Phase 2 Future Hospital development site

Sandwell and West
Birmingham
Future Hospital Development Site
Report August 2017
Sandwell and West Birmingham NHS Trust

Dr Arvind Rajasakeran (FHP Clinical Lead)
Rachel Barlow (Executive Sponsor)
Martin Chadderton (Analyst)
Mrs Alice Joy (RCP Patient Carer Network Representative)
Mr Stephen Hildrew (Directorate General Manager)
Dr Guy Hagan (Specialty Lead)
Cathy Dhanda (Project Manager)
Contents

Overview of Respiratory Programme 3
Brainstorming, creating Affinity Diagrams, SWOT analysis to a set of objectives 3
‘What the current state looks like’: Benchmarking 4
The 3 workstreams: PRE | IN | POST Hospital and their drivers 6

Results 9
PRE-Hospital workstream results 9
IN-Hospital workstream results 10
POST-Hospital workstream results 11

Reflections 12
Future plans 12
Summary 13
Appendices 16
Overview of Respiratory Programme

The Sandwell and West Birmingham NHS Trust in collaboration with and support of the Royal College of Physicians’ (RCP) Future Hospital Programme (FHP) has embarked on an ambitious project to redesign and align respiratory services for the local population. This approach is leading the way on defining an integrated model which delivers a seamless pathway for patients through primary, acute, social, community and voluntary care.

The launch of the FHP project took place in March 2016 when senior managers, patients, community, primary care and acute staff attended a workshop to define ‘what good looks like’. The event was well attended and valuable themes were collated to define the project objectives.

Process 1.1 Brainstorming, creating Affinity Diagrams, SWOT analysis leading to a set of objectives

- Hold workshop to determine 'what good looks like' including stakeholders such as:
  - PATIENTS
  - CLINICIANS
  - NURSES
  - COMMUNITY STAFF
  - CORPORATE STAFF
  - GP'S
  - PRIMARY CARE MANAGEMENT

- 'Brainstorm' ideas and group into similar themes.

- An Affinity Diagram was produced grouping together similar ideas.

- The second part of the workshop then took these 'grouped ideas' and produced a set of matrices in a SWOT analysis format refining them into a set of ideal outputs for the programme.
  - Questions asked:
    - Do we have it?
    - Do we want it?
    - Four boards were set up with the headers of 'YES' or 'NO'

- SWOT style matrices of ideas were then ranked

- A set of defined objectives for the Programme were produced as an output.
After setting broad objectives; we conducted a ‘baselining’ exercise for the Respiratory medicine conditions in our area using Pareto analysis, demographic and epidemiology techniques combined with peer comparison against hospitals of similar size and case mix to determine main ‘areas of need’ or priority conditions related to the objectives for our programme.

Process 1.2 ‘What the Current State looks like’ – baselining exercise for Respiratory medicine in Sandwell and West Birmingham Hospital, Birmingham.

We considered a peer of our NHS trust to be one of similar financial turnover and case mix so the method of peer comparison was to use national systems such as NHS Improving Quality ‘Better Care Better Value’ and benchmarking tools such as CHKS using those conditions and stratifying around the conditions and age bands which we are comparing against allowing us to establish combinations of opportunity e.g. COPD in the over 75 age band, asthma in children etc. Predictive forecasting of conditions was performed by taking a variable (length of stay, readmissions etc.) and then calculating the formulae that would represent the last 2 years. Some trends were largely linear but others had a logarithmic or polynomial equation (examples of which can be seen within the benchmarking section below) which was then used to predict future performance.
Key findings of the benchmarking analysis were:

**PEER COMPARISON**

Chronic Obstructive Pulmonary Disease (COPD), Bronchiectasis and Asthma has comparatively poor readmission rates when compared to other trusts.

<table>
<thead>
<tr>
<th>CCS Group</th>
<th>Discharges Subsequently Readmitted</th>
<th>Trust</th>
<th>Peer</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>127 - Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>421</td>
<td>30.3%</td>
<td>22.2%</td>
<td></td>
</tr>
<tr>
<td>128 - Asthma</td>
<td>91</td>
<td>16.1%</td>
<td>11.5%</td>
<td></td>
</tr>
</tbody>
</table>

**DEMOGRAPHIC ANALYSIS**

There are ‘hotspots’ of certain conditions around Sandwell and City hospitals.

