Measuring the impact of Helping in Hospitals

Final evaluation report

Peter Babudu, Elliot Trevithick and Rahel Späth

July 2016

TSIP | The Social Innovation Partnership

CONTENTS

EXECUTIVE SUMMARY

This evaluation report assesses how effective hospital impact volunteering is at improving patient experience and well-being.

The beneficiaries

The recipients of the hospital impact volunteering services were patients from ten UK hospital trusts, a large number of whom were elderly and frail, and living with dementia.

The services they received

The services consisted of a variety of hospital impact volunteering roles such as mealtime assistants or dementia buddies aimed at directly improving patient experience and well-being.

The impact of the services

Can hospital impact volunteering help improve patients' experience and well-being?

Quick answer: Hospital impact volunteering shows promise as a way to improve patient experience, mood, anxiety levels, nutrition and hydration, while releasing nurse time to care.

Key results from the nine hospital trusts' evaluations:

- Thirty per cent of all outcomes measured produced a statistically significant positive result.[1]
- The majority of hospitals found statistically significant positive results on patient mood, nutrition and hydration levels, and releasing time to care.
- Some hospitals found statistically significant positive results on patient experience and anxiety levels, while for others no effects were found.
- No hospitals found any effects on re-admissions, length of stay, delayed transfer of care and number of falls.

The table plots significant positive changes (SP), no changes (NC) and significant negative changes (SN).

Outcome	SP	NC	SN
Improved patient experience	2	6	0
Improved mood	3	1	0
Reduced readmissions	0	4	0
Reduced length of stay	0	3	0
Reduced anxiety levels	2	2	0
Improved nutrition levels	4	2	0
Improved hydration levels	1	0	0
Releasing time to care	1	0	0
Reduced delayed transfer of care	0	1	0
Decreased number of falls	0	2	0

Fig. 1 The robustness of the results

Strengths: Given the early stage of development that many impact volunteer roles were in, we used relatively robust methodologies such as matched comparison group designs where possible. Also, the portfolio approach involving nine hospitals lends further credibility to the emerging evidence.

Weaknesses: The comparison designs do have limitations and, in some cases, we had to use less robust designs such as pre-post designs for reasons of feasibility. In addition, some of the measurement tools had not been tested for validity and reliability. However this evaluation's robustness is appropriate for interventions that are still under development.

Conclusion

Hospital impact volunteering shows promise as a way to maintain or improve patient experience and well-being outcomes and has the potential to relieve pressures on the healthcare system.

[1] This figure is calculated from all outcomes measured, not just the key outcomes listed in this table. It does however not weight findings by robustness or sample size.

INTRODUCTION

This report details the evaluation of the Helping in Hospitals project.

The primary purpose of this report is to provide an accurate picture of hospital impact volunteers' impact on patients. The report is the final output of work carried out by The Social Innovation Partnership (TSIP) for the Helping in Hospitals project, funded by the Cabinet Office and the Department of Health, and managed by Nesta.

The report begins by introducing TSIP and the Helping in Hospitals project. It then describes the methodology used to measure the hospital impact volunteers' impact, before presenting and discussing the results of the research, making recommendations and offering a brief conclusion.

THE SOCIAL INNOVATION PARTNERSHIP

The Social Innovation Partnership (TSIP) is a trusted advisor to public, private and social sector organisations seeking to maximise their social impact. We believe that a strong and dynamic society will take shape when evidence and innovation sit at the heart of efforts to tackle our most persistent social challenges; when evidence is used to better understand what brings about social change, and innovation is used to find and test new solutions.

THE HELPING IN HOSPITALS PROGRAMME

Nesta is an innovation charity with a mission to help people and organisations bring great ideas to life. It is dedicated to supporting ideas that can help improve all our lives, with activities ranging from early-stage investment to in-depth research and practical programmes.

Nesta has worked with ten hospital trusts in England to support the creation of impact volunteering opportunities and, with TSIP's assistance, to look systematically at the impact of volunteers on patients, staff and trusts. The programme ran over 18 months in two cohorts. Firstly, six hospital trusts were funded by the Cabinet Office as part of its Centre for Social Action agenda. The Department of Health then funded a further four hospital trusts, taking a particular interest in the involvement of younger volunteers, and so building on its work with youth social action in health. The age group for this cohort was 16-25 years old.

For further details on the Helping in Hospitals programme, its origin, the different types of impact volunteering roles it included, and the wider project timelines, please refer to Nesta's ***Helping in Hospitals: a guide to high impact volunteering in hospitals***

For a visual overview of the variety of volunteering services provided as part of the Helping in Hospitals programme and the impact these aim to have on patients, please see Appendix 1 in this report.

METHODS

The hospitals collected a variety of quantitative and comparative data to better understand the impact of volunteering services on patients' hospital experience and well-being.

RESEARCH QUESTION

The evaluation aimed to answer one question:

- Can hospital impact volunteering help to improve patients' experience and well-being?

KEY PRINCIPLES BEHIND OUR APPROACH

In trying to answer this research question, our work was driven by three key principles:

- **Robustness:** The primary aim was to measure the impact of hospital impact volunteering with as much accuracy as possible.
- **Proportionality:** It was important that the robustness of the evaluation was proportionate to the volunteering services' size and stage of development.
- **Sustainability:** The evaluation needed to be resource-efficient to avoid unnecessarily taking volunteering service and medical staff time away from patient care.

RESEARCH DESIGN

To answer the question, the research took the form of an impact evaluation, using quantitative data.

In all hospitals, we employed informally matched comparison group designs, where possible. This involved focusing impact volunteering on select beneficiary wards, while holding off impact volunteering on other wards until the research could establish its actual impact and benefits. Since many of the volunteering services had not expanded volunteer exposure to all wards at the start of the project, comparison groups were deemed to be ethical by all stakeholders.

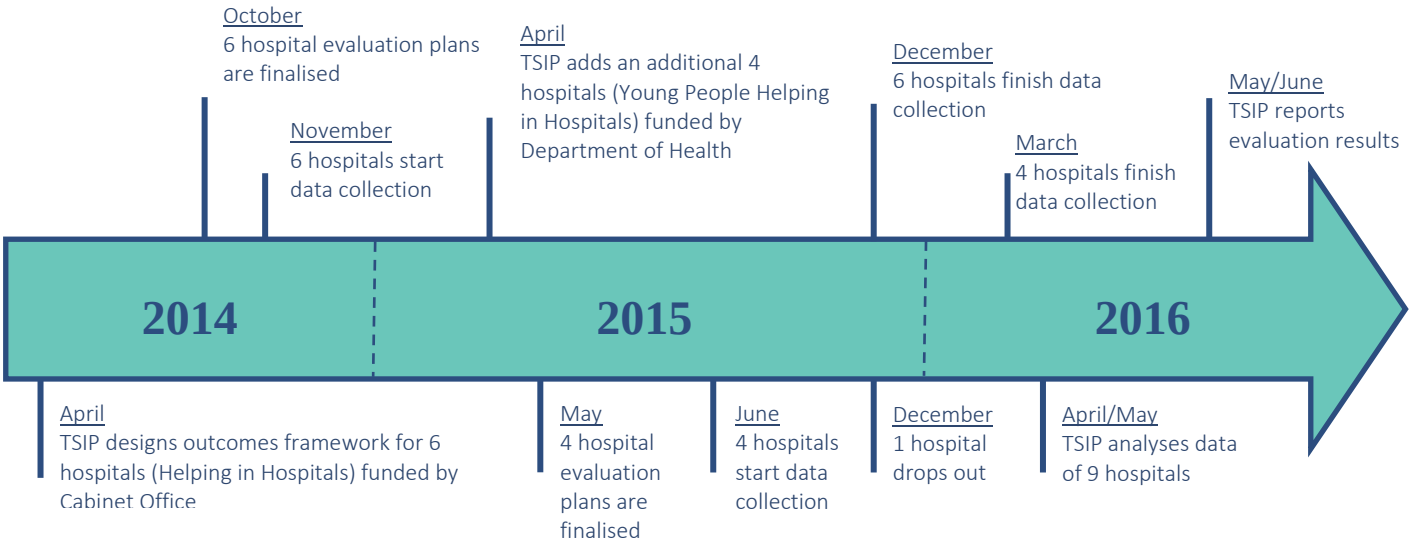
The beneficiary and comparison groups typically consisted of separate wards that, according to the hospitals, were as similar to each other as possible in terms of size, patient demographics, and the types of conditions they cared for. In some cases, a patient survey question was used instead of having beneficiary and comparison groups on separate wards to determine whether a patient had had interactions with the impact volunteers or not.

For some outcomes, however, a comparison group was not feasible, and we used pre-post approaches instead.

The evaluation involved two separately funded hospital cohorts. It began with six Cabinet Office-funded hospital trusts in April 2014, and expanded to include four Department of Health-funded hospitals focused on young volunteers in April 2015 (see table below). We used Theories of Change to determine what outcomes should be measured for each hospital, while seeking to align outcome measurement as much as possible across hospitals. Data collection began in November 2014 and June 2015, respectively, and ended in December 2015 and March 2016, respectively (see Figure 1).

Cabinet Office-funded hospital trusts	Department of Health-funded hospital trusts
• Barts Health NHS Trust • Cambridge University Hospitals (CUH) NHS Foundation Trust • Derbyshire Community Health Services NHS Trust • Great Western Hospitals NHS Foundation Trust • Kingston Hospital NHS Foundation Trust • Sheffield Teaching Hospitals NHS Foundation Trust	• The Princess Alexandra Hospital NHS Trust • Royal Free London NHS Foundation Trust • University Hospital Southampton NHS Foundation Trust • Western Sussex Hospitals NHS Foundation Trust

Figure 1. Helping in Hospitals evaluation timeline



Outcomes and measurement tools

The evaluation used a variety of quantitative measurement tools to measure a diverse set of patient-centred outcomes, depending on what was appropriate for each outcome and what data were feasible for hospitals to collect. See Appendix 1 for the project-level Theory of Change and Table 2 (overleaf) for an overview of the key outcomes measured and main measurement tools employed.

Table 2. Measurement tools overview

Outcome	Tool
Improved patient experience #	**The Friends & Family Test (FFT):** Routine question "How likely are you to recommend our ward to friends and family if they needed similar care or treatment?"
Improved mood #	**Smiley face pictorial scale:** "Please circle the number you think best reflects your mood"
Reduced readmissions	**Readmission rates:** Due to data limitations, a proxy of total readmissions, admissions and discharges data was used.
Reduced length of stay	**Routine Length of Stay data:** Number of days of patient stay
Reduced anxiety levels #	**Anxiety surveys:** "Do you feel you got enough emotional support from hospital staff during your stay?" or "Do you feel confident and safe in our care?"
Improved nutrition levels #	**Nutritional intake:** Weight, calories and protein, or proportion of meal consumed. **Mealtime experience proxy:** "We would like you to think about your experience of food on the ward. Did you get enough help from staff to eat your meals?")
Improved hydration levels #	**Mealtime experience proxy:** "Do you always get the help you need to drink?"
Releasing time to care	**Nurse survey:** "As an overall percentage (%) of your working time, over the last week how long did you spend carrying out the following groups of tasks?", distinguishing between skilled and unskilled tasks. "If a volunteer assisted you during the last week on the ward, did you find this helpful?"
Reduced delayed transfer of care	**Routine Delayed Transfer of Care (DTOC) data:** Number of patients facing a DTOC
Decreased number of falls	**Routine falls data:** Time, date, ward location and harm caused for each fall.
More patient voices heard	**Patient survey:** Number of patient surveys or counting the number of patient complaints.

Data for these outcomes were in some cases collected by the volunteers themselves – see limitations section below.

