

**Thames Valley Clinical Senate** 

# **Thames Valley Clinical Senate**

NHS Bed Test

Applied retrospectively to the Oxfordshire Transformation Programme - Phase 1

28<sup>th</sup> July 2017

Final

# Contents

1. The NHS Bed Test	3
2. Oxfordshire Transformation – Phase 1	3
2.1 Clinical Senate Recommendations from Phase 1 regarding the bed proposal	0
3. Methodology for the NHS Bed Test Review	5
3.1 Process	5
3.2 Definitions	6
4. Description of the Service Model	6
4.1 Liaison Hub & Hub Beds	7
4.2 Ambulatory Assessment Unit	9
4.3 Acute Hospital at Home (AHAH)	10
4.4 Hospital Assessment and Re-ablement Team (HART)	10
5. Conclusions and Recommendations	11
Conclusion	13
Appendix 1	15
References	16

# 1. The NHS Bed Test

In March 2017, Simon Stevens announced an addition to the Government's 4 tests for reconfiguration proposals which is known as the NHS Bed Test.

He stated that from 1 April 2017, proposed bed closures would only be supported if NHS organisations were able to demonstrate that the hospital bed closures could meet one of the 3 new conditions as follows:

- 1 Show that enough alternative provision is being put in place alongside or ahead of bed closures, and that a workforce would be there to deliver it; and/or
- 2. Show that specific new treatments or therapies would reduce specific categories of admissions; or
- 3. Where a hospital has been using beds less efficiently than the national average, that it has a credible plan to improve performance without affecting patient care.

In September 2016, the Thames Valley Clinical Senate (the Senate) was asked to undertake a clinical review of the Phase 1 Oxfordshire Transformation proposals, as part of the formal NHSE stage 2 assurance processes. This was completed in November 2016. Further evidence was submitted and considered in December 2016 and an Appendix to the Senate report was published in January 2017.

Following the announcement of the additional NHS Test in March 2017, the Senate was asked to apply it retrospectively to the Oxfordshire Transformation Phase 1 proposals.

# 2. Oxfordshire Transformation – Phase 1

The Phase 1 proposals reviewed by the Clinical Senate were as follows:

- **Critical Care:** The proposal to change the status of the Critical Care Unit at the Horton General meant that patients requiring level 3 care would, in future, be treated at the John Radcliffe. Patients requiring Level 2 care, would continue to receive this at the Horton General. There was no identification of bed closures as part of this proposal.
- **Maternity Services:** The proposal was to make permanent the change the status of the maternity services at the Horton General from an Obstetric unit to a Midwife led unit. This meant that women who either chose to give birth in an obstetric unit or needed to for safety reasons, would receive their care in the John Radcliffe Hospital. It was proposed that a Midwife Led unit would continue on the site of the Horton General. In line with projected activity, some beds were reduced at the Horton General and there was a corresponding increase at the John Radcliffe

with no overall reported reduction in beds and the changes were considered against the Government's 4 Tests.

- Acute Stroke Care: The proposal to direct all stroke patients from the Horton General to the Hyper Acute Stroke Unit at the John Radcliffe Hospital did not include intent to close beds.
- Planned Care:The proposed changes to increase the delivery of planned care at the<br/>Horton General did not include intent to close beds.
- **Bed Realignment** The proposal to enable patients who are in an acute bed but no longer need acute medical care to move from a hospital setting into a nursing home to facilitate discharge planning set out a clear statement that the proposal would lead to a reduction in acute beds though they would be replaced in a community setting. At the time of the review in November 2016, 74 beds had been closed and there was intent to close more.

This bed test review is therefore focussed on the bed realignment proposal as other changes in Phase 1 were considered against the Government's 4 Tests for service reconfiguration.

# 2.1 Clinical Senate Recommendations from Phase 1 regarding the bed re-alignment proposal

The Senate agreed that the principle of closing acute beds to use the funding to purchase beds in the community was the right one. It did not comment on the appropriate number of beds to close as the information submitted was not sufficient to enable it to do so.