**STRATIFYING CONDITIONS**

Illustrated which age bands certain conditions are most prevalent in.

**DEMOGRAPHIC ANALYSIS (cont.)**

We have a high deprivation index within our catchment area.

**TREND ANALYSIS**

Trend Analysis would suggest that, unchecked, we would be looking at an increase in Respiratory medicine readmissions in future years.
This initial analysis facilitated refining objectives into a set of measures built into the balanced scorecards (appendix A,B and C) allowing us to check progress at the ‘study’ part of our PDSA.

The project stakeholders were from a number of stakeholder groups (e.g. service user, commissioning, nursing, allied health professionals, management and medical). These members formed ‘task and finish’ groups in 3 workstreams and met regularly each month to work towards delivering the milestones which were aligned to the key FHP principles. All progress was tracked through a monthly steering group, which also acted as a point of escalation and decision making, and was chaired by the clinical lead - Dr Rajasakeran. The challenges involved in bringing people together in a meeting were significant due to competing clinical commitments.

Project governance was designed to ensure that the deliverable was aligned to Sandwell and West Birmingham Hospital Trust strategy and met the objectives required by the Clinical Commissioning Group (CCG). The 3 workstreams (PRE|IN|POST Hospital) are based around the patient journey: Pre-Hospital workstream was commissioner and GP led with acute, community professionals and a patient representative. This workstream looked at the way in which all partners can work together to provide care closer to home, skill up primary care on managing and diagnosing patients as well as ensuring that non-complex cases and referrals are managed by primary care. The plan going forward is to use this information to agree a commissioned integrated model.
To determine the inputs and outputs to delivering a successful PRE-Hospital workstream a driver diagram was constructed:

**Process 1.3 Construct Driver Diagram for Pre-Hospital (or Co-Located clinic workstream):**

The In-Hospital workstream is led by a respiratory physician with the multi-disciplinary team (MDT) and the key objective was to streamline the pathways for patients once they are admitted to the hospital. The focus was to test using PDSA the in-reach pathway and the effect that acute physicians made to the early management and discharge, referral and follow up for patients. The national and Trust objective to standardise a 7 day working model for respiratory disease was seen as not tenable due to the already stretched consultant resource. Therefore the approach has been to look at implementing incremental interventions to improve the patients experience and flow through hospital. One of these was the impact of senior presence on the wards and emergency areas throughout the week. This model was tested for a week and showed that patients valued seeing a senior doctor and that this helped decision making. However, there was not a significant change to the length of stay (LOS) for patients but some small increase in discharges over the weekend. At the end of January 2017 the team piloted a model designed to ensure that referrals from the assessment unit were reviewed daily at Sandwell Hospital followed by a mini MDT with community nurse specialist (CNS) and community services to facilitate discharge. The implementation of the COPD bundle has also been rolled out in the assessment units on both City and Sandwell hospitals. The team are also in the process of setting up virtual review clinics to facilitate early discharge from the wards.
The Post-Hospital workstream key objective has been to develop an approach to reduce the readmission rates for patients with a long-term condition. To determine the inputs and outputs to delivering a successful Pre-Hospital workstream a driver diagram was constructed:

**Process 1.3 Construct Driver Diagram for Pre-Hospital (or Co-Located clinic workstream):**

The workstream is led by a respiratory consultant and the intervention is virtual multidisciplinary clinics involving acute teams, social workers, palliative care and the community respiratory services. The virtual MDT takes place every 6 weeks and the patients for discussion are referred following a criterion (see appendix). The approach is to take a holistic overview of the precipitating factors that may have contributed to the admission and to provide a plan of care to reduce the frequency of readmission and decrease the LOS if admitted to hospital. The team will continue to expand on this approach and intend to introduce metrics to measure qualitative and quantitative impact as well as an automated alert system.

Each workstream (Pre|In|Post) Hospital went through a set of PDSA cycles where an initiative or intervention was planned, piloted and measured against a balanced scorecard.
The balanced scorecards were designed around choosing a main measure (that we were trying to improve), a balancing measure (that may be adversely affected by changing the main measure), a process measure and where possible a financial measure (or return on investment) and a People (patient/staff) measure. The results of the workstreams are outlined within the appendix section at the end of the report.