Please refer to Appendix 4 for additional information about these tools.

Data collection process

Data collection differed by outcome and hospital, with our primary concern to optimise data quality while minimising disruption to service delivery. Each hospital volunteering service had an evaluation lead within their team to drive evaluation planning and coordinate data collection activities with other hospital staff. The evaluation leads often worked in collaboration with the hospitals' business intelligence teams and related research teams, where possible, to gain access to routine or administrative data and ensure data collection fitted smoothly alongside existing data collection activities. Once the data was collected, it was sent to TSIP for analysis. None of the data included confidential information and therefore data sharing was straightforward.

In addition to the impact data, we have gathered contextual information through focused conversations with each hospital trust to inform the interpretation of the results.

Data analysis

Depending on the outcome data available, we used one of the three below analysis approaches, in order of robustness:

1. **Difference-in-difference:** Where a true baseline was available – for example, in cases where new impact volunteering roles were trialled – difference-in-difference analyses were used to determine whether the patient outcome changes in the beneficiary wards differed from the patient outcome changes in the comparison wards. This is the most robust approach.
2. **Beneficiary group vs comparison group:** Where no true baseline was available due to pre-existing impact volunteering on the beneficiary wards, independent t-tests were used to determine whether impact volunteering has had an effect on patients in the beneficiary group relative to the comparison group. This is a less robust approach and results should be interpreted with caution.
3. **Before vs after intervention:** Where no comparison group was available, dependent t-tests were used to determine whether patients' outcomes changed between before and after the impact volunteering interaction. This is the least robust approach and results should be interpreted with caution.

Participants

The evaluation initially included ten hospitals – six hospitals through Cabinet Office funding and four hospitals that focused on young volunteers through Department of Health funding. One of the four hospitals was unable to gather appropriate data for the project and it was therefore not included in the evaluation.

Data was collected predominantly on wards with a large proportion of elderly and frail patients, often with considerable prevalence of dementia. Since patients' average length of stay on the evaluation wards was less than 30 days, patients usually provided just one data point. The evaluation therefore involved a patient population with considerable turnover. The exceptions to this are the cases where patients were followed up with on a specific outcome as part of a pre-post design.

LIMITATIONS OF THE RESEARCH

The employed evaluation methodology has the following limitations:

- **Imperfect counterfactual:** While hospitals have done their best to identify optimal comparison wards, there is no guarantee that they were sufficiently comparable. Changes to wards after trial start sometimes affected the counterfactual's comparability. Randomisation was not feasible due to practical constraints (such as too low numbers of wards) and was deemed inappropriate by the volunteering services whose aim it was to support those patients most in need. In short, the differences between patient outcomes in beneficiary wards and comparison wards cannot solely be attributed to the impact volunteers, but instead other factors, such as patient demographics or differential staff pressures, may have influenced that difference in patient outcomes.
- **No counterfactual:** In some cases, no comparison group was feasible and we employed a pre-post design instead. This has the same drawbacks as the above, although more severe.
- **No baseline:** In some cases, where impact volunteers had already been active prior to the start of the project, no true baseline was available. The analysis therefore could not compare outcomes changing over time and instead simply compares beneficiary wards with comparison wards.

- **Untested measurement tools:** While some data (such as Length of Stay) are straightforward, other measurement approaches were not. The surveys in particular should ideally be tested for reliability and validity, which was not possible during the timeframe of the evaluation.
- **Reach:** For some outcomes (e.g. patient experience), data was collected from all patients on a given ward regardless of whether they had interacted with an impact volunteer or not. This was partially because of what was deemed feasible for data collection (e.g. FFT data is already routinely collected but does not often assess whether the patient actually had a volunteer interaction), and partially to include the effect of volunteers on the wider ward atmosphere, but may cause us to underestimate the effect of impact volunteering where less than a majority of volunteers had interactions with the volunteers.
- **Contamination:** In some cases, volunteers ended up supporting some comparison group patients and therefore likely diluted the observable impact in the data.
- **Risk of response bias:** Some data were collected directly by the volunteers, due to lack of a feasible alternative, and are therefore at risk of some bias as patients may have provided more positive responses than if the volunteer was not present.

RESULTS

Hospitals detect positive effects for patient experience, mood, anxiety levels, nutrition and hydration, and releasing nurse time to care.

CAN HOSPITAL IMPACT VOLUNTEERING HELP TO IMPROVE PATIENTS' EXPERIENCE AND WELL-BEING?

Portfolio-level results

Results from the nine hospital trusts' evaluations reveal the following:

1. Thirty per cent of all outcomes measured produced a statistically significant[2] positive result.[3]
2. Of those hospital trusts that measured **patient mood, nutrition and hydration levels and releasing time to care**, the majority found statistically significant positive results while for the remaining hospital trusts no effects were found.
3. Of those hospital trusts that measured **patient experience and anxiety levels**, some of the hospital trusts found statistically significant positive results, while for others no effects were found.
4. Of those hospital trusts that measured **readmissions, length of stay, delayed transfer of care and number of falls**, no effects were found.
5. No hospital trusts found any statistically significant negative effects.

Table 3 (overleaf) provides an overview of the key results the nine hospital trusts produced for each of the core outcomes. It uses the following key:

- **Dark green (SP)**: Statistically significant positive change
- **Light green (NSP)**: Positive change but statistical significance test was not possible
- **Yellow (NC)**: No statistically significant change, positive or negative
- **Grey (blank)**: The outcome was not measured by this hospital

No outcomes showed a negative change that was statistically significant.

[2] Statistically significant at the level of 0.05, which means that we can be at least 95% sure the change was not purely due to chance. Setting the level at 0.05 is standard practice.
[3] Note that this figure is calculated from all outcomes measured, not just the key outcomes listed here. It does however not weight findings by robustness or sample size.

Table 3. Overview of results of the Helping in Hospitals evaluation

	Original Helping in Hospitals cohort (Cabinet Office)						Young People cohort (DH)		
Outcome	Barts	Cambridge	Derbyshire	Great Western	Kingston	Sheffield	Royal Free	Southampton	Western Sussex
Improved patient experience	SP	NC	NSP	NC	NC	NC	SP	NC	NC
Improved mood	SP				SP	SP		NC	
Reduced readmissions			NC	NC	NC	NC			
Reduced length of stay	NC		NC	NC					
Reduced anxiety levels	SP	NC			SP				NC
Improved nutrition levels		SP			SP	SP	SP	NC	NC
Improved hydration levels						SP			
Releasing time to care	SP								
Reduced delayed transfer of care			NC						
Decreased number of falls				NC					NC
More patient voices heard		NSP							

How did service delivery and data collection issues affect the evaluation?

The following information was gathered in conversation with the hospital trusts to better understand how service delivery and practical data collection issues may have affected the evaluation.

Service delivery factors:

- **Volunteer management:** Volunteers needed to be reliably present (where they are expected), present in sufficient concentration (rather than thinly spread), and well managed (sufficient oversight and allocated according to abilities), in order to have the best impact. Generally, large numbers of volunteers encouraged higher impact, but there was also a saturation level at which point increasing volunteer numbers did not necessarily result in an increase in impact.
- **Referral issues:** Increasing the number of patient referrals was one of the biggest problems – it slowed down the delivery of the service and meant fewer patients received volunteer support and consequently less data was available for the evaluation.
- **Gathering momentum:** Receiving PR and external attention tended to boost volunteering activity (e.g. higher recruitment numbers).
- **Pressure on hospital beds:** Hospital-wide pressures on length of stay meant patients may have been discharged before medically fit as there is insufficient support capacity. This may have made readmissions more likely.
- **Pressure on staff:** Staffing pressures frequently meant that less data were collected to ensure core services delivery.

Caveats for the data:

- **Noise in the data:** A multitude of factors influenced the measured patient outcomes and isolating the impact of the volunteers is extremely challenging.
- **External dependencies:** The volunteering service often cannot influence Length of Stay or Delayed Transfer of Care because these outcomes depend on the availability of care packages beyond the control of the volunteering service.
- **Levels of need:** Patients or wards selected for the treatment group often had higher levels of need for support than comparison patients or wards, potentially causing the evaluation to underestimate the effectiveness of impact volunteering.
- **Measurement issues:** Some measurement tools were less suitable than hoped for and will need to be improved to better capture impact. For instance, many tools struggled with a 'ceiling effect' – where outcomes are already close to optimal at baseline (e.g. FFT scores being close to 100%) – making further improvement on such outcomes extremely challenging.
- **Data from the most vulnerable:** The most vulnerable patients who are elderly, frail or very unwell were the least likely to fill in tools and may therefore be under-represented in the present evaluation. In addition, they may not have been able to distinguish between help from volunteer and help from staff, despite volunteers wearing uniforms, which further complicates effective evaluation of volunteering roles.
- **Risk of response bias:** Some data were collected by the volunteers (due to lack of a feasible alternative) and is therefore at risk of bias, as patients provided the data in their presence.

HOSPITAL BY HOSPITAL RESULTS

This section covers the evaluation findings for each individual hospital, alongside a brief overview of the results, an explanation of the wider context affecting the evaluation, and a table with the summarised quantitative results.

The tables include each outcome for the relevant hospital; the average change in that outcome; the p-value, indicating whether the result is statistically significant or not; and the analysis approach used to measure it. The latter is numbered to indicate the robustness of the approach (1 being the most robust). The tables use the following key similar to the above for the **p-values**:

- **Dark green**: Statistically significant[4] positive change (starred)
- **Yellow**: No statistically significant change, positive or negative

No outcomes showed a negative change that was statistically significant.

The tables use the following key for the **direction of change in each outcome**:

- **Dark green (p)**: Positive change
- **Yellow (x)**: No change
- **Red (n): Negative change**

Caution: Only results with statistical significance are true effects, regardless of the direction of the change in the outcome the tables may indicate.

[4] Statistically significant at the level of 0.05, which means that we can be at least 95% sure the change was not purely due to chance. A 0.05 level is standard practice.

Cabinet Office-funded hospitals

1. Barts Health NHS Trust

- Impact volunteers had a statistically significant positive influence on mood and distress in dementia patients, patient and nurse satisfaction with volunteer support, and the time nurses spend on unskilled tasks. The positive impact on the dementia patients and nurse satisfaction matches the hospital trust's observation that dementia volunteers were well received by clinical staff due to the fact that the roles and measurement tools were very closely co-designed with the clinical Dementia and Delirium team. According to the trust, volunteers are meeting dementia nurses during their training and therefore gain more confidence to act as part of the dementia team. In addition, posters and staff guidance are used to remind staff how volunteers can support the trust and what support they need from trust staff, which may have contributed to nurse satisfaction with the volunteer support.
- No effects were found for overall patient experience, length of stay, nurses' satisfaction of the hospital's care, and time nurses spend on skilled tasks.
- Wider context: With regard to length of stay, Barts Health have a number of ongoing Length of Stay-reducing projects and did not expect to see much related impact from the volunteers on their own. Also, Length of Stay data can be deceiving in cases where a stay ends due to death, rather than successful discharge, so they need to be interpreted with caution. Lastly, pressures caused by being put under special measures in May 2015 resulted in less capacity for data collection and thus lower sample sizes.