The Senate said that it would encourage continued investment in this scheme to the extent that the maximum potential could be achieved for patients who no longer need acute hospital care. However, there were areas which the Senate felt required more attention and it made recommendations as follows:

- it should be explicit that people would be moved into the hub beds with a plan to achieve discharge to the intended destination and the Oxfordshire CCG should continue to monitor the outcome for these patients, their length of stay in the hub beds and the usage of the beds
- 2. there should be checks to ensure that there is a robust system response beyond the hub to ensure that delays were not transferred from the hospital to the community

In setting the recommendations, the Senate was seeking assurance that when patients were transferred to the hub beds, staff would actively promote the discharge of those patients to their ultimate destination. The Senate accepted that the period of stay would have to be sufficient to allow sometimes complex assessments to be carried out or for long stay arrangements to be put in place but it was keen to ensure that patients would move through hub beds in a proactive manner. To this extent, it recommended that the Oxfordshire CCG

should monitor the progress of patients in hub beds. There was also a requirement that the whole pathway of care should be actively monitored so that the system could identify and take action if capacity issues arose in specific elements which created delays elsewhere in the pathway.

# 3. Methodology for the NHS Bed Test Review

The methodology of the review was informed by national guidance and the Clinical Senate Review Process: Guidance Notes (2014).

The aim of the Senate was to assess the proposed closure of beds against the three conditions set out within the NHS Bed Test. At the time that the Senate reviewed the Phase 1 Oxfordshire Transformation proposals, 74 beds had been closed. At the time of this review, 110 beds had been closed and it was confirmed, to the Senate, that there were no plans to close additional beds at the current time.

#### 3.1 Process

The Senate review focussed on condition 1 as the applicable test in this case as the proposals did not include new treatments or therapies which would reduce specific categories of admission and no evidence was submitted that suggested that the Oxford University Hospitals Foundation Trust (OUHFT) had been using beds less efficiently than the national average. The review of evidence was therefore assessed against the following:

Show that enough alternative provision is being put in place alongside or ahead of bed closures, and that a workforce would be there to deliver it;

The Oxfordshire Transformation Team presented an initial paper to the Senate which was considered at its meeting on 6<sup>th</sup> June 2017. The Senate found that more information was required to enable it to undertake its review and it framed a number of questions to the Transformation Team.

Following the Senate meeting of the 6<sup>th</sup> June, a stakeholder meeting between the Senate and the OUHFT clinical team responsible for the delivery of the alternative services was held. This gave the Senate the opportunity to understand the delivery of the proposal from inception to current time. Following the meeting, further information and data was supplied by the OUHFT. At the Senate's subsequent meeting on the 11<sup>th</sup> July 2017, the Senate reviewed a more detailed report and held a Q&A session with an OUHFT Divisional Director responsible for the service and staff representing the Oxfordshire CCG. Further information was submitted by the OUHFT following the Q&A session in response to specific queries raised.

The Clinical Senate membership includes members from the Oxfordshire system who declared a conflict of interest. Those members were invited to remain at the meeting to inform the discussion but did not participate in the decision making. The Clinical Senate membership is shown at Appendix 1.

#### **3.2 Definitions**

For clarity, the following definitions will apply within this document.

- Hub BedsBeds which have been procured in nursing homes by the<br/>Liaison Hub and which remain under the management of the<br/>Liaison Hub
- Intermediate Care Beds Beds which are purchased by Oxfordshire County Council to enable patients to achieve an optimum level of health and independence; to reduce avoidable admissions or to facilitate a full assessment of a person's needs. These beds are not included as part of the re-ablement proposal
- Acute Ambulatory Unit A patient focused service where patients will be treated without the need for an overnight stay in hospital. Patients may return home overnight and return to the unit if further treatment is required.
- Acute Hospital At Home A team of senior nurses who provide short term support for patients discharged from the Acute Ambulatory Unit to enable them to return home

#### Home Assessment and Re-ablement Team

Working alongside the AAU, the Home Assessment and Reablement Team (HART) provides assessment, re-ablement and home care to people leaving hospital and from the community

HART Mitigation Beds Beds which have been independently procured by Oxford County Council for use by HART. They are managed by the Liaison Hub.

# 4. Description of the Service Model

In 2015, the Oxford University Hospitals NHS Foundation Trust (OUHFT) had, nationally, the 2nd highest number of patients delayed in acute hospital beds waiting for a package of care to be put in place to enable them to move either home or to a residential setting.

