Board Meeting
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Item 10.01

Bed Base Review

Position Paper (Stage 2)

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1. Introduction

The Bed Base Review project agreed periods between stages to assess positive impact and unintended consequences. This paper presents the analysis to date following completion of Stage 1a. The intent is to provide content to the NHSG Board when considering the recommendation laid out in this paper. We acknowledge that this work does not sit alone, and to achieve a sustainable health and care system, changes to our care models, pathway redesign and focus on prevention are all required. The purpose of the Bed Base Review commission is:

- Outcome 1 – to stabilize services and reduce harm to citizens and colleagues from the consequences of system pressures
- Outcome 2 – to reduce waits and improve access to care in ARI
- Outcome 3 – create the conditions for clinical engagement, participation and leadership
- Outcome 4 – create immediate, short and long term recommendations to achieve above outcomes

The next step includes revising the plans outlined in the staged approach model in light of the delivery of Stage 1a and the findings of this paper, to inform how and where the next tranche of capacity should be implemented.

Stage	Target	Impact	Indicative workforce cost*
Stage 1a (to March 2024)	40 beds	Clear corridor care; repatriate around ¼ of all boarders	£5,612,000
Review impact of Stage 1a			
Stage 1b (March 2024-June 2024)	*34 beds*	*Clear corridor care; repatriate all geriatric medicine boarders and around ¼ of general medicine boarders*	*£4,770,000*
Review impact of Stage 1b, ongoing redesign work and further exploration of alternative pathways/models of care to inform placement and function of Stage 2 capacity			
Stage 2 (July-December 2024)	21 beds	Clear corridor care; repatriate all geriatric and general medicine boarders	£2,947,000
Review impact of Stage 2, ongoing redesign work and further exploration of alternative pathways/models of care to inform placement and function of Stage 3 capacity			
Stage 3 (June 2024-June 2025)	25 beds	Clear corridor care; repatriate all boarders; allow turnaround space	£3,508,000
TOTAL	**120 beds**		**£16,837,000**

** Workforce costs modelled on 'general medicine' beds requirement and extrapolated for each stage. It should be noted that exact costs will depend on clinical need of the identified patient cohort, and it is unlikely to be a linear relationship between staffing numbers and bed numbers, particular for CSS services.*

2. Background

Stage 1 of the Bed Base Review project, conducted during spring 2023, evidenced the shortfall in bed capacity at Aberdeen Royal Infirmary and how this compared to the rest of Scotland. The Scottish Government have recognised the findings of this work, as noted in their Discovery Closure Report. *(Feb 2024 – Appendix 1)*

Modelling work at the time to achieve 87% occupancy and 74% ED 4-hour standard identified the need for an additional 120. It should be noted that this modelling did not seek to address future growth in demand from the increasing burden of disease, changes in population health or delivery of planned care access performance targets.

The phased tactical plan for the introduction of these additional new beds was supported by the CET on 1st August 2023 and approved by the NHSG Board on 5th October 2023. Implementation of Phase 1 was completed on 31st January 2024.

Additional Number of Beds	Scenario	Predicted ARI % Occupancy	Predicted ARI ED % Performance	Predicted NHSG ED % Performance
120	Clear Corridor Care, repatriate all Boarders and allow turnaround space	87%	74%	79%
100	Clear Corridor Care and repatriate all Boarders	89%	70%	77%
92	Clear Corridor Care and repatriate all General Medicine and Geriatric Medicine Boarders	91%	69%	77%
80	Clear Corridor Care and repatriate about three quarters of Boarders	92%	66%	75%
74	Clear Corridor Care and repatriate Geriatric Medicine Boarders and about a quarter of General Medicine Boarders	93%	63%	73%
60	Clear Corridor Care and repatriate about a half of Boarders	94%	61%	72%
40	Clear Corridor Care and repatriate about a quarter of Boarders	97%	57%	70%
20	Clear Corridor Care	100%	52%	68%
0	Do nothing	103%	46%	64%

The impact at end of March 2024 (2 months after opening of the second tranche) of this initial phase delivering 25% of total modelled capacity was presented to the CET on 9th April 2024 and is summarised here. *(Appendix 2)*