Table 4. Quantitative impact results for Barts Health NHS Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	-0.19% (n)	0.191	1. Difference-in-difference
Improved mood in dementia patients (between 0-100%)	20.00% (p)	< 0.001*	3. Before vs after intervention
Reduced distress in dementia patients (between 7 and 32 points)	-1.76 (p)	< 0.001*	3. Before vs after intervention
Reduced length of stay (in days)	-2.59 (p)	0.009[5]	1. Difference-in-difference
Improved patient satisfaction with volunteer support (% of patients satisfied)	10.24% (p)	0.010*	2. Beneficiary group vs comparison group
Improved nursing staff satisfaction with volunteer support (% of nurses satisfied)	59.12% (p)	< 0.001*	2. Beneficiary group vs comparison group
Improved nursing staff experience (FFT) - % of nurses recommending this hospital's care	-0.75% (n)	0.771	2. Beneficiary group vs comparison group
Releasing time to care (% of nurse time spent on tasks that require a trained nurse)	1.00% (p)	0.541	2. Beneficiary group vs comparison group
Releasing time to care (% of nurse time spent on tasks that do not require a trained nurse)	-4.00% (p)	0.019*	2. Beneficiary group vs comparison group

[5] The analysis revealed that the treatment and comparison groups were not sufficiently comparable in terms of average length of stay at baseline – before the volunteering was fully implemented (see page 19 for the difference between the two groups). The analysis and results are thus not sufficiently reliable. Therefore, even though this result is technically speaking statistically significant, it cannot be accepted as a true positive effect.

2. Cambridge University Hospitals (CUH) NHS Foundation Trust

- Impact volunteers had a statistically significant positive influence on patient nutrition and a positive (non-significant) influence on number of patient voices heard. According to the hospital, mealtime training involved their senior dietician and was offered to all volunteers, both of which may have boosted their ability to improve patient nutrition levels. Furthermore, the hospital observed that having volunteers on the mobile patient survey team are particularly valuable to collect feedback from patients with communication difficulties, patients who are particularly frail and patients who have dementia. These volunteers may thus have contributed considerably in getting more patients' voices heard.
- No effects were found for overall patient experience and anxiety levels, though the latter suffers severely from ceiling effect (the outcome was already at the optimum at baseline).
- Wider context: Since data were collected for the same ward for both treatment and comparison (the difference being the days on which there were volunteers or not), the analysis may be obscured slightly due to the comparison group potentially having received some volunteering support on 'treatment' days, risking this evaluation to underestimate the effect of impact volunteering. In addition, being placed under special measures put extra pressure on the hospital and caused delays in the rollout of the mobile dementia volunteer role, and shortage of beds affected staff morale. The service therefore may not have reached its full potential.

Table 5. Quantitative impact results for Cambridge University Hospitals (CUH) NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	1.61% (p)	0.183	2. Beneficiary group vs comparison group
Improved patient nutrition (% of meal consumed)	12.00% (p)	< 0.001*	2. Beneficiary group vs comparison group
Improved anxiety levels (% of patient requests responded to)	0.00% (x)	1.000	3. Before vs after intervention
More patient voices heard (number of patient surveys collected through the volunteers in addition to 4703 routine surveys)	4067 (p)	n/a	n/a

3. Derbyshire Community Health Services NHS Trust

- Impact volunteers had no observable statistically significant positive influence on patient outcomes, although patient experience was very positive (not significant). Anecdotal evidence from the hospital themselves suggests that closely matching patients with volunteers proved successful and patients felt excited about their visits from volunteers.
- No effects were found for patient confidence levels, well-being levels, readmissions, delayed transfer of care or length of stay.
- Wider context: Due to staff capacity limitations affecting the number of volunteers they could engage and train, and referrals they could arrange, the volunteering service may not have reached its potential. Consequently, fewer patients were supported and less data were available for some of the outcomes. In addition, the staff expressed some concern over the validity of the confidence and well-being survey, as patients frequently misunderstood its questions. The resulting data should therefore be viewed with some caution. Furthermore, some of the treatment wards tended to have a higher length of stay average and, combined with a few extreme outliers, this may have skewed the data. Lastly, the volunteering service discovered that it had little influence over how soon patients could be discharged (length of stay and delayed transfer of care), as this depended heavily on care packages that many patients required but that were outside the control of the volunteering service.

Table 6. Quantitative impact results for Derbyshire Community Health Services NHS Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	n/a[6] (p)	n/a	n/a
Increased confidence at point of discharge (between 0 – 100%)	-8.63% (n)	0.305	2. Beneficiary group vs comparison group
Improved levels of well-being (between 0 – 100%)	-9.47% (n)	0.350	2. Beneficiary group vs comparison group
Reduced readmissions (% readmitted from total admissions)	-0.03% (p)	0.133	1. Difference-in-difference
Delayed transfer of care (% of patients facing a DTOC)	n/a	n/a	n/a[7]
Reduced length of stay (in days)	-2.56 (p)	0.166	1. Difference-in-difference

[6] No baseline and no comparison group were available, but patients provided very positive ratings (100% on average).
[7] It was not feasible to conduct a difference-in-difference analysis here.

4. Great Western Hospitals NHS Foundation Trust

- No effects were found for overall patient experience, number of falls, readmissions or length of stay. The trust cautions that linking their volunteers' activities with these outcome is challenging (particularly for falls) due to the many other influencers on those outcomes.
- Wider context: Refurbishment made the treatment group ward more dementia-friendly. While this is beneficial to patients, it may also explain the increased length of stay trend on the treatment ward as it resulted in higher proportions of dementia patients on the ward who on average tend to have longer stays.

Table 7. Quantitative impact results for Great Western Hospitals NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	1.75% (p)	0.539	2. Beneficiary group vs comparison group
Reduced number of falls (percentage of falls per number of beds on the ward)	0.58% (p)	0.910	2. Beneficiary group vs comparison group
Reduced readmissions (% readmitted from total discharges)	-0.01% (p)	0.874	1. Difference-in-difference
Reduced length of stay (in days)	1.52 (n)	0.203	1. Difference-in-difference

5. Kingston Hospital NHS Foundation Trust

- Impact volunteers had a statistically significant positive influence on patient nutrition (patient experience), anxiety levels at discharge, and mood and well-being in dementia patients. According to the trust, volunteers received specific nutrition training and were involved in patients' meal choice which may have contributed to the patients' positive mealtime experience. Furthermore, volunteers benefited from supervised induction sessions involving volunteering team and clinical team supervisors to increase the general quality of the volunteers' support.
- No effects were found for overall patient experience, patient experience with regards to emotional support, readmissions and take-up of community services.
- Wider context: Hospital To Home-related outcomes saw particularly positive trends in the months immediately after the relevant volunteer training sessions, affecting patient readmissions and community services take-up. In addition, patients selected for the treatment group were often those most in need of support and were for this reason a more vulnerable population than the comparison group. The evaluation therefore may have underestimated the effects of the impact volunteers.

Table 8. Quantitative impact results for Kingston Hospital NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	1.11% (p)	0.410	2. Beneficiary group vs comparison group
Improved patient experience (emotional support) - % of patients satisfied with the emotional support received	0.52% (p)	0.555	2. Beneficiary group vs comparison group
Improved nutrition (patient experience) - % of patients satisfied with the mealtime support received	3.07% (p)	0.008*	2. Beneficiary group vs comparison group
Reduced readmissions (% readmitted from total discharges)	-0.03% (p)	0.683	1. Difference-in-difference
Reduced anxiety about discharge (from 1 to 10 points)	2.17 (p)	< 0.001*	3. Before vs after intervention
Increased take-up of community services (% of patients who had taken up services 6 weeks after discharge)	3.46% (p)	0.834	3. Before vs after intervention
Improved mood and well-being in dementia patients (from 1 to 10 points)	1.89 (p)	< 0.001*	3. Before vs after intervention

6. Sheffield Teaching Hospitals NHS Foundation Trust

- Impact volunteers had a statistically significant positive influence on patient mood (social engagement aspect), mood after volunteer activities, satisfaction with eating support and satisfaction with drinking support. According to the trust, volunteers spent two weeks on the ward before their specific mealtime training to help them settle in and gain some independence and confidence. In addition, the nutrition role was advertised specifically to people with a keen interest in nursing or health care to ensure the roles were suitably filled. With regards to the mood-related outcomes, the trust observed that the specific activities volunteer role (using arts, games or music) were a welcome distraction, particularly for long-term patients, and therefore had a good chance of significantly improving patients' mood.
- No effects were found for overall patient experience, mood (distress aspect), readmissions and satisfaction with combined eating and drinking support. The latter was measured only during the beginning of the evaluation (between November 2014 and May 2015) and may not yet have captured any impact, as the nutrition role was changed and scaled in November 2014 and was only in full swing from April/May 2015, at which point nutrition and hydration were measured separately and did show significant impact (see above).
- Wider context: The trust's discharge lounge volunteer service was delayed considerably and may not have reached its full potential during the duration of the evaluation.

Table 9. Quantitative impact results for Sheffield Teaching Hospitals NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	0.43% (p)	0.729	2. Beneficiary group vs comparison group
Improved nutrition and hydration (combined) – % of patients satisfied with eating and drinking support	2.07% (p)	0.669	2. Beneficiary group vs comparison group
Improved patient mood (levels of distress between 0 and 3 points)	-0.08 (p)	0.320	2. Beneficiary group vs comparison group
Improved patient mood (social engagement between 0 and 3 points)	0.16 (p)	0.030*	2. Beneficiary group vs comparison group
Improved patient nutrition – eating support satisfaction (between 0 and 3 points)	0.49 (p)	< 0.001*	2. Beneficiary group vs comparison group
Improved patient hydration – drinking support satisfaction (between 0 and 3 points)	0.71 (p)	< 0.001*	2. Beneficiary group vs comparison group
Reduced readmissions (% readmitted from total discharges)	1.04 (n)	0.611	3. Before vs after intervention
Improved patient mood before and after volunteer activity (between 1 – 10 points)	2.01 (p)	< 0.001*	3. Before vs after intervention

Department of Health-funded hospitals:

7. Royal Free London NHS Foundation Trust

- Young impact volunteers had a statistically significant positive influence on patient nutrition and experience finding their way around the hospital. A positive trend was also observed in the number of requests front of staff needed to deal with (non-significant).
- No effects were found for overall patient experience.
- Wider context: Their CQC visit in January 2016 caused considerable stress and tied up staff capacity on all levels. Among other things, this resulted in less data being collected for the evaluation.

Table 10. Quantitative impact results for Royal Free London NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	0.23 (p)	0.431	1. Difference-in-difference
Decreased monthly number of requests made to front of house staff as a result of volunteers supporting front of house staff	-10,449 (p)	n/a	n/a
Improved nutrition (% of meal consumed)	18.46% (p)	< 0.001*	1. Difference-in-difference
Patient experience (finding their way around the hospital) – between 1 and 5 points	0.52 (p)	0.003*	3. Before vs after intervention

8. University Hospital Southampton NHS Foundation Trust

- No effects were found for overall patient experience, nutritional intake (both calories and protein levels), or mood.
- Wider context: Due to a major ward move, volunteering service delivery and related data collection were delayed and only took full effect from October 2015 onwards. The service therefore may not yet have reached its full potential. Also, the service discovered that some volunteers had been deployed to the comparison ward, thereby introducing a slight risk that the evaluation was underestimating the impact volunteers' effect on patients. In addition, the treatment ward may have a slightly younger and fitter population due to some of their patients being elective, affecting the comparability of the treatment and comparison group somewhat. Lastly, research staff shortages resulted in less data being collected.
- A larger study on nutrition is currently underway at the hospital and results are expected in August this year.