Health and social care providers in Oxfordshire agreed to work together to develop and implement an approach to address delays and improve patient flow and experience. The approach focussed on transferring patients who no longer needed acute medical care from the hospital setting into a nursing home for a short period of time, while they awaited the next stage of their care. This approach had been tried the previous winter on a smaller scale utilising 30 beds in nursing homes.

There was also an intention to increase the number of patients treated on an ambulatory basis i.e. treated in hospital on a day basis, returning home overnight.

The alternative provision reviewed by the Clinical Senate therefore includes hub beds, acute ambulatory care and the HART service in as far as it relates to discharges from the hub beds.

#### 4.1 Liaison Hub & Hub Beds

At the inception of this scheme in December 2015, the Liaison Hub was established at the OUHFT. It is clinically led and its function is:

- to procure the hub beds in nursing homes
- to manage the discharge function from the acute hospital to the hub beds including patient and family liaison
- To track all patients in the hub beds ensuring that they are receiving appropriate care while in the hub beds and to progress the discharge from the hub beds to the patients final destination.

As at May 2017, there were 91 hub beds in operation but the number of beds can flex according to demand. In addition to the hub beds, as at May 2017, there were also 30 HART mitigation beds which have been put in place to support discharge from HART.

Before procuring beds, nursing homes are assessed for quality which includes reference to the current CQC reports and community feedback and they are clinically assessed to ensure that they have the capability to provide care for the frail and complex patients in this cohort. Relationships have been established with a small number of Nursing Homes which are located across Oxfordshire with the intention of being able to place patients as close to their home as possible.

The Liaison Hub workforce includes medical and clinical staff, therapists and social workers. Data provided by the Liaison Hub for March 2017 shows full staffing with the exception of social workers where there were two vacancies which were being recruited to.

#### Transferring patients to Hub Beds

Patients who are identified for discharge to the Hub Beds are typically frail and complex with an average age of 89+. Many of them require end of life care. Selection criteria have been developed on an iterative basis since December 2015 and patients are 'discharged to assess'.

A full joint assessment of patients is carried out prior to transfer to a hub bed, and care plans are jointly agreed by the Liaison Hub and the receiving nursing home. There is no waiting list as such for access to a hub bed as there is flexibility within the system arrangements. The daily visits, by members of the Liaison Hub, ensures that they are able to forward plan as patients are discharged.

Medical care for the patients in hub beds is provided by the nursing home and there is a Multi-Disciplinary Team (MDT) within the Liaison Hub which offers 7 day support to the nursing homes between 8.00am and 10.00pm. It was noted that where a pre-existing contract was in place between a nursing home and a GP practice, there was an expectation

that the GP practice would provide the medical cover for the patients being discharged. Given the known pressure on primary care this approach was queried. The Senate was assured that the process allowed the GP practice to review the needs of the patient before transfer and if there was not agreement between the Liaison Hub and the GP, the transfer would not proceed. It was noted that the MDT will also provide 7 day support to the GP between 8.00am and 10.00pm. The Senate was advised that the scheme is supported by the Local Medical Committee (LMC).

Through this programme and with support from the MDT, the clinical team in the Liaison Hub reported that the nursing homes have developed increased confidence to manage the care of the patients in the hub beds. The average length of stay is 44 days which reflects the complexity of the patients who have correspondingly complex assessment needs that are not easily resolved.

#### Discharge Destination from Hub beds

In the early stage of the programme and as part of the key performance indicators (KPIs) to evaluate the project, the discharge destination for a similar cohort of patients prior to the commencement of the Liaison Hub was agreed as the baseline.

Comparison data from September 2016 shows that the discharge performance was in line with the baseline though the re-admission rate was initially higher. This was identified as an initial lack of confidence in the nursing homes rather than problems with identifying appropriate patients. In those early stages, the whole system took a risk adverse approach but as confidence has grown and the medical support has been utilised, the re-admission rate has fallen to an average of 8 per month (Apr-July 2017).

Figures supplied by the Liaison Hub (below) show the discharge destinations for the 829 patients who have been through the process since December 2015.