Below is a table outlining the aims; their alignment to FHP principles and the task and finish group priorities to achieve the objectives with results:

<table>
<thead>
<tr>
<th>Aims</th>
<th>FHP Principles alignment to project</th>
<th>Task and Finish Groups (Workstreams)</th>
</tr>
</thead>
</table>
| To develop a patient focussed service which is an integrated model of care across primary, acute and community clinicians where the pathway is seamless | • Fundamental standards of care must always be met  
• Patients experience is valued as much as clinical effectiveness  
• Responsibility for each patient care is clear and communicated  
• Good communication with and about patients is the norm  
• All patients have a care plan that reflects their individual clinical and support needs | Workstream: Pre-Hospital Integrated clinics model with multidisciplinary team in primary care with acute clinicians nursing/doctors/AHPs |

**RESULTS**

The Pre-Hospital workstream was measured against its ability to prevent unnecessary hospital visits for the Cohort of patients seen within the pre-hospital clinics.

For this cohort of patients the gap between hospital visits lengthened by an average of 0.32 days for that cohort balanced against no discernible change in LOS for the same cohort.

Patient satisfaction responses to the clinics were high.

We also saw positive return on investment (ROI) as far as sharing of knowledge between primary and secondary care and reconciliation of medicines as well as said unnecessary visits.

Full results for the Pre-Hospital workstream are contained within the balanced scorecard (Appendix A).
To deliver a service model which is sustainable and robust to meet the needs of the local population

- Fundamental standards of care must always be met
- Patients experience is valued as much as clinical effectiveness
- Responsibility for each patient care is clear and communicated
- Good communication with and about patients is the norm
- All patients have a care plan that reflects their individual clinical and support needs
- Patients do not move wards unless this is necessary for their clinical care
- Patients have timely access
- Staff are supported to deliver safe, compassionate care and committed to improving quality

<table>
<thead>
<tr>
<th>Workstream: In-Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-reach model by respiratory medicine to allow the patients attending emergency department to be promptly reviewed and diagnosed to allow a safe deflection or admission to the wards</td>
</tr>
</tbody>
</table>

**RESULTS**

The In-Hospital workstream was measured against its ability to stream respiratory patients to the correct wards from assessment units as opposed to general wards facilitating early diagnosis and better management of their condition.

For this cohort of patients the number of incorrect referrals improved by 0.1 per day on average but these patients then had reduced LOS as a result.

Patient satisfaction and staff satisfaction responses to the clinics were good.

Full results for the In-Hospital workstream are contained within the balanced scorecard (Appendix B).

<table>
<thead>
<tr>
<th>Workstream: Post-Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of a comprehensive support package for patients with high care requirements and frequent hospitalisation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To provide comprehensive early assessment for patients with high care requirements and frequent hospitalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Fundamental standards of care must always be met</td>
</tr>
<tr>
<td>- Patients experience is valued as much as clinical</td>
</tr>
<tr>
<td>- Responsibility for each patient care is clear and</td>
</tr>
</tbody>
</table>
communicated
- Good communication with ad about patients is the norm
- All patients have a care plan that reflects their individual clinical and support needs
- Patients do not move wards unless this is necessary for their clinical care
- Patients have timely access

frequent admissions through a virtual MDT

RESULTS
The Post-Hospital workstream was measured against its ability to prevent unnecessary Emergency A&E attendances for the Cohort of patients seen within the post-hospital MDT clinics.

For this cohort of patients the gap between A&E attendances lengthened by an average of 0.49 days for that cohort balanced against no discernible change in Emergency LOS for the same cohort.

Patient satisfaction responses to the clinics were not undertaken.

We also saw positive ROI as far as the reduction in A&E frequent attenders and some early evidence of follow-up outpatients.