Following the Project Mandate for Stage 2 being approved by the Chief Executive Team in May 2024, we have consolidated our knowledge relating to:

1. Current in-patient adult bed capacity across secondary and community care (excluding maternity, mental health and paediatrics).
2. Physical infrastructure available for additional capacity across Aberdeen Royal Infirmary and other NHS Grampian sites
3. Anticipated impacts of ongoing change and transformation work
4. Learning from PWC following their independent review in April 2024 of the Governance and management systems relating to the Bed Base Review
5. A staff well-being survey *(Appendix 3)* carried out prior and after all 32 beds were opened in stage 1

This report details the findings of this analysis, censored to changes / knowledge confirmed to 30th June 2024.

2. Adult in-patient bed capacity

2.1 What is a bed? Definitions

We have a complex ecosystem of bed types and uses across our Portfolios. The Performance Governance Directorate have standardised terminology, recording and presentation of bed capacity to aid consistency and improve data quality in Trakcare. These definitions are used in this report.

- We consider the capacity on a Monday-Friday basis, i.e. inclusive of inpatient wards which are intended to close at a weekend
- We exclude critical care capacity from this calculation, as well as maternity, paediatric and mental health beds
- The **funded** bed base is what is considered in place and staffed via substantive staffing.

In addition, various types of surge capacity are included in our system. These are:

  - **Surge Beds:** These are compliant bed spaces with bedhead services but are not intended to be staffed in terms of the ward complement.
  - **Non-Standard Beds:** These are beds located in non-compliant bed spaces (generally treatment rooms). They are not intended to be staffed in terms of the ward complement**.**
  - **Corridor Care – MultiBay.** This represents placing an additional patient in a multibay area without any supporting bed head services being present or supporting inpatient infrastructure. This recording type is also used for the use of space which meets the criteria in Dr Grays, under the Phased Flow model
  - **Corridor Care – Ward.** This represents placing an additional patient in the physical main corridor of the ward without any supporting bed head services being present or supporting inpatient infrastructure. This recording type is also used for space which meets the criteria in Dr Grays, under the Phased Flow model.

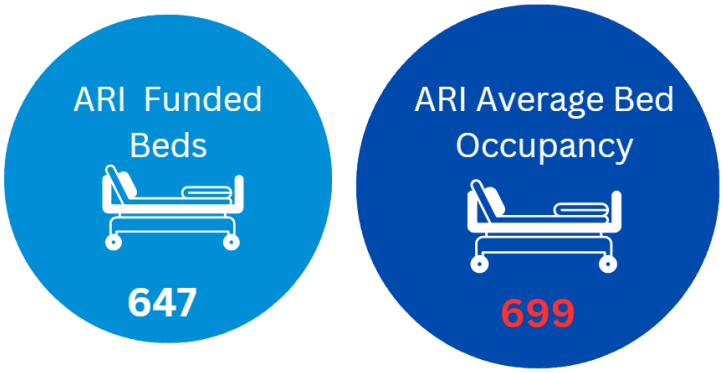
2.2 Aberdeen Royal Infirmary

The current number of funded standard adult in-patient beds at ARI, recorded on TrakCare, stands at **647** (counted using the criteria in Definitions Section 2.1). There will be daily fluctuations in this number due to routine short-term closures but, following the data cleanse exercise, there is now an improved level of confidence among operational and performance teams.

In addition, there are **30** surge beds identified and **45** additional bed placements (made up of Non-Standard beds, Corridor Care – Multibay and Corridor Care – Ward from the definitions in Section 2.1) across ARI in a combination of corridor care, multi-bay and non-standard bed spaces.

2.2.1 Occupancy

While the number of 'funded, established' beds (the definitions used by PHS for ISD(S)1 reporting and outlined in Section 2.1) in ARI has reduced over the last 10 years, occupancy has increased – average 627 pre-covid to an average of **699 currently**, which peaked at 744 on 16th May. This level of occupancy is more frequently observed during winter months.



2.3 Aberdeen City including Woodend General Hospital

Standard adult in-patient beds in Aberdeen City are predominantly located within Woodend General Hospital and Rosewell House. For this report's purposes, we have not included dedicated specialist facilities, such as Roxburgh House.