Table 11. Quantitative impact results for University Hospital Southampton NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	-0.07 (n)	0.678	1. Difference-in-difference
Improved nutrition (calories intake at mealtime)	-40.13 (n)	0.582	1. Difference-in-difference
Improved nutrition (protein intake at mealtime)	-2.19 (n)	0.445	1. Difference-in-difference
Improved mood (between 1 – 5 points)	-0.14 (n)	0.348	1. Difference-in-difference

9. Western Sussex Hospitals NHS Foundation Trust

- Young impact volunteers had no significant effects on overall patient experience, satisfaction with nutrition support, falls and anxiety levels. However, for anxiety, baseline levels were at maximum (100 per cent) and therefore no improvement was possible.
- Wider context: The service's discharge lounge volunteer role was delayed considerably as it was reviewed due to concerns that it was not sufficiently efficient when it was first rolled out. Its effectiveness therefore may not be detectable within the timeframe of the evaluation. In addition, the treatment group may consist of a slightly more vulnerable population as the dementia ward was included (for ethical reasons). Furthermore, staffing pressures were somewhat higher on treatment wards, particularly due to a ward expansion. In both treatment and comparison groups, these pressures may have had a negative effect on the data and reduced capacity for data collection. Furthermore, one of the treatment wards initially struggled to make time to work with the volunteers due to work pressures, and therefore recruiting volunteers for this team was a challenge. The team remained resistant for some time but had overcome this by the end of the project. Still, this may have led to an underestimation of the volunteers' impact across the project.

Table 12. Quantitative impact results for Western Sussex Hospitals NHS Foundation Trust

Outcome	Outcome change	p-value	Analysis approach
Improved patient experience (FFT) - % of patients recommending this hospital's care	-1.49% (n)	0.289	2. Beneficiary group vs comparison group
Improved patient nutrition (patient experience) - % of patients satisfied with the mealtime support received	-1.86% (n)	0.421	2. Beneficiary group vs comparison group
Reduced number of falls (percentage of falls per number of beds on the ward)	2.5% (p)	0.236	2. Beneficiary group vs comparison group
Reduced anxiety levels (% of patients feeling confident in the hospital's care)	n/a	n/a[8]	1. Difference-in-difference

[8] Insufficient variability and sample size to conduct a valid difference-in-difference analysis

DISCUSSION

Hospital impact volunteering shows promise as a way to improve patient experience, mood, anxiety levels, nutrition and hydration, and release nurse time to care.

INTERPRETING THE RESULTS

This evaluation aimed to answer one key question:

Can hospital impact volunteering help improve patients' experience and well-being?

The evaluation of the Helping in Hospitals project indicates that hospital impact volunteering shows promise as a way to improve patients' experience and well-being. It detected statistically significant positive findings on thirty percent of all outcomes, including overall patient experience, mood, anxiety levels, nutrition and hydration, and releasing nurse time to care.

However, the results were mixed and some hospitals did not receive positive findings, for which there are a multitude of possible explanations, such as service delivery challenges and related staffing shortages, lack of sufficient data, difficulties with collecting data from the most vulnerable, bias affecting data collection and wider pressures on the healthcare system. Consequently, a further range of factors influence the measured patient outcomes and make isolating the impact of the volunteers extremely challenging.

Furthermore, flaws in the methodologies employed during the hospitals' evaluations need to be taken into account when interpreting the results (see full research limitations on page 8). In short, the comparative approaches used cannot allow us to completely exclude the potential for other factors (rather than the impact volunteers) to have influenced the measured outcomes. The measurement tools employed have not yet been tested, and therefore may not be as valid or as sensitive as they could be. Lastly, the practical realities of data collection may in some cases have caused us to under- or overestimate the impact volunteers' impact.

As a result, it is important to treat the results of this evaluation with the appropriate level of caution. The less robust a design is, the more at risk it is of overestimating impact, and the less confident we can be in the results. This evaluation reflects this as more positive results are found in the less robust designs.

However, considering the early stage of development of many of the impact volunteering roles evaluated here, and the ambitious evaluation approaches taken to measure them, the results are – on the whole – promising. Similar results were found across hospitals, strengthening the evidence produced by individual hospitals. In combination, they strongly suggest that impact volunteering has already shown significant effects on patient experience and well-being, and has the potential to bring the same effects to hospitals that have not yet observed such changes.

RECOMMENDATIONS

Based on the findings of this evaluation, we can make the following recommendations to service providers, researchers and funders/commissioners.

Recommendations for funders/commissioners

1. Further invest in hospital impact volunteering as a way to improve patient experience and well-being, as well as to potentially relieve pressure on the healthcare system.
2. Provide sufficient resources for the evaluation of hospital impact volunteering to further our understanding of what impact it can have for patients and other stakeholders, and to identify ways to further improve volunteering services. This will enable smarter policy decisions in the future.

Recommendations for service delivery

3. Ensure that volunteers are reliably present, present in sufficient concentration, well managed and allocated according to their abilities, in order to have the best impact. Generally, large numbers of volunteers encourage higher impact, but there also is a saturation level at which point increasing volunteer numbers does not necessarily result in an increase in impact.
4. Focus sufficiently on encouraging patient referrals and matching to avoid slowing down the delivery of volunteering roles, such as hospital to home or dementia patient activities.
5. Use PR and external attention to boost volunteering activity.
6. Keep monitoring key patient outcomes to ensure the sustainability of the service.

Recommendations for evaluation

7. Review which outcomes hospital impact volunteers realistically can influence and focus your evaluation on those.
8. Review and pilot measurement tools before rolling them out. Ensure they are valid (capture accurate data), reliable (collect consistent data) and appropriate (capture data even from vulnerable populations such as dementia patients).
9. Conduct increasingly rigorous evaluations once the volunteering roles are fully developed and solidly implemented, in order to increase the certainty with which you can claim the effectiveness of the service.

CONCLUSION

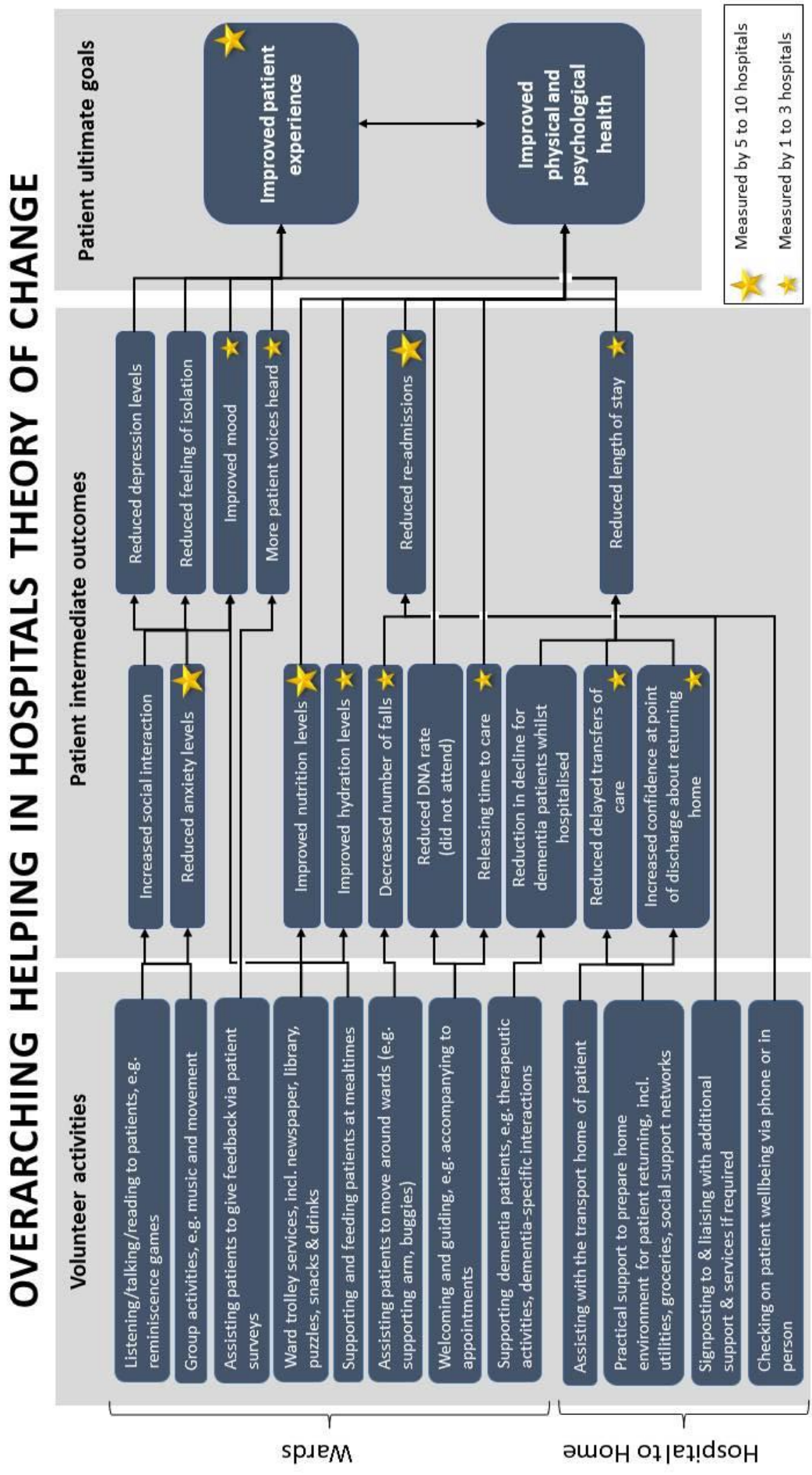
Hospital impact volunteering shows promise as a way to maintain or improve patient experience and well-being outcomes and has the potential to relieve pressures on the healthcare system.

APPENDICES

Additional detail and resources from the evaluation of Helping in Hospitals

APPENDIX 1: HELPING IN HOSPITALS OVERARCHING THEORY OF CHANGE

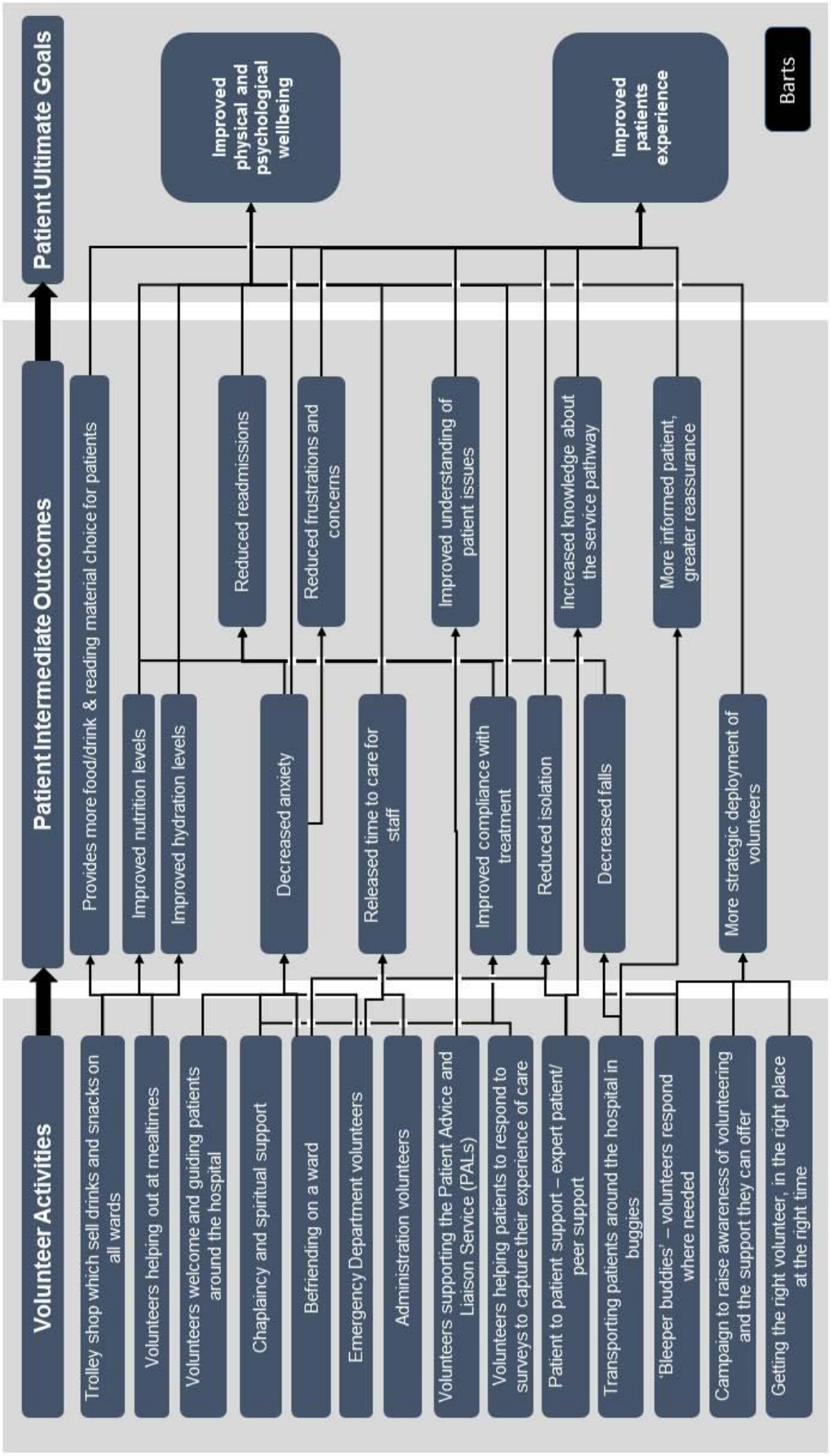
The below Theory of Change diagram provides an overview of the variety of volunteering services provided as part of the Helping in Hospitals programme (on the left) and their collective impact on patients, both in terms of their ultimate goals (on the right) and the intermediate outcomes on which they depend (in the middle). The outcomes that were measured in the present evaluation are marked with a star. Those outcomes with small stars have been measured by one to three hospital trusts while outcomes with large stars have been measured by five to ten hospital trusts. The diagram thus provides a visual overview of the kind of evidence that was produced across the hospital trusts by the evaluation of the Helping in Hospitals programme.