Full results for the Post-Hospital workstream are contained within the balanced scorecard (Appendix C).
**Pre-Hospital workstream**: Our team has been able to demonstrate that co-located clinics in the primary care setting, with input from specialists and the community respiratory team, can bring about efficiencies and proactively optimise health care for patients with chronic and complex respiratory needs. We have circa 90 groups of practices and to establish a functioning model of co-located clinics we need expansion of the respiratory specialist workforce at the level of consultants and Specialist Respiratory clinicians in the community. Some of this will be realised in, efficiencies from OP appointments saved and emergency admissions reduced. We also believe there will be an increase in the incidence of COPD and improved accuracy of the diagnosis of Asthma. The impact of early diagnosis and proactive early interventions including preventive measures are more difficult to estimate at this early stage. We propose that investment is needed to realise the efficiencies that we have demonstrated. The model will be presented to the primary care commissioning framework committee in September 2017 and we are hoping that this model of health delivery will be commissioned for April 2018. The service will be monitored for quality assurance. The metrics reflect the process, health outcomes, experience measures and balance measures that will be agreed. Using IT integration, systems will be put in place to measure the key indicators so they team can reflect and optimise the processes and pathways.

**In-hospital workstream**: Business case has been submitted for expansion of consultant work force and is awaiting final stage approval at the executive level. When the post holder commences we will be in a position to phase in our aspirations for respiratory in reach and subsequently a 7 day respiratory service that meet our needs. There are plans for the 2 hospital services to merge in a single site when the new Midland Metropolitan Hospital buildings are completed in spring/summer of 2019.

**Post-Hospital workstream**: The findings from the analysis are being presented to “Quality Plan committee” and we have requested commissioning a psychologist, administrative support, social worker time and palliative care input. This service has already become operational. We intend to quality assure this service using staff experience surveys and reduction in use of non-elective services and Quality of Life measures from patients.
vii. Summary – Dr Arvind Rajasakeran

Our Trust’s vision is for it to be renowned as the best integrated care organisation in the NHS. Our Future Hospital project for Respiratory care was founded and developed on the principles of the Trust’s ‘Right Care Right Here’ programme and the principles of care as outlined in the Future Hospital Commission report.

Our vision is to develop a truly integrated respiratory service and we have through this project, been able to share this vision with all the relevant stakeholders. We, as a team recognise that to ensure the sustainability of the objectives, we need to design a model that addresses all aspects of care requirements of the patients with a respiratory long term condition. This is reflected in the three individual workstreams aimed at the pre-, in- and post-hospital care of the respiratory patient. We have been systematically addressing the issues using quality improvement methodologies and tools. We recognise that for this to be realised and effective, collaborative engagement of clinicians, commissioners and the executives working in the primary and secondary care setting is paramount. We also recognise for the changes to be embedded, and operationally be effective, systems will need to be put in place for sustenance of this process for periods longer than 3-5 years. The steering group has seen that the Future Hospital project has morphed into a Future Respiratory programme for the Respiratory department.

We have demonstrated that bringing specialist input to the primary care setting improves patient care, patient experience, skills and knowledge of GPs and practice nurses. We have been able to demonstrate ROI in avoided outpatient referrals, non-elective admissions and medicine optimisation. Similarly engagement in a quality improvement exercise has provided the evidence for the additional resource requirements. We believe this has allowed us to present persuasive business cases to the Primary Care Commissioning Framework and our Trust executives. There has been a change in culture and we routinely aim to measure the impact of health service interventions on key metrics and this allows the use of science of health care delivery in shaping the future of the commissioning process.

We were very fortunate to have been able to put together team of stakeholders who all were able to subscribe to a common vision and we enjoyed the unflinching support of the executives at primary care and secondary care level. Never has there been a greater emphasis on the need for innovation in health care design and using novel technologies to deliver health services. However the reality is that the NHS is currently under pressure. We are facing increasing demands due to changes in demographics and societal expectations. These are national issues and we are not immune to it. Our organisation is going through an interesting phase while we build our eagerly awaited Midland Metropolitan Hospital - the NHS’s first truly acute hospital that is designed to serve the acute care requirements of the population. This means that alternative models of care have to be developed for ambulatory patients and those requiring OP services. This is both an opportunity to develop new models of care and challenges are plenty while there is considerable re-organisation of many services in preparation for this. The team faced its share of challenges especially when it suffered the loss of analyst support and project management support. The team demonstrated considerable resilience throughout that period and with the help of the Executive team we were able to get back on track with renewed enthusiasm and fresh input from our current project manager. The resilience perhaps was a result of a shared vision and clinical engagement and distributive leadership.
### Stakeholder Feedback

