference  
| | Steve Adams |
|   | **TBC** |
|5b | **New DVT pathway to be uploaded onto Map of Medicine (Long Term Solution)** | In collaboration with the updated Cellulitis pathway, DVT pathway to be finalised and forwarded to Map of Medicine for publication/processing.  
WELLS template to be added to MoM – MoM template to include:  
- Type in “leg swelling”  
- Wells score brought up to complete  
- Guided through DVT pathway electronically and options presented depending on answers inputted  
| | Jeannie Henderson  
(Pathway Completion and oversight)  
Mark Beadling (MoM Publication) |
|   | July 2016 |
|6 | **Embedding New DVT Pathway (Communications Plan)** | Develop a GP promotional pack, similar to cellulitis to update general practice  
In collaboration with the updated Cellulitis pathway  
GP Education regarding new pathways and wider AEC reform program i.e how the program will develop over the next 12 months.  
Promote AEC Work Program including both cellulitis and DVT pathways regularly at TiTo events (July and September), ‘All Together Sunderland’ newsletter, quarterly locality  
| | Jeannie Henderson  
Tracey Lucas  
Andrew Hawthorn  
Libby Hodges |
|   | July – Sept 2016 |
**Meetings (nurse, practice manager & GP) and monthly practice managers meeting.**
Tito Dates: 13th July and 14th September.

<table>
<thead>
<tr>
<th>育</th>
<th>Educate NEAS on new pathway</th>
<th>Steve Adams</th>
</tr>
</thead>
<tbody>
<tr>
<td>育</td>
<td>Educate UCCs and GP OOHs of new pathway</td>
<td>Jacqui McLoughlin</td>
</tr>
<tr>
<td>育</td>
<td>Educate RAH Team on new pathway</td>
<td>Paul Cutler/Lisa Kempster</td>
</tr>
<tr>
<td>育</td>
<td>Educating CHS/AECU on new community pathways</td>
<td>Andrew Hawthorne/Libby Hodges</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>育</th>
<th>Measurement Metrics i.e. DVT new pathway</th>
<th>Matt Thubron/Natalie McClary/Mike Homes/Hannah Willoughby</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Prescribing for Apixaban per practice per year will show initial avoided ED attendance (in hours)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>OOH prescribing for Apixaban will show avoided ED attendances/admissions in OOH’s</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Numbers of PoC testing undertaken in the community with no further action undertaken i.e. negative results will provide evidence for A EACU/ED avoidance</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Need to unpick DVT coding, data recorded (HRGs) not providing accurate picture. Need to map patients to understand how they are recorded to obtain exact figures to target</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>D-dimer testing in labs pre and post new pathway</td>
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</tr>
<tr>
<td>7</td>
<td>Use metric comparator to ensure right measures are collated</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Map DVT patients through BI systems to ensure DVT admission and ED attendance figures are accurate</td>
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<tr>
<td>7</td>
<td>Cross ref patient group with 1% integrated team work to ensure no duplication</td>
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<tr>
<th>育</th>
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<th>Natalie McClary/Debbie Burnicle/Tracey Lucas</th>
</tr>
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<tbody>
<tr>
<td>8</td>
<td>Action plan and pathway to be discussed and signed off at both OOH (25th May) and urgent care boards (7th June)</td>
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