OVERARCHING HELPING IN HOSPITALS THEORY OF CHANGE
Patient ultimate goals
Improved patient experience
Improved physical and psychological health
Measured by 5 to 10 hospitals
Measured by 1 to 3 hospitals
Patient intermediate outcomes
Reduced depression levels
Reduced feeling of isolation
Improved mood
More patient voices heard
Reduced re-admissions
Reduced length of stay
Increased social interaction
Reduced anxiety levels
Improved nutrition levels
Improved hydration levels
Decreased number of falls
Reduced DNA rate (did not attend)
Releasing time to care
Reduction in decline for dementia patients whilst hospitalised
Reduced delayed transfers of care
Increased confidence at point of discharge about returning home
Volunteer activities
Listening/talking/reading to patients, e.g. reminiscence games
Group activities, e.g. music and movement
Assisting patients to give feedback via patient surveys
Ward trolley services, incl. newspaper, library, puzzles, snacks & drinks
Supporting and feeding patients at mealtimes
Assisting patients to move around wards (e.g. supporting arm, buggies)
Welcoming and guiding, e.g. accompanying to appointments
Supporting dementia patients, e.g. therapeutic activities, dementia-specific interactions
Assisting with the transport home of patient
Practical support to prepare home environment for patient returning, incl. utilities, groceries, social support networks
Signposting to & liaising with additional support & services if required
Checking on patient wellbeing via phone or in person
Wards
Hospital to Home

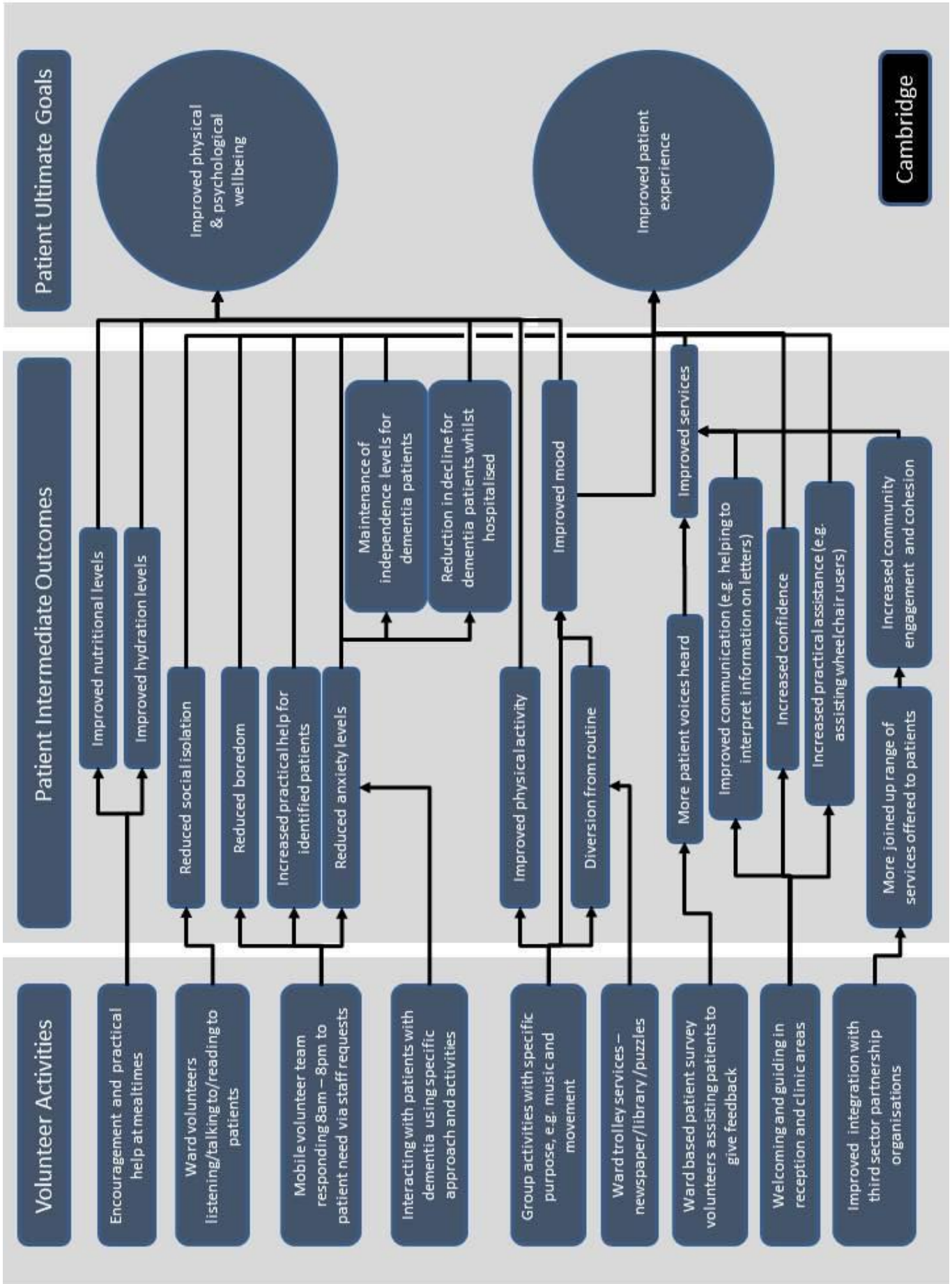
APPENDIX 2: INDIVIDUAL HOSPITALS' THEORIES OF CHANGE

The following section provides the individual Theories of Change of the ten hospital trusts that were funded as part of the Helping in Hospitals programme. Similar to the overarching Theory of Change, each individual hospital trust Theory of Change provides an overview of the volunteering services provided as part of the Helping in Hospitals programme (on the left) and their impact on patients, both in terms of their ultimate goals (on the right) and the intermediate outcomes on which they depend (in the middle).