We also conducted a workforce feedback exercise with our group of stakeholders as part of our results for the programme and in keeping with our principle of listening to all our stakeholders we finish the report with the anonymised reflections from steering group (May 2017)

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Reflection</th>
</tr>
</thead>
</table>
| Patient representative| Heartened by the group continuing to be enthused and engaged throughout, despite the challenges faced by organisations and competing demands. Feels role has not been able to develop as no other patients have been recruited to the programme. Raised concern that patients can perceive the bureaucracy as impeding service improvement.  
To patients, the aims of the project were both laudable and desirable, seeking as they did to integrate respiratory services across primary, secondary and community care with the focus on the patient. The construction of a new hospital also provided an ideal opportunity for changing the way services were delivered.  
The programme got off to a flying start, the team having done a great deal of background work in identifying a baseline from which to launch their objectives. The team was well constructed, involving as it did hospital clinicians and managers, patient representatives, GPs, commissioners, community clinicians and, importantly, a data analyst and project manager. The removal of the data analyst and project manager quite early on in the project caused real problems for those remaining, who did their best to carry on in the absence of some vital members. Another problem arose when one of the patient representatives encountered personal problems that prevented his planned involvement in the project.  
The team rose to the challenge, petitioning for a new project manager, who was subsequently appointed and who was a strong influence in pushing forward objectives. The data analyst was also later reinstated, which was vital to progress measurement. Recruitment of a new patient representative proved to be difficult, but was finally achieved.  
Care bundles were implemented, together with MDT clinics held by GPs, consultants and community clinicians and several PDSA cycles completed to assess the value of actions taken. Opinion questionnaires administered to patients and staff gave a strong indication of satisfaction on both parts. Analysis of data on PDSA cycles on indicators of project efficacy showed improvements in every aspect measured which, if extrapolated to the wider population, would suggest not only that the programme has met with the approval of patients, but also that it will bring efficiency savings to the organisations involved.  
Key points:  
• The RCP Patient Carer Network (PCN) representative was welcomed as a full member of the team |
• The team itself was diverse and committed
• Significant challenges were encountered but worked through by the team
• Commissioners were supportive throughout
• Patients and staff alike found the initiatives highly beneficial
• Actions taken have supported the original aims and objectives
• This is a long-term programme that will continue to grow and evolve, particularly as the secondary care element will ultimately move to new premises’

Operational

The learning events organised centrally and at the development sites served as a source of knowledge and inspiration for our team. The teams were honest and shared both their successes and challenges and this transparent approach facilitated true learning. We had positive feedback for our site’s ability to display our metrics and our analysis of the interventions in a most effective manner and this is, in large part due, to the support we received from our analyst and the expert input from the FHP’s expert analyst.

It also was evident that the various development sites were in different phases as they became part of the FHP and we embarked on the operational element only after launch of the FHP in January 2016.

The FH project did not come with any financial resource which may have helped with the rate of change. The project findings have revealed that additional resources and different ways of working is needed not just for consultants but also the wider MDT and the need to resource the MDT such as psychologists, social workers, CNS, physiologists to provide a sustainable and integrated model.

Some members felt that many of the changes proposed common sense and should in fact be normal practice already. The organisation has not appreciated that whilst other services have been resourced to deliver, respiratory has not, even though as a service the demand has increased over the years. The project has identified a clear gap between what is expected and the gap in resource.

The FH project has served to bring focus on the long term vision for Respiratory services. It served as a rallying call for all stakeholders to combine their efforts to bring about cohesive changes that will be fit for the future and renewed the need for integrated services and the use of QI science in health care innovation.

Commissioning

There has been a commitment issue compounded by demands on time and competing priorities. Communication to GPs and primary care about the aims of the project has been a challenge.

Community Respiratory Service

The FH project has provided a structure and focus. The drawback is that the vision is difficult to realise without the additional resource.

Acute Nursing Service

Many of the interventions that have been planned through the FH project have been discussed over the years but not delivered. The test will be ensuring that they are delivered consistently. Important to ensure that the changes will be sustained.
APPENDIX A: Balance Scorecard (Pre-Hospital): Clinic model has gone through several PDSA cycles of Acute and Primary Care integrated care teams involving face to face joint consultation with patients.