Discharge Destination	No of Patients	%
Permanent Placement in Nursing Home	314	38%
HART	193	23%
Home without care	49	6%
Home with domiciliary care	163	20%
RIP in nursing home	110	13%

Feedback, from a patient survey of their experience of transfer to a nursing home and care whilst there, was largely positive and it was reported that many patients who are placed in a hub bed choose to remain there on a residential basis. This was seen as an endorsement of the care taken in selecting the nursing homes.

#### 4.2 Ambulatory Assessment Unit

Generally hospital admission rates are continuing to climb due to increasing numbers of emergency presentations of elderly patients with multiple chronic diseases. Historically, these patients would have been admitted but the purpose of the ambulatory units is for the hospital to provide expedited multidisciplinary and medical specialist assessment, care and treatment for a short period whilst enabling the patient to return home overnight.

There are 3 ambulatory units in Oxfordshire

1. **Emergency Medical Unit (EMU)** in Abingdon, co-located with the Abingdon Community Hospital and established in 2010. It operates from 8am to 8pm on weekdays and 10am to 4pm at weekends. Most patients are treated during the day and return home overnight but it has access to six short-stay inpatient beds which patients can occupy for 72 hours. This has the additional benefit of avoiding transporting patients to other sites.

Patients are referred by their GP, the ambulance service or community district nurses and the service both escalates care for patients having an acute crisis and provides a step-down service for patients from acute services. It focuses on frail elderly patients (the average age is 80) but has open referral criteria for all patients over 18. It will accept any patients who are not hyper-acute – e.g. patients with suspected heart attacks, strokes, head injuries or those who may need surgery.

2. **Rapid Assessment Unit (RAU)** in Banbury (at the Horton General Hospital) delivers care 7 days per week

3. **The Acute Ambulatory Unit (AAU)** Opened in August 2016. Based in the John Radcliffe Hospital and again focussed on the frail elderly, the AAU has senior doctors at the front door and available by phone. There are no access criteria but hyper acute patients are not seen in the unit. All GP referrals are directed to the AAU but patients can also be referred by the ambulance and community services. In contrast to other models of care, patients arrive with the expectation that their care will be delivered on an ambulatory basis and that they will return home overnight.

Patients arriving at the AAU are reviewed by the senior team which has access to multiprofessional colleagues throughout the hospital. A key difference in the AAU is that the full resource of the team is applied in a very short period.

Of the average 500 new patients seen each month, 90% are from GPs and the other 10% come through ED or direct from the ambulance. Of the 500, approximately 66% will be seen the same day and discharged. This compares with 30% discharge from the admissions unit. 12% will be admitted and 24% will go home and come back the next day to continue their treatment on the standard AAU pathway where treatment can continue for up to 5 days.

OUHFT is similar to other hospitals in that its emergency activity continues to a climb. In the period from December 2014 to June 2017, A&E attendance grew by 30% and non-elective admissions grew by 10%. However, activity data shows that during the same period, the trust was able to increase the number of non-elective patients admitted and discharged on the same day from 28% in December 2014 to 37% in June 2017.

For patients over 65, for whom the AAU is most relevant, the increase in non-elective admissions during the period was 7% and the trust was able to increase the number of patients admitted and discharged on the same day from 18% in December 2014 to 27% in June 2017. In the same period, non-elective bed days for over 65's fell by 8.86% and the average length of stay has reduced from 2.97 to 2.47 days.

In terms of workforce, the AAU clinical team reported only one vacancy which was in the process of being recruited to. Despite staffing shortfalls in Oxfordshire the team reported that recruitment had not been difficult due to the innovative approach of the AAU's work.

### 4.3 Acute Hospital at Home (AHAH)

AHAH's current primary focus is post-acute care, working alongside the ambulatory assessment units for any hospital-based interventions that are included in an ambulatory treatment pathway. Initial assessments are mostly conducted at the OUHFT but further work is underway to review whether this can be more frequently conducted within the community.

The weekly numbers of patients supported by the AHAH has been increasing as the bed closures have been phased in. Over 30 patients are now supported each week by 14 staff who work out of the John Radcliffe and Horton General Hospitals.