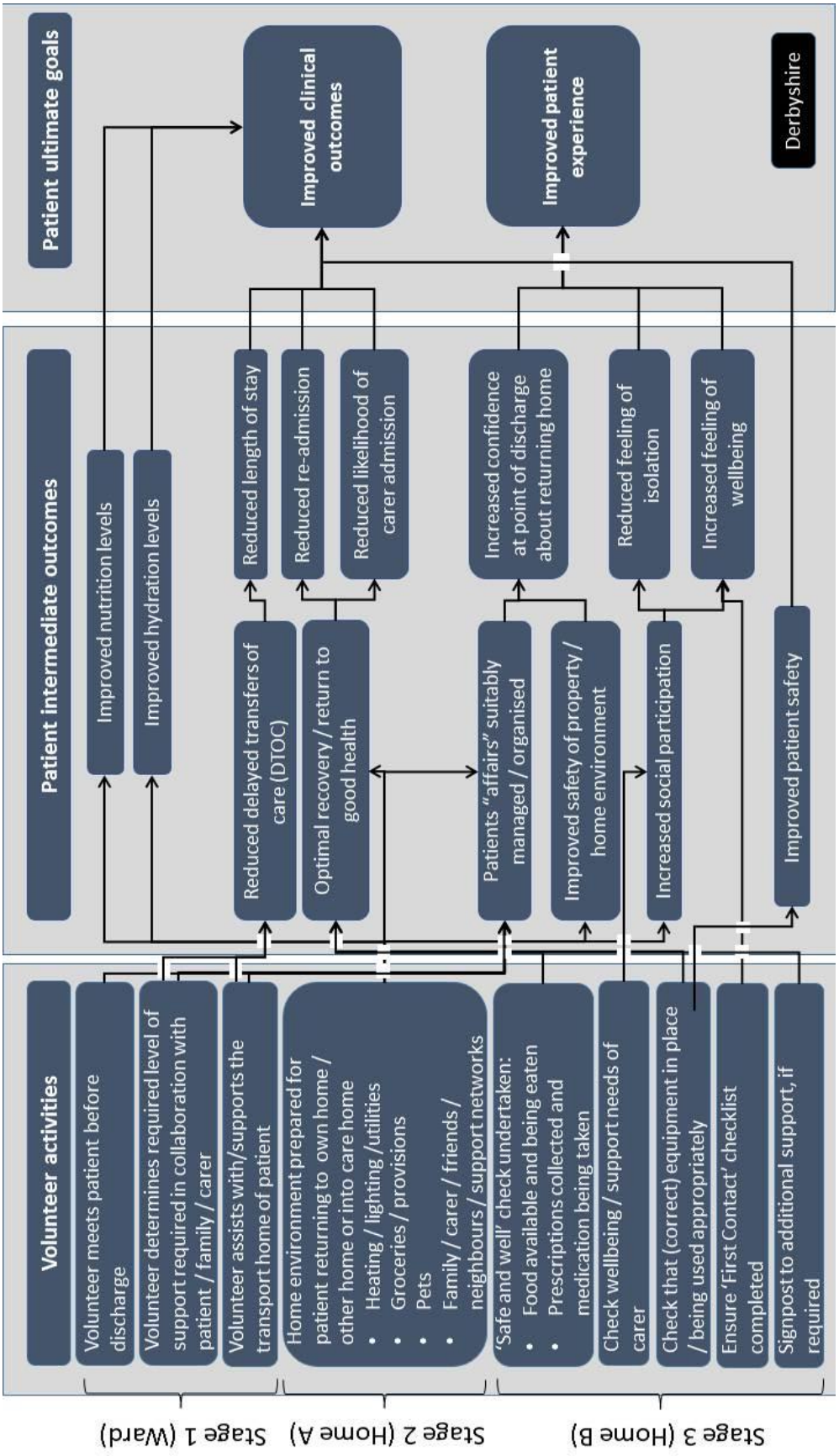
BARTS HEALTH NHS TRUST



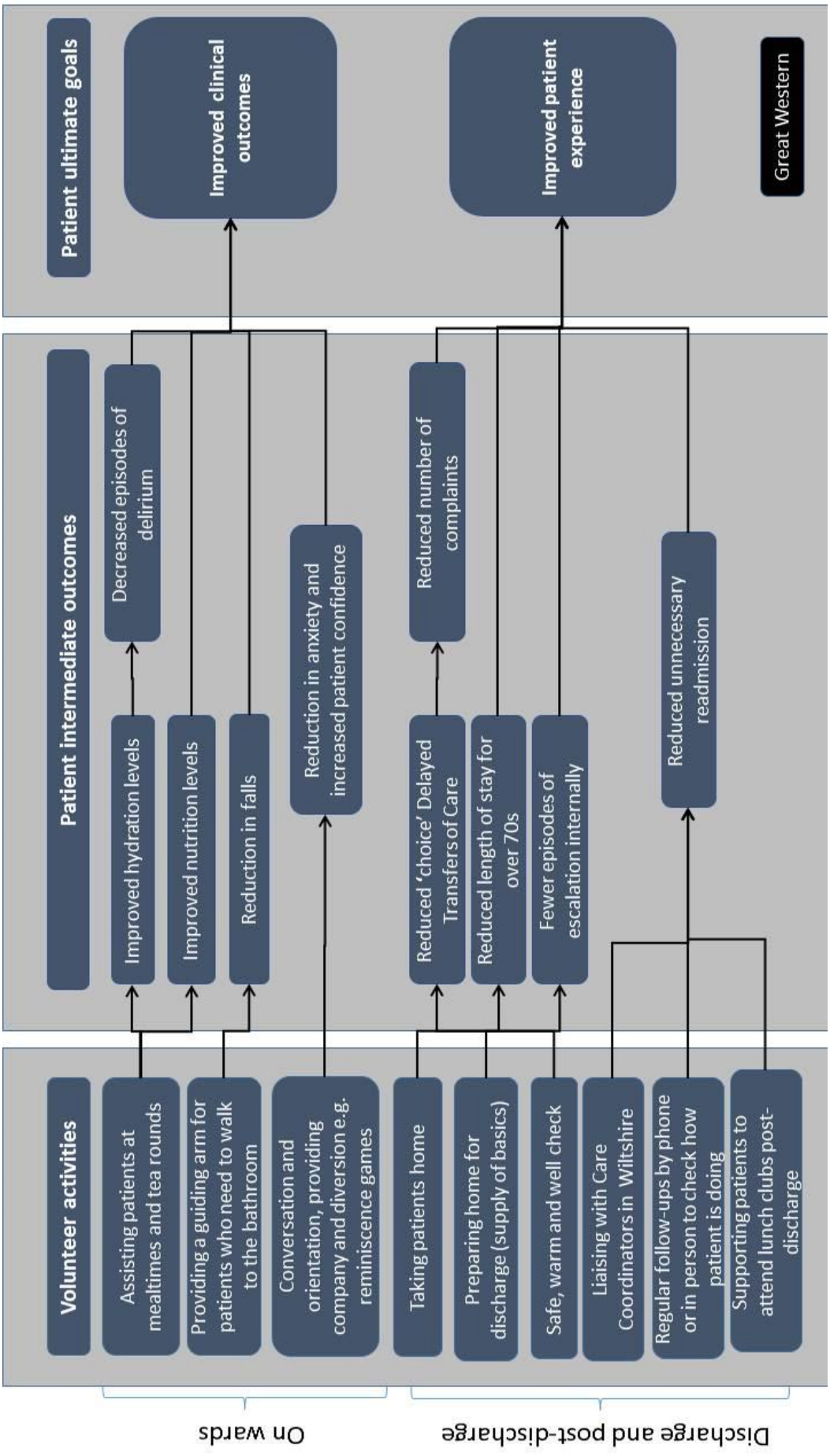
CAMBRIDGE UNIVERSITY HOSPITALS NHS FOUNDATION TRUST



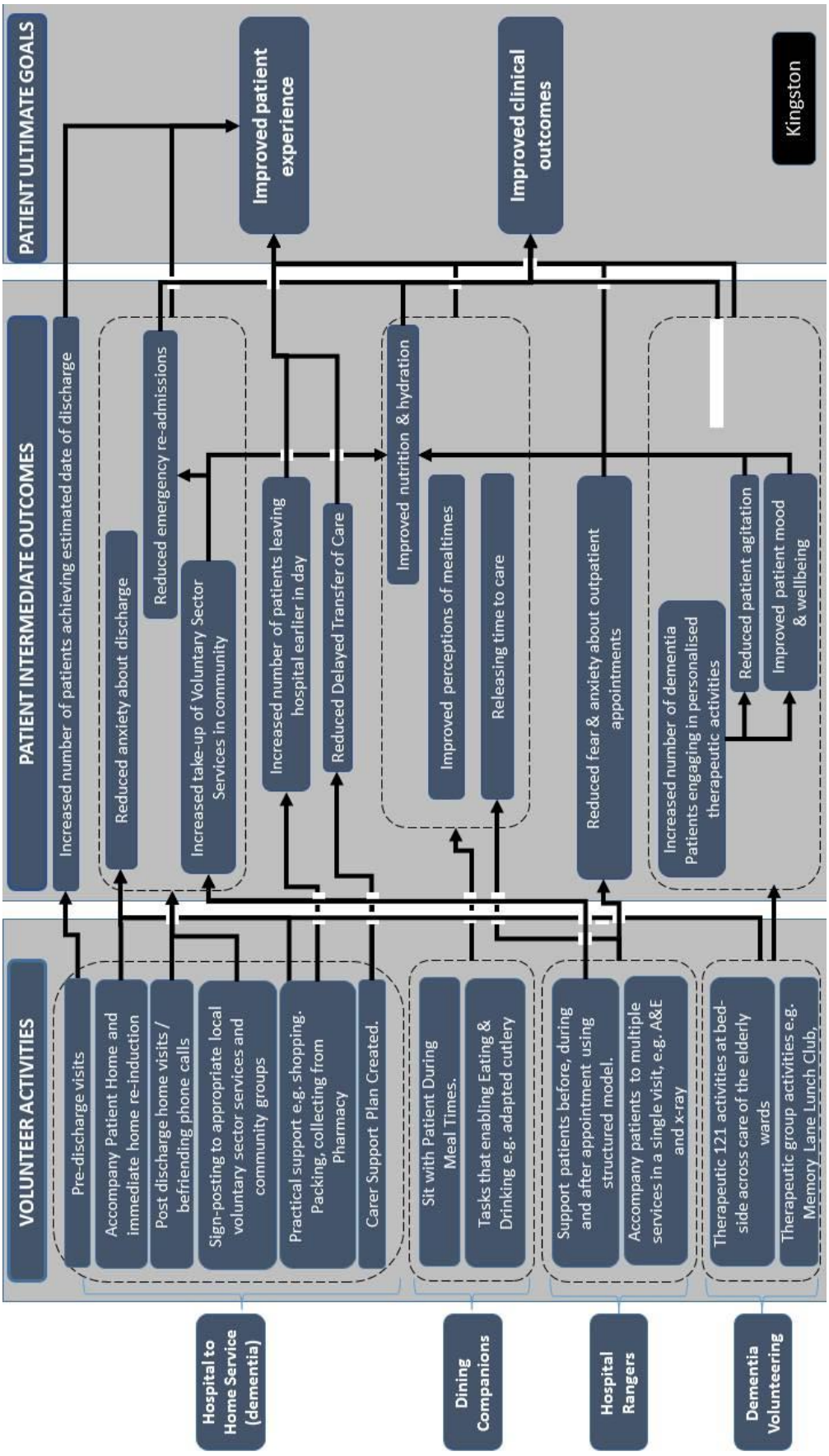
DERBYSHIRE COMMUNITY HEALTH SERVICES NHS TRUST