2.3.1 Woodend Hospital

- There are a total of **144** beds (plus 13 surge beds) meeting the criteria used in this report: 44 Elective Orthopaedic *(Wards 7, 9, 10; managed by Integrated Specialist Care Portfolio)*
- 80 Specialist Rehabilitation, plus 12 surge beds (*managed by Aberdeen City Health & Social Care Partnership*)
- 20 Interim Care, plus 1 surge bed *(Morningfield Ward; managed by Aberdeen City Health & Social Care Partnership)*

Occupancy (Elective Orthopaedics)

Elective orthopedics largely manage their capacity effectively within their own footprint, with high occupancy and an average length of stay 1.3 days across the elective wards in 2023. Currently Ward 10 is out of use due to maintenance works , but the service is managing contingency plans within their existing capacity.

Occupancy / Length of Stay (Specialist Rehabilitation beds)

Occupancy in the Stroke Rehab Unit continues to exceed core established bed capacity with all surge capacity in almost continuous use.

It should be noted that length of stay in rehabilitation facilities is considerably longer than those in acute facilities, due to the nature of patient needs and onward discharge challanges. Appropriate levels of rehabilitation support are needed to ensure patients can be moved on in their journey as quickly as possible, with good clinical outcomes.

There is a lack of General Rehabilitation capacity meaning patients who fall outwith both Specialist Rehab criteria and Frailty criteria do not have an appropriate facility and therefore may be experiencing delays.

2.3.2 Rosewell House

A total of 60 beds are available at Rosewell House, however only 40 are currently in use. These are frailty intermediate care beds, intended for use as 'step down' from acute hospital and 'step up' from home. However, the capacity is mostly utilised as 'step down'.

The 20 unused beds are closed due to the inability to secure GP-led medical cover. These beds were previously staffed by Bon Accord Care, who have now left to staff other BAC facilities.

2.4 Aberdeenshire

Community Hospitals

There are **153** standard, in-patient beds across 10 community hospitals, and 10 surge beds. The Trakcare data quality exercise is being finalised for Aberdeenshire so these numbers may change by a very small amount (single figures).

There are several permanently closed or 'mothballed' wards across Aberdeenshire community hospitals, which could provide options for reopening as the infrastructure is likely in place but there may be challenges in recruiting the required workforce in more remote areas. The Infrastructure Planning work will provide more detail on these spaces.

During July 2024, occupancy has averaged **142** (93%) across all sites. Due to the geographical spread there may be areas of higher pressure within the region.

2.5 Moray including Dr Gray's Hospital

2.5.1 Dr Gray's Hospital

Excluding Maternity, Paediatric and A & E beds, Dr Gray's has:

- 88 fully funded and staffed beds,
- 20 surge beds, and
- 7 non-standard and corridor care beds.

Occupancy - During 2024, occupancy has averaged 114%, reaching 138% at it's peak.

2.5.2 Moray Community Hospitals

Excluding the Mental Health ward in Seafield Hospital, Moray Community Hospitals collectively have:

- 53 fully funded and staffed beds,
- 2 surge beds, and
- 0 non-standard or corridor care beds.

Around 50% of beds are occupied by delayed patients.

With 2 of the community hospitals built in the 1890s, the cost of ongoing maintenance is significant. A fire inspection was nearly failed recently, owing to the condition of the building.

2.6 Interim Care beds

Interim care beds have historically been utilised in community settings to provide temporary placements for patients awaiting a permanent care package. These placements enable patients who no longer require acute medical care to be moved to a more suitable care facility whilst waiting for permanent arrangements, supporting flow from acute and community hospitals.

Interim care beds are mostly located out with NHSG premises, (e.g. private care homes), therefore we have no data to inform our understanding of past or present capacity.

3. Delays

Patients are delayed across our bed base for many reasons. Delays, for whatever reason, are continuing to increase creating additional pressure on our hospitals and staff, and lead to poorer experiences for our patients. It is unrealistic to expect there will be zero delayed patients, therefore any future changes should consider how they can be managed effectively and most appropriately to their needs.