**MAIN MEASURE** | These patients were frequent attenders at A&E, outpatient and also, inpatients so we measure a before and after profile of their attendances across these 3 elements.

**BALANCING MEASURE** | If we reduce frequency of attendances then there is a risk we increase the length of stay for those attendances that remain.

**PROCESS MEASURE** | Counting the number of patients seen in the clinic.

**FINANCIAL / ROI**

**Pre-HOSPITAL**

**Process Measure**

**Number of days between Acute Stays improved and sustained by 0.32 days.**

**The Mean Length of stay for this cohort of patients has largely remained static (slight reduction) throughout the period.**

**PATIENT MEASURE**

Likert scale entered by patients attending clinic.

**FINANCIAL / ROI**

Pre Hospital: Return on Investment for Co-located clinic.

**AIM**

**PRIMARY DRIVER**

**SECONDARY DRIVER**

Patient pays less visits, in hospital, primary care, and in order for managing condition.

**RETURN**

<table>
<thead>
<tr>
<th>Patient</th>
<th>1 Patient</th>
<th>25 Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Patients</td>
<td>200 Patients</td>
<td></td>
</tr>
<tr>
<td>3 Medicines</td>
<td>75 Medicines</td>
<td></td>
</tr>
<tr>
<td>1 Scan</td>
<td>75 Scans</td>
<td></td>
</tr>
<tr>
<td>1 Admission</td>
<td>25 Admissions</td>
<td></td>
</tr>
</tbody>
</table>

**INVESTMENT**

**SHARED KNOWLEDGE**
- Multi-disciplinary team collaboration
- Clinicians driven to help others

**REDUCED HOSPITAL INDIGENOUS**
- Reduced hospital admissions
- Reduced readmission rates

**EIGHT ECONOMIC FACTORS OF RETURN**
- Reduced OPvisit
- Reduced OP referrals
- Reduced OP readmissions
- Reduced OP medication
- Reduced OP investigations
- Reduced OP diagnostic tests
- Reduced OP complications
- Reduced OP mortality

**REDUCED OP HOSPITAL ADMISSIONS**
- Reduced hospital admissions
- Reduced readmission rates

**END OF CO-LOCATED CLINIC**
- Reduced hospital admissions
- Reduced readmission rates

**RUN A SET OF COLLOCATED CLINICS**
- Consultant
- Consultant
- Consultant
- Consultant
- Consultant
- Consultant
APPENDIX B: Balance Scorecard (In-Hospital): In-reach model allowing Respiratory team to see patients at the front door before they reach inpatient wards

**MAIN MEASURE** | By referring the patients to respiratory wards as opposed to general medicine wards at the point of admission results in better management of the condition.

**BALANCING MEASURE** | If we say we’ve increased the number of correct admissions to respiratory wards we need to ensure this was not due to general admissions increasing.

**PROCESS MEASURE**

---

**IN-HOSPITAL**

**IN HOSPITAL | Main Measure | Number of Respiratory Patients not sent to Respiratory wards per day | Jan 18 2017 to Feb 13 2017**

The Number of Respiratory Medicine patients sent to non-respiratory wards slightly improved 0.09 per day during the period of the In Reach period.

**IN HOSPITAL | Balance Measure | Number of Emergency Medicine Admissions per week | Jan 18 2017 to Feb 13 2017**

Although it dipped afterwards the Number of Emergency Medical admissions that could have contributed to incorrect admissions to non-respiratory wards during the period of Jan 22 to Jan 27 was at least average for a normal week.

**PATIENT MEASURE** | Likert scale entered by patients after they were seen by In Reach Respiratory team

**STAFF MEASURE** | Likert scale entered by staff after they saw patients in the In Reach AMU clinic

**IN Hospital | Respiratory Medicine AMU InReach**

Q1. Facilitated Service Provision for Acute Resp. med Patients

Q2. Added Educational value and Personal development

Q3. Had Positive Impact on my workload
Appendix C: Balance Scorecard (Post-Hospital): Virtual clinic gives patients with high care requirements and frequent admissions support post hospital admission.