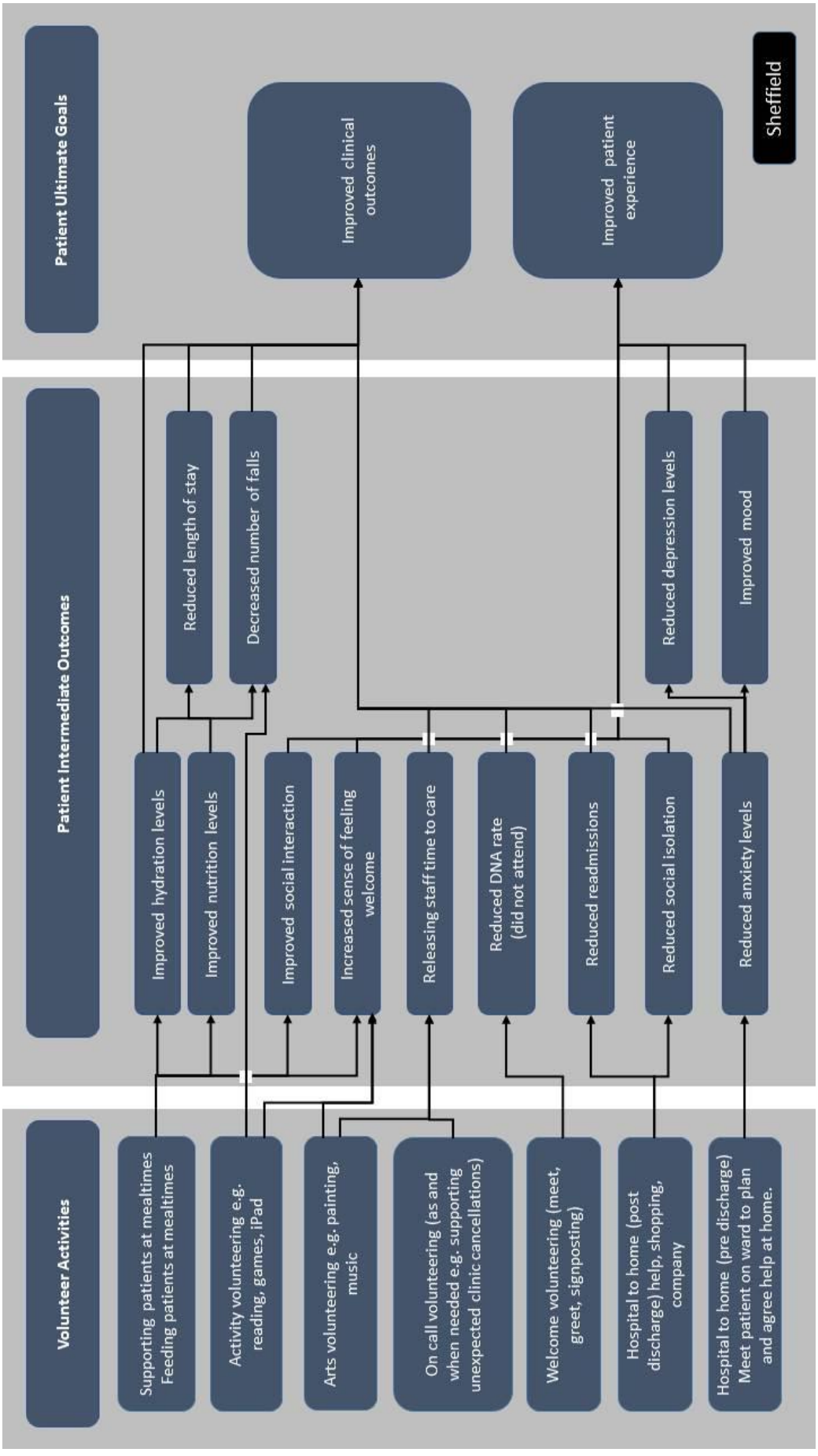
GREAT WESTERN HOSPITALS NHS FOUNDATION TRUST



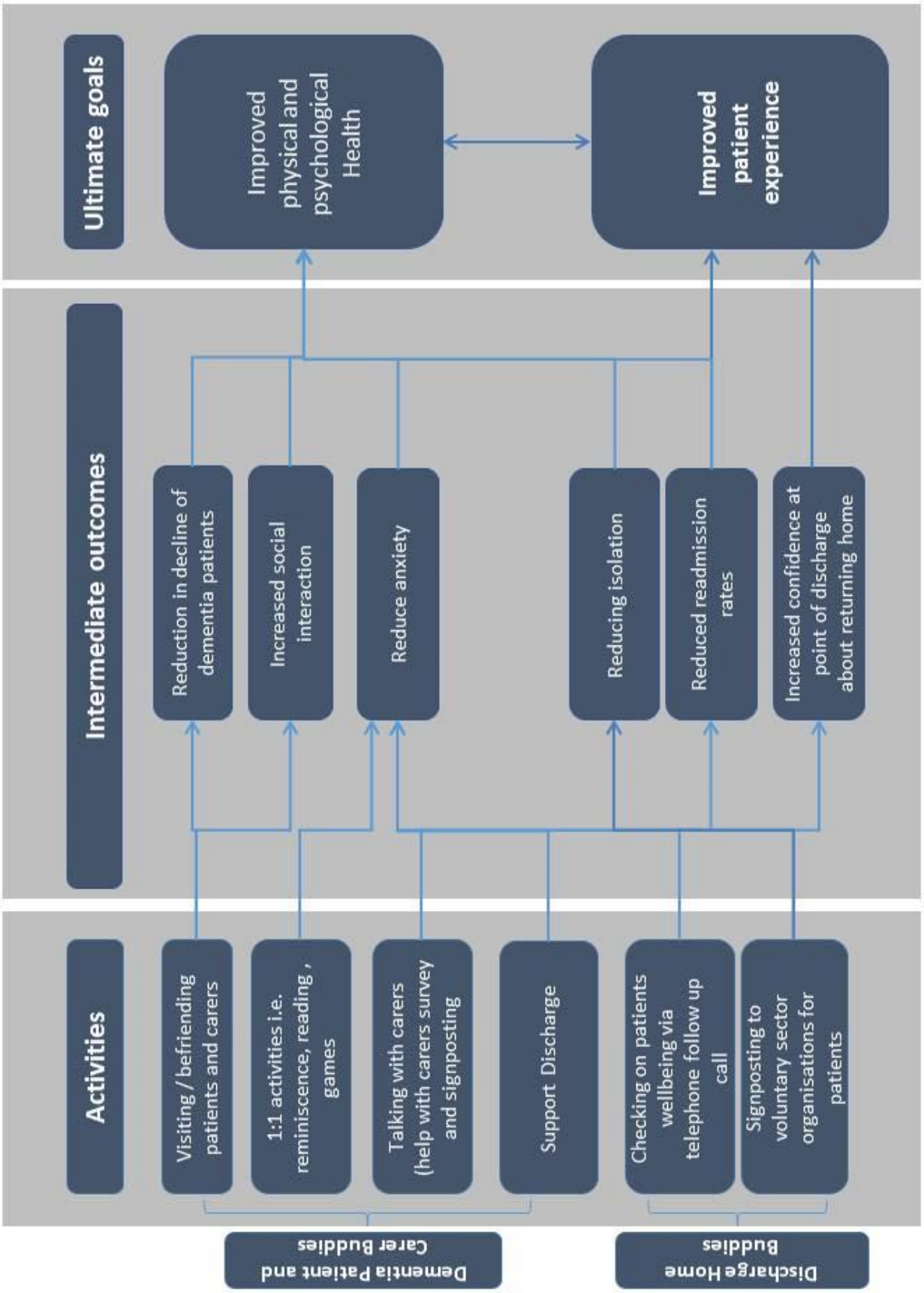
KINGSTON HOSPITAL NHS FOUNDATION TRUST



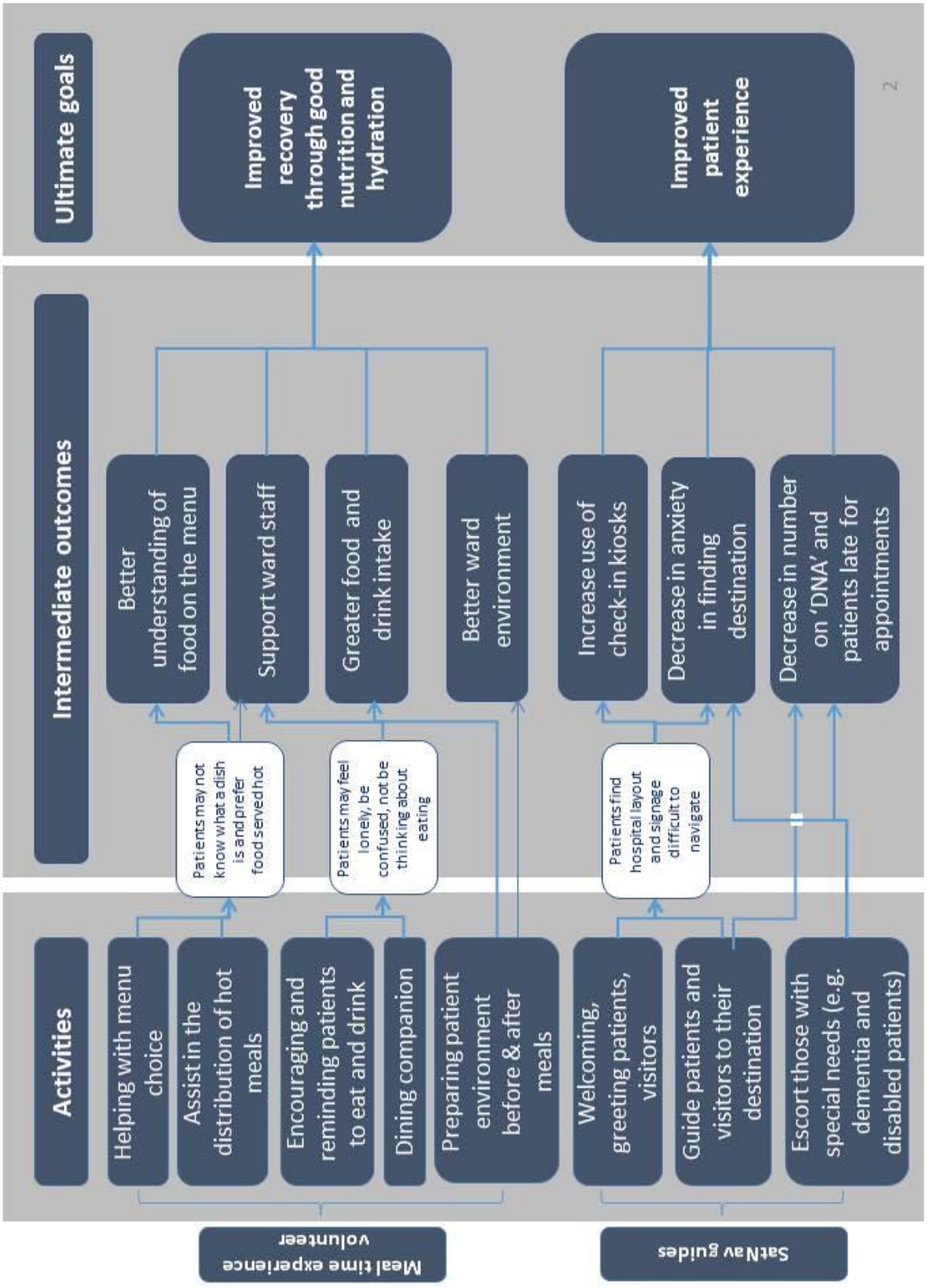
SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