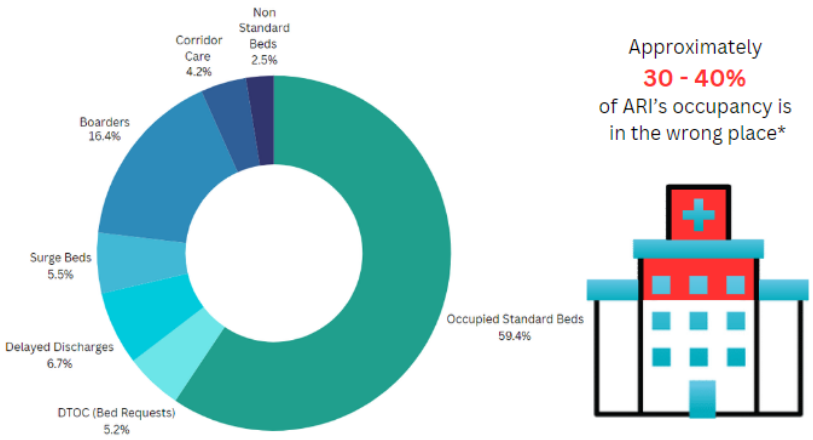
Delays can be categorised in 2 main ways:

Delayed Discharges - a hospital inpatient who is clinically ready for discharge from inpatient hospital care and who continues to occupy a hospital bed beyond the ready for discharge date.

Delayed Transfer of Care - indicated by a Bed Request being placed on a patient, (only when the patient is fit and ready to be moved), requesting a bed in the correct location, which will be in a different hospital within NHSG.

A snapshot analysis of patients 'out of place' in ARI during July 2024 identified approximately 40% of occupants to be in the wrong place* (be that within ARI itself due to use of boarding or non-standard beds, or awaiting discharge to another facility or home). In community hospitals it can be as high as 50%.

ARI	July 2024 Rough Averages
Corridor Care	28
Non Standard Beds	17
Surge Beds	37
Boarders	110
Delayed Discharges (ARI)	45
Delayed Discharges (NHSG)	200
DTOC (bed request + delayed discharges)	80
Available Staffed Beds (exc critical care)	646
Occupancy	670
% Occupancy	104%
% Occupancy DTOC	12%



(Note: there may be some double counting of delayed or boarded patients in surge/non-standard beds)

In addition, there are patients who have long or excessive length of stays which are not routinely reported but contribute to pressure experienced in ARI. A recent audit (*Appendix 4*) has been conducted of these patients and work is ongoing to better understand the issues contributing to long length of stays. Early analysis shows the majority of these patients are General Medicine patients and contributing factors include ongoing rehabilitation requirement, awaiting a care home placement and possible suitability for Hospital @ Home. These themes are informing improvement activity in this area.

Only Delayed Discharges are routinely reported to Scottish Government, long length of stays are not routinely captured in our existing datasets therefore formal reporting may not reflect the full picture or impact of delays across our system.

4. Locations / Physical Infrastructure

The availability of suitable fit for purpose physical infrastructure in ARI was a challenge at the end of stage 1 of the BBR project.

In March 2024 a report (*Appendix 5*) on unused bed capacity (existing head of bed services not currently utilised for patients) was presented to CET. This reflected 40 such bed spaces scattered in the Pink Zone currently used as offices, stores, waiting areas and multi-bedded rooms being under utilised), and in RACH.

The opening of Baird & Anchor sites may offer opportunities for in-patient availability in ARI, subject to approval through the Corporate Landlord process. These are summarised below:

Location	Barriers / Dependencies	Number of possible beds	Timeline*
Ward 309	On relocation to Baird Family Hospital	15	Mid-2025
Ward 308	On relocation to Anchor Centre (currently used as OP but bed head services available)	18	Late 2024

** Estimated timelines dependent on opening of Baird & Anchor units. Existing staff would transfer with the services so recruitment of appropriate workforce required.*

The BBR project team is linked in with the Infrastructure & Sustainability Planning Team. This work has identified closed wards in community hospitals (including in part WGH) across Grampian, which may also have potential for reopening. An updated summary will be produced of all hospitals across the system, following completion of site visits and interviews with relevant service managers.