- The team is made up of senior nurses with acute and discharge experience working under the management of the admitting doctor. They will see patients in their own homes on a short term basis the median length of support provided is 3 days
- They can 're-admit' patients to the AAU if needed.
- The clinical team advised that the quality is good and there have been no complaints and very few re-admissions

#### 4.4 Hospital Assessment and Re-ablement Team (HART)

In September 2015, the Oxfordshire Re-ablement Service (ORS) was commissioned by Oxfordshire County Council and provided by Oxford Health. The supported Hospital Discharge Service (SHDS) was commissioned by OCCG and provided by OUHFT. These two services were brought together on 1 October 2016 and this service, now called the Home Assessment and Re-ablement Team (HART) is provided by OUHFT.

HART provides assessment, reablement and short-term home care to people both leaving hospital and from the community. The service works with people to identify personal goals and individuals' reablement capacity. Once someone has reached their reablement potential and has ongoing care needs, the service makes a referral to the Oxfordshire CC for ongoing provision, usually long term home care.

The service currently has a waiting list for new patients and is also experiencing delays in discharge which are identified to a number of issues:

- When the service commenced in October 2016, it was anticipated that 75% of staff from the previous services would transfer across. The actuality was that only 60% transferred. That plus absences for long term leave (maternity) and for sickness have impacted the capacity of the service. Recruitment has been underway and the service has reported that the position is improving
- 2. The transfer period to the newly procured service was 6 weeks which was very short

- 3. The service reports that the complexity of the case mix has been underestimated and this should be reviewed as part of the commissioning arrangements
- 4. There is a lack of domiciliary provision to enable HART to discharge patients from the service when re-ablement has been achieved

The review of discharge destinations from hub beds showed that, to date, 23% are discharged to HART. Therefore delays in HART are likely to have a not insignificant effect on the throughput for the hub beds.

The Senate is aware that these issues are known to the system and that steps are being taken to address them. Information shared regarding the HART waiting list and shown in the table below indicates that improvements are starting to be seen.



The chart is based on three points where data regarding the waiting list was shared. It is not assumed that the reduction was/is as linear as the chart indicates.

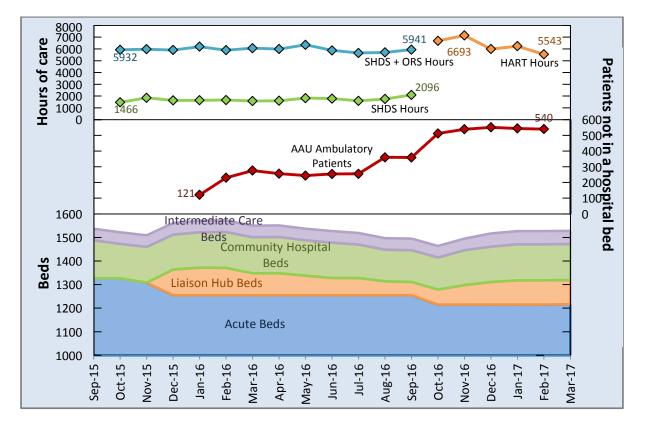
# **5. Conclusions and Recommendations**

The Senate noted its unusual position in that it was applying the NHS Bed Test retrospectively whereas it will, from now, be applied as part of the usual tests which reconfiguration proposals are subject to. This gave the Senate an advantage in that it had the opportunity to review whether or not there had been any impact following the bed closures which going forward will have to be based on projections alone. For the OUHFT, it has meant that the Trust has had to provide evidence of the effectiveness of its new services and the experience that OUFT has gained in developing these services will be valuable to other systems trying to achieve similar changes.

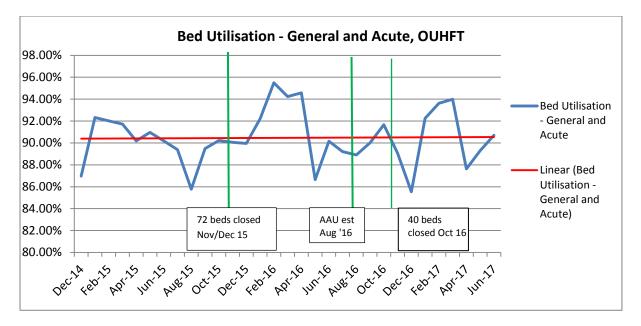
The bed-realignment proposals were initially introduced to reduce the high number of patients who experienced a delay in their discharge from the acute hospital (DTOC). Despite an early reduction in the figures, this was not maintained and the OUHFT still has one of the highest DTOC figures. Whilst this is disappointing, the Senate agreed that the principle of what the Trust was aiming to achieve with the new services should be supported and there was evidence that they were delivering benefits to patients in reducing admissions and reducing length of stay.