**MAIN MEASURE |** The days between A&E arrivals were measured for the Cohort of Patients seen within MDT clinic before and after MDT clinics started.

**BALANCING MEASURE |** Length of Emergency Length of Stay for this Cohort of Patients

**PROCESS MEASURE |** Each Patient had a MDT document entered after attendance at clinic

**POST HOSPITAL |** Return on Investment for MDT clinic

**Financial/ROI**

**No Patient Measure**

**No Staff Measure**
Appendix D: Aims slide presented at the Liverpool event on the 10 May 2017

1. **Aims of The Project**

1. Develop a patient focussed service which is an integrated model of care across primary, acute and community clinicians where the pathway is seamless
2. To deliver a service model which is sustainable and robust to meet the needs of the local population
3. To provide comprehensive support for patients with high care requirements and frequent hospitalisation

1. Fundamental standards of care must always be met
2. Patient experience is valued as much as clinical effectiveness
3. Responsibility for each patient care is clear and communicated
4. Patients have timely access
5. Patients do not move wards unless this is necessary for their clinical care

**IN HOSPITAL (Work stream 2)**
In Reach Model that has allowed the Respiratory Medicine team to reach patients at the 'Front door' to allow prompt and timely review of patients before they hit hospital wards.

**POST HOSPITAL (Work stream 1)**
Provide comprehensive support for patients with high care requirements and frequent admissions through a virtual MDT.

**PRE HOSPITAL (Work stream 3)**
Integrated clinic model has been trialled which allows the multidisciplinary team to facilitate a number of approaches in primary care these are face to face clinics with primary and acute physicians.

7. Good communication with and about patients is the norm
10. All patients have a care plan that reflects their individual clinical and support needs
11. Staff are supported to deliver safe, compassionate care, and committed to improving quality
Appendix E: Benefits of a Co-located clinic poster that won a Green Sustainability award at RCP's Medicine 2017

THE BENEFITS OF CO-LOCATED CLINICS IN RESPIRATORY MEDICINE

- Patient received general and specialist support.
- Confidence gained within GP Practice to make some decisions that may have required a hospital visit e.g. patients with malignancy.
- Specialist physician gained local knowledge about Respiratory issues faced by the local practice.

- Rationalisation of medicine: Switching to cost effective inhaler combination treatment leading to recurring cost saving and compliance with Guidelines.
- A ‘One stop shop’ of acute and general practitioners with combined decision making reduced probable future GP visits. Patient expectations were managed better using the combined input of specialist and the Generalist leading to fewer GP visits.
- It was calculated that 5 sets of outpatient appointments, 1 planned Inpatient admission and a probable emergency admission was reduced as a result e.g. An opportunistic intervention lead to proactive care potentially avoiding an infective exacerbation requiring emergency hospital admission.
- A bone scan was cancelled for a patient as the test was not deemed necessary upon review of hospital records.

We are working to dissolve the barriers that currently exist across services, as a local exemplar of how equitable and high value care can be provided to all patients.

We cross-referenced patients registered with a primary care practice with frequent attendees at the trust (accident and emergency, emergency medicine inpatients, or outpatient clinics). From this the GP identified patients who could attend their local surgery for a joint consultation with the GP and the specialist in the same room. We chose to measure our success against cost savings, shared knowledge and patient outcomes.

This was a partnership between Sandwell and West Birmingham and Tower Hill General Practitioner.

From the patients seen we managed to derive both quantitative and qualitative benefits. These outcomes are illustrated within the results infographic.

Encouraged by this early success we are going to use PDSA (plan, do, study, act) cycles to refine, spread and gather more data on the process to ensure we have the most robust model to deliver the best care possible.
Contributors:

Dr Manish Latte (GP)
Mrs Kelly Redden Rowley (Sandwell Community Respiratory Service)
Mrs Lynne Dale (Birmingham Community Respiratory Service)
Mrs Anne Findlay (Clinical Nurse Specialists)
Dr Imtiaz Ahmed (Respiratory Physician)
Dr Hatem Abusriwil (Respiratory Physician)
Mr Yasir Malik (Service Manager for Respiratory services)
Mr Mohammed Khalil (Senior CCG lead)
Katie Gray (Deputy Chief Operating Officer for Improvement)