Viable options out with ARI

There are identified spaces within the current NHSG estate that *could* be recommissioned for inpatient clinical use. Areas referenced in this section are based solely on ward spaces not currently in use outwith our acute hospital footprint; they each have their own limitations or dependencies, and each will have challenges in creating an appropriate sustainable workforce and are noted here solely due to identification of physical space.

None of these locations have workforce aligned to them so would be dependent on ability to recruit appropriate workforce. The Aberdeenshire locations particularly have historical challenges in recruitment and retention of staff.

Location	Barriers / Dependencies	Number of possible beds
Ward 15, Woodend	Currently designated contingency capacity / Some upgrading works required	20
Ward 16, Woodend	Require alternative location for pre-op assessment	18
Rosewell	Medical cover	20
Glen O Dee, Banchory	Closed due to ability to recruit & retain staff	12
Fraserburgh	Closed due to ability to recruit & retain staff	15
Huntly	Upgrading work underway	18

5. Impact of ongoing Change and Transformation projects

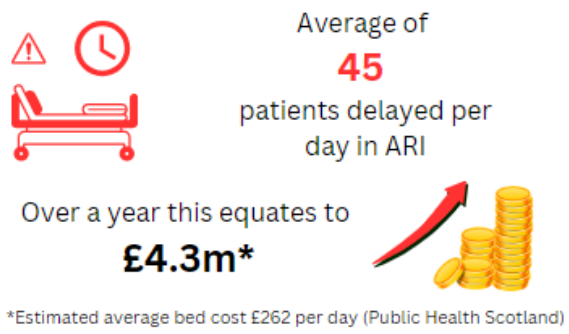
Our health and care system is in a constant state of change, with ongoing long-term sustainable transformation programmes and responding to shorter term improvement projects or safety notices.

The anticipated impact of these projects on bed requirements is often difficult to predict with much certainty, partly due to the volume of change initiatives, the dependencies, undetermined consequences between projects and uncertainty as to actual bed capacity gains.

However, a number of work streams that the Bed Base Review project is cognisant of are noted:

Unscheduled Care Improvement Programme - focused on the 4hr ED performance standard, with a short-term goal of improving performance by 10%; longer term, ecosystem mapping will inform future priorities to shift to new models of care but unlikely to make significant gains in the current financial year given the underlying low bed base.

- **Planned Care –** no significant changes anticipated that will affect bed requirements, length of stay or occupancy. The impact of unscheduled care continues to be the biggest challenge to increasing planned care activity.
- **Hospital @ Home** - Aberdeen City continued to expand its H@H service with the aim of increasing admissions and bed capacity by March 2024. This target hasn't been met due to staffing challenges. The USC PB have ceased any further funding being aligned to H@H expansion (specifically around Respiratory), however the recently appointed CL for H@H is exploring General Medicine H@H pathways. No detail on impact or benefit yet available and unlikely to be realised in the short term.
- **National focus on Delayed Discharges -** The Scottish Government, COSLA and local authorities have agreed a joint mission to reduce delayed discharges to pre-pandemic levels (34.6 delays per 100,000 adults in each HSCP). This work is being overseen by the Collaborative Response and Action Group (CRAG letter). It should be noted that work is driven and measured by reported the Delayed Discharges defined in Section 3 and does not include Delayed Transfer of Care or non-tracked delays. However, reducing Delayed Discharges should improve flow across the system thereby reducing all delays. If all HSCPs were to achieve the target set by end of September, this would release 54 NHS beds by winter.



6. Change Controls and Benefits Measurement

It is imperative that future additions to our bed base are scheduled to avoid notable changes elsewhere in the system. As part of effective delivery of change we must be able to accurately measure the achievement of benefits, or not, for high priority projects. We need to compare the metrics around markers pre and post additional beds opening, such as occupancy rates, boarding levels, length of stay, ambulance waiting times, prevalence of non-standard bed space usage and all delays of patients fit for discharge.

As a frame of reference, the Safe Transfer of Patients SOPs implementation coincided with 32 beds opening in wards 303 and 304 across December and January. As a result, neither project can confidently measure the impact of their changes in terms of internal or national metrics. The Bed Base Review project planned to take the learning and impact on key metrics from the first stage forward into planning for subsequent stages.