There is ample national and international evidence to support the provision and effectiveness of both the AAU and the Liaison Hub. The Senate supported the move towards the ambulatory care model and was pleased to hear that it was being well received by both patients and Oxfordshire GPs. The activity data which has been reviewed, showed that the OUFT has, despite continued growth in emergency activity, been able to reduce the amount of time patients need to spend in hospital and length of stay has been reduced for the over 65s. Patient and family feedback from a review conducted by Oxfordshire Healthwatch demonstrated that patients were largely happy with the way that the hub beds are being managed. Whilst there was some nervousness in the system at the outset, the medical support for the nursing homes and GPs who are caring for patients in the hub beds is increasing confidence which is likely to have a positive impact beyond the hub beds.

The trend of bed use at the OUHFT measured from December '14 to June '17 has remained stable despite the growth in activity. It is noted that although beds in the acute trusts have been reduced by 110, this is matched by purchase of additional beds in the nursing homes and the difference in the total number is actually very small.



Changes in bed capacity and ambulatory provision Sept 15 – March 17 (OUHFT)



Serious incidents at the OUHFT for the last two years have been reviewed and there is no evidence that patients using the AAUs or the Liaison Hub services have experienced any serious incidents relating to delays in treatment.

However, there is concern about the delays in the system around domiciliary care, particularly as this was one of the recommendations from the Senate Report from Phase 1 of the Oxfordshire transformation proposals. The Senate is conscious that HART is a newly configured service, part of which was previously run by another organisation and that it will take time to settle. The Senate also heard that a significant amount of work is currently being undertaken in the system to understand the reasons for the delays and to put solutions in place. A review of the HART waiting list as at 25<sup>th</sup>July 2017, showed that it had been reduced significantly. This work is being led by the NHS England South Central Director of Commissioning Operations.

However, the Senate noted that all the patients on the HART waiting list were currently occupying beds in the acute or community hospitals in Oxfordshire and 27 patients were occupying a hub bed. Whilst the majority of patients in hub beds are discharged to other destinations, the information provided to the Senate showed that 23% were discharged to HART. The problems in HART and in other agencies relating to the domiciliary sector must therefore be having a not insignificant effect on the hub beds. The Senate would strongly recommend that the problems within these agencies is addressed ed as quickly as possible.

#### Conclusion

Providing the issues within HART and the domiciliary sector can be resolved, and the HART waiting list information suggests this has started to happen, the Senate recommends that the conditions for the NHS Bed Test have been met subject to the following:

 The delays associated with patients being referred to HART need to be resolved and there needs to be sufficient capacity for HART to discharge once their element of service provision is complete. The Senate was advised that this is currently a problem for HART. Concern that the delays in the acute would be transferred to the community sector was a concern flagged by the Senate when it reviewed Phase 1.

- 2) The Oxfordshire CCG should monitor the system and take action to ensure that delays do not build with regard to the discharge to domiciliary care.
- 3) The Senate retrospective review was based on the current closures of 110 beds. It did not consider any future closures.

In concluding the report, the Senate would like to thank the clinical and analytical teams at the OUHFT for the provision of data and information regarding the new services; the staff at NHS England South Central Operations and Delivery Directorate for their advice regarding the performance of the services identified within this report and the NHS England South Central Nursing Directorate for the provision of data regarding Serious Incidents and expertise regarding the HART service.