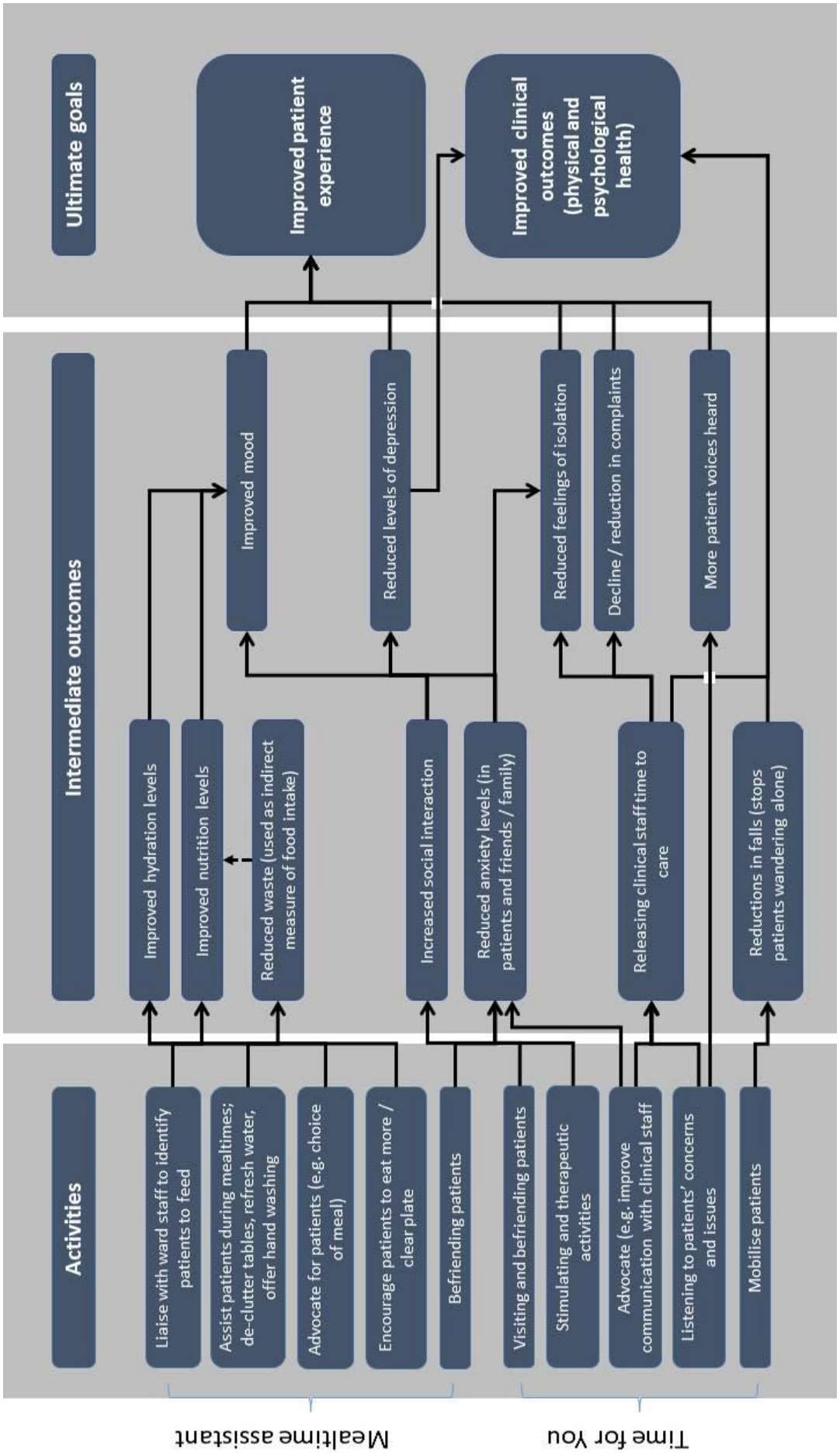
THE PRINCESS ALEXANDRA HOSPITAL NHS TRUST



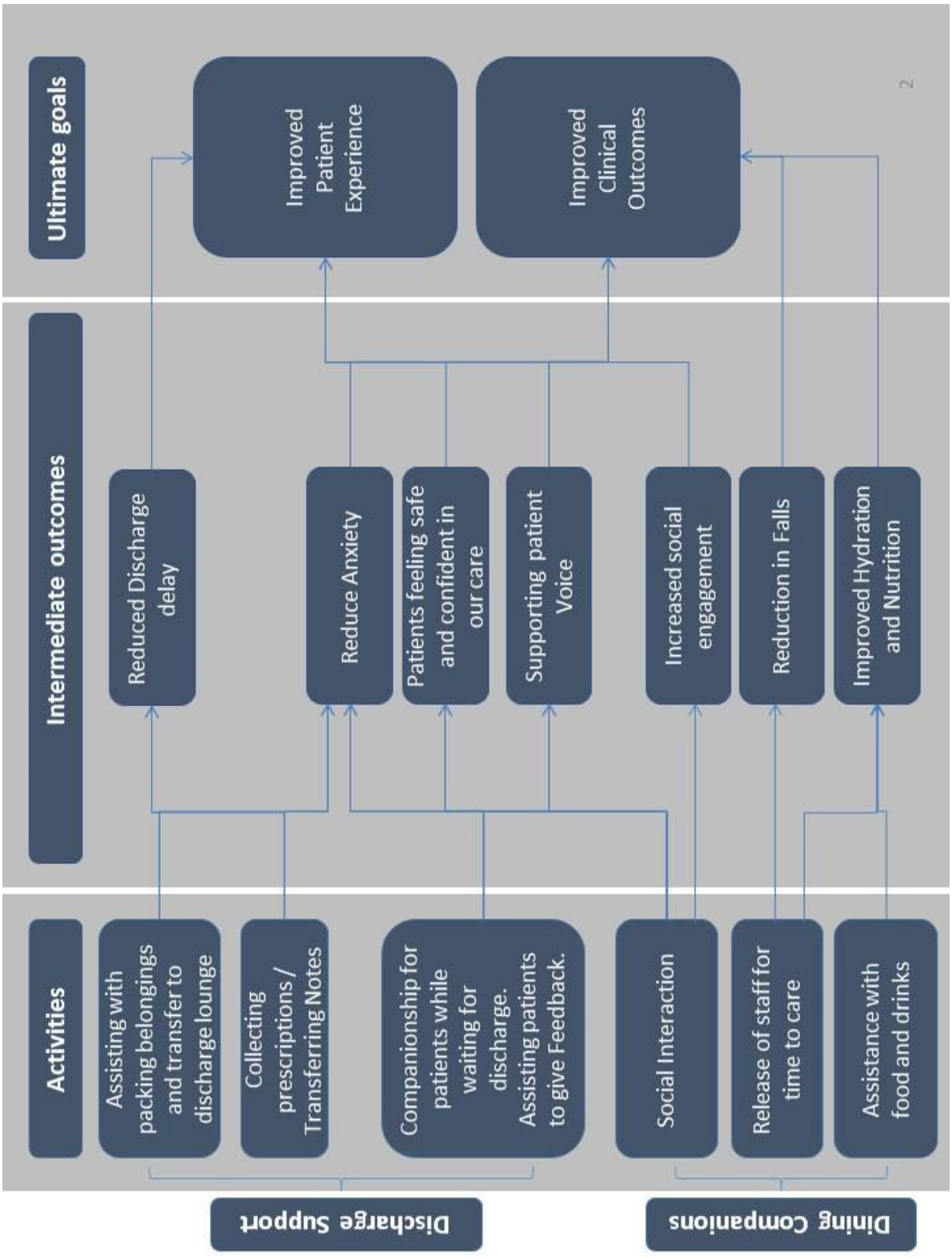
ROYAL FREE LONDON NHS FOUNDATION TRUST



UNIVERSITY HOSPITAL SOUTHAMPTON NHS FOUNDATION TRUST



WESTERN SUSSEX HOSPITALS NHS FOUNDATION TRUST



APPENDIX 3: ADDITIONAL DETAIL ON IMPACT RESULTS

This section provides additional detail on each of the hospital's evaluation results for those audiences that are interested. As relevant, it provides separate data on the treatment and comparison groups, on baseline and follow-up, including means, standard deviations (where relevant) and sample sizes.

1. Barts Health NHS Trust

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	92.86%	56	94.80%	409	0.191
	Comparison	91.15%	113	93.01%	185	

Outcome	Patient group	Baseline		Follow-up		t-test
		Mean	Sample size	Mean	Sample size	p-value
Improved mood in dementia patients (between 0-100%)	Treatment	68.00%	58	88.00%	58	< 0.001*
Reduced distress in dementia patients (between 7 and 32 points)	Treatment	10.14	58	8.38	58	< 0.001*

Outcome	Patient group	Baseline			Follow-up			Diff-in-diff
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Reduced length of stay (in days)	Treatment	13.70	17.17	584	7.34	11.81	4132	0.009[9]
	Comparison	10.95	19.03	853	7.19	12.09	4573	

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient satisfaction with volunteer support (% of patients satisfied)	Treatment	98.84%	86	0.010*
	Comparison	88.60%	35	
Improved nursing staff satisfaction with volunteer support (% of nurses satisfied)	Treatment	99.12%	113	< 0.001*
	Comparison	40.00%	10	
Improved nursing staff experience (FFT) - % of nurses recommending this hospital's care	Treatment	94.15%	156	0.771
	Comparison	94.90%	155	

[9] The analysis revealed that the treatment and comparison groups were not sufficiently comparable in terms of average length of stay at baseline – before the volunteering was fully implemented (see page 19 for the difference between the two groups). The analysis and results are thus not sufficiently reliable. The analysis model is not appropriate given that the trends of the treatment and control group data are not parallel in the baseline period. Therefore, even though this result is technically speaking statistically significant, it cannot be accepted as a true positive effect.

The two satisfaction with volunteer support outcomes refer specifically to people who have seen a volunteer (within any given treatment ward, volunteers would only interact with a proportion of patients, rarely all), which is why sample size is much lower in comparison group. Interestingly, it shows that volunteers are rated as less useful on comparison wards.

Outcome	Patient group	Follow-up			t-test
		Mean	Standard deviation	Sample size	p-value
Releasing time to care (% of nurse time spent on tasks that require a trained nurse)	Treatment	67.00%	0.14	158	0.541
	Comparison	66.00%	0.15	157	
Releasing time to care (% of nurse time spent on tasks that do not require a trained nurse)	Treatment	33.00%	0.14	158	0.019*
	Comparison	37.00%	0.16	157	

2. Cambridge University Hospital (CUH) NHS Foundation Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	93.08%	737	0.183
	Comparison	91.47%	1656	

Outcome	Patient group	Follow-up			t-test
		Mean	Standard deviation	Sample size	p-value
Improved patient nutrition (% of meal consumed)	Treatment	76.00%	0.27	158	< 0.001*
	Comparison	64.00%	0.35	205	

Outcome	Patient group	Baseline		Follow-up		t-test
		Mean	Sample size	Mean	Sample size	p-value
Improved anxiety levels (% of patient requests responded to)	Treatment	100.00%	46	100.00%	94	1.000

The value in the mean columns represents the percentage of requests from patients that volunteers were able to respond to and consequently address any patient anxieties.

Outcome	Patient group	Follow-up	t-test
		Sample size	p-value
More patient voices heard (number of patient surveys)	Collected by volunteers	4067	n/a
	Collected routinely	4703	

The hospital already collects large number of surveys from patients, but with the help of the iPad volunteers, 86% additional surveys were collected.

3. Derbyshire Community Health Services NHS Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	100.00%	19	n/a
Increased confidence at point of discharge (between 0 – 100%)	Treatment	72.52%	31	0.305
	Comparison	81.15%	95	
Improved levels of well-being (between 0 – 100%)	Treatment	67.69%	31	0.350
	Comparison	77.16%	95	

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Reduced readmissions (% readmitted from total admissions)	Treatment	5.20%	247	1.96%	458	0.133
	Comparison	1.38%	360	0.66%	603	
Delayed transfer of care (% of patients facing a DTOC)	Treatment	6.87%	247	7.41%	458	n/a*
	Comparison	8.77%	360	10.14%	603	

*It was not feasible to conduct a difference-in-difference analyses here.

Outcome	Patient group	Baseline			Follow-up			Diff-in-diff
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Reduced length of stay (in days)	Treatment	25.47	29.36	186	21.22	17.68	467	0.166
	Comparison	19.40	19.57	281	19.06	17.27	618	

4. Great Western Hospitals NHS Foundation Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	91.42%	210	0.539
	Comparison	89.67%	213	
Reduced number of falls (percentage of falls per number of beds on the ward)	Treatment	34.29%	175	0.910
	Comparison	33.71%	175	

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Reduced readmissions (% readmitted from total discharges)	Treatment	14.64%	485	15.27%	478	0.874
	Comparison	14.09%	447	15.24%	492	

Outcome	Patient group	Baseline			Follow-up			Diff-in-diff
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Reduced length of stay (in days)	Treatment	15.60	12.89	479	16.77	13.54	470	0.203
	Comparison	15.09	16.29	439	14.08	14.12	479	

5. Kingston Hospital NHS Foundation Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	92.27%	552	0.410
	Comparison	91.16%	1999	
Improved patient experience (emotional support) - % of patients satisfied with the emotional support received	Treatment	97.45%	502	0.555
	Comparison	96.93%	1312	
Improved nutrition (patient experience) - % of patients satisfied with the mealtime support received	Treatment	98.63%	375	0.008*
	Comparison	95.56%	754	

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Reduced readmissions (% readmitted from total discharges)	Treatment	13.33%	30	10.46%	86	0.683
	Comparison	10.37%	5259	10.37%	12736	

Outcome	Patient group	Baseline		Follow-up		t-test
		Mean	Sample size	Mean	Sample size	p-value
Reduced anxiety about discharge (from 1 to 10 points)	Treatment	5.42	91	7.59	91	< 0.001*
Increased take-up of community services (% of patients who had taken up services 6 weeks after	Treatment	40.00%	10	43.46%	91	0.834

Outcome	Patient group	Baseline		Follow-up		t-test
		Mean	Sample size	Mean	Sample size	p-value
discharge)						
Improved mood and well-being in dementia patients (from 1 to 10 points)	Treatment	5.25	626	7.14	626	< 0.001*

6. Sheffield Teaching Hospitals NHS Foundation Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	94.24%	743	0.729
	Comparison	93.81%	673	
Improved nutrition and hydration (combined) – % of patients satisfied with eating and drinking support	Treatment	87.28%	90	0.669
	Comparison	85.21%	117	

Outcome	Patient group	Follow-up			t-test
		Mean	Standard deviation	Sample size	p-value
Improved patient mood (levels of distress between 0 and 3 points)	Treatment	0.72	0.92	176	0.320
	Comparison	0.80	0.97	750	
Improved patient mood (social engagement between 0 and 3 points)	Treatment	2.26	0.93	195	0.030*
	Comparison	2.10	0.91	729	
Improved patient nutrition – eating support satisfaction (between 0 and 3 points)	Treatment	2.76	0.67	138	< 0.001*
	Comparison	2.27	1.15	487	
Improved patient hydration – drinking support satisfaction (between 0 and 3 points)	Treatment	2.65	0.75	102	< 0.001*
	Comparison	1.