Ideally, future stages of BBR delivery to be implemented during a designated 'change freeze' period as is common practice in digital change, or to minimise concurrent change implementation.

One positive change to assist in this approach is we now have a new SRO on the USC Programme who is also a key member of the BBR Project board. Also, the same Programme Lead is working on both.

7. Communication & Engagement

It should be noted that when the first stage of the BBR project was completed, we were unable to confidently craft a communication to colleagues across the system as to what was going to happen next. This has left a void in messaging to colleagues that the project team are cognisant of. This learning must inform this current stage.

8. Results and Options from Analysis

Currently, our available total bed capacity across adult inpatient (excluding MHLD & Maternity) facilities is 1125 and distributed as below:

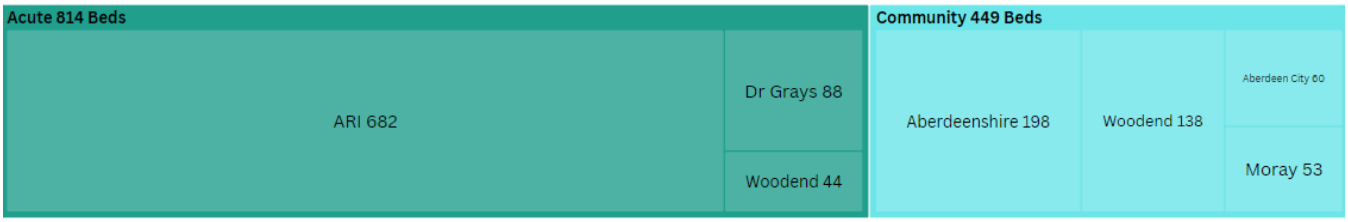
Updating the key projections from Stage 1 using our new baseline bed numbers, and assumptions based on the following key parameters:

- Circa 30 more delayed discharges per day in ARI since start of BBR 1
- Closure of beds/facilities in the community
- 160 more attendances at ARI ED in June 2024 than June 2023
- 130 more admissions to IP from ARI ED year to date (Jan-Jun) 2023 v 2024

now shows:

Additional Number of Beds	Scenario	Predicted ARI % Occupancy	Predicted ARI ED % Performance	Predicted NHSG ED % Performance
170	Clear Corridor Care, Non-Standard Bed Use, Surge Beds and Delayed Discharges and allow turnaround space	81%	70%	67%
130	Clear Corridor Care, Non-Standard Bed Use, Surge Beds and Delayed Discharges	85%	65%	65%
85	Clear Corridor Care, Non-Standard Bed Use and Surge Beds	89%	60%	62%
45	Clear Corridor Care and Non-Standard Bed Use	94%	54%	60%
30	Clear Corridor Care	96%	52%	60%
0	Do nothing	103%	47%	58%

POSSIBLE AVAILABLE bed capacity (if all identified existing ward spaces in Section 4 were recommissioned): **1263 (+138: 35 acute + 103 community)**



9. Conclusion

Multiple variables contribute to determining the optimal Bed base requirement for ARI. An optimum bed base in ARI is critical to respond to in-patient hospital service based demand. This update confirms the current ARI in - patient bed capacity is inadequate, compounded by flow challenges, and cannot be mitigated sufficiently by further improvement work alone.

The NHSG Board are asked to support further work to progress a business plan for stage 2 utilising the capacity released by the Baird and Anchor projects.

Acknowledgements

Core Project Team leading this gateway review/analysis and development of this report:

- Specialist Analyst, Health Intelligence
- Programme Manager, Planning, Innovation & Programmes Directorate
- Project Support Officer, Planning, Innovation & Programmes Directorate

The project team have developed this paper in conjunction with colleagues from across our system, including but not limited to:

Performance Governance Directorate

Colleagues from each portfolio who have contributed to the Performance Governance Directorate review and the data in this paper:

- Divisional General Manager, ISC
- Strategic Interface Lead, MUSC
- Chief Nurse, ACHSCP and Service Manager Rehabilitation, Woodend Hospital, ACHSCP
- Service Manager, MUSC-DGH and Clinical Lead, Home First, MHSCP
- Operational Lead Nurse, AHSCP