# Appendix 1

Thames Valley Clinical Senate Membership

Dr Jane Barrett	Chair
Dr Shahed Ahmad	Medical Director, NHS England South Central
Jan Fowler	Director of Nursing, NHS England South Central
Dr Abid Irfan	Clinical Chair, Newbury & District Clinical Commissioning Group
Dr Jackie McGlynn	Medical Director, Bracknell & Ascot Clinical Commissioning Group
Dr Joe McManners	Clinical Chair, Oxfordshire Clinical Commissioning Group
Prof Gary Ford	Stroke Clinician, Oxford University Hospital Foundation Trust
	(OUHFT) and CEO of Oxfordshire AHSN
Dr Jane O'Grady	Director of Public Health, Oxfordshire
James Drury	Finance Director, Buckinghamshire Hospitals
Michael Baker	Deputy Director of Healthcare Public Health, NHS England, South
	East
David Williams	Director of Strategy, Buckinghamshire Hospitals
Dr Emmanuel Umerah	Deputy Medical Director, Frimley Health
Dr Lindsey Barker	Medical Director, Royal Berkshire Hospital
Andrew Stevens	Director of Strategy and Planning, OUHFT
Dr John Black	Medical Director, South Central Ambulance Service
Stuart Bell	CEO, Oxford Health Community Trust
Dr Michael Bannon	Dean, Health Education England, Thames Valley
Dr Chris Morris	General Practitioner, East Berkshire
Dr Hugh Gillies	General Practitioner, Oxfordshire
Douglas Findlay	Patient/Lay Member
Karen Maskell	Patient/Lay Member
Janet Waters	Patient/Lay Member

#### References

Ambulatory Emergency Care: The Logical Way to Go. (2017). [ebook] Ambulatory Emergency Care Network. Available at:

http://www.ambulatoryemergencycare.org.uk/uploads/files/1/CaseStudies/AEC%20Case%20Study %20Nottingham.pdf [Accessed 6 Jul. 2017].

Brand, C., Kennedy, M., King-Kallimanis, B., Williams, G., Bain, C. and Russell, D. (2010). Evaluation of the impact of implementation of a Medical Assessment and Planning Unit on length of stay. Australian Health Review, 34(3), p.334.

Byrne, D. and Silke, B. (2011). Acute medical units: Review of evidence. European Journal of Internal Medicine, 22(4), pp.344-347.

Coleman, P. (2001). Will alternative immediate care services reduce demands for non-urgent treatment at accident and emergency?. Emergency Medicine Journal, 18(6), pp.482-487.

Crilly JL, Keijzers GB, Tippett VC, et al. Expanding emergency department capacity: a multisite study. Aust Health Rev 2014;38:278–8

Forero, R., McCarthy, S. and Hillman, K. (2011). Access block and emergency department overcrowding. Critical Care, 15(2), p.216.

Gomez-Vaquero, C., Soler, A., Pastor, A., Mas, J., Rodriguez, J. and Viros, X. (2009). Efficacy of a holding unit to reduce access block and attendance pressure in the emergency department. Emergency Medicine Journal, 26(8), pp.571-572.

Harris A, Sharma A, Access block and overcrowding in emergency departments: an empirical analysis, Emergency Medicine Journal 2010;27:508-511.

House of Commons (2017). Delayed Transfers of Care in the NHS. UK Parliament, p.15.

Health.org.uk. (2017). Improving patient flow across organisations and pathways | The Health Foundation. [online] Available at: http://www.health.org.uk/publication/improving-patient-flow-across-organisations-and-pathways [Accessed 6 Jul. 2017].

Mason, S., Knowles, E. and Boyle, A. (2016). Exit block in emergency departments: a rapid evidence review. Emergency Medicine Journal, 34(1), pp.46-51.

Moloney, E., Bennett, K. and Silke, B. (2007). Effect of an acute medical admission unit on key quality indicators assessed by funnel plots. Postgraduate Medical Journal, 83(984), pp.659-663.

Rooney, T., Moloney, E., Bennett, K., O'Riordan, D. and Silke, B. (2008). Impact of an acute medical admission unit on hospital mortality: a 5-year prospective study. QJM, 101(6), pp.457-465.

Scott, I., Vaughan, L. and Bell, D. (2009). Effectiveness of acute medical units in hospitals: a systematic review. International Journal for Quality in Health Care, 21(6), pp.397-407.

Shepperd, S. (2000). 'Hospital at home' schemes are a cheaper, effective alternative to hospital care in people referred for acute admission. Evidence-based Healthcare, 4(4), pp.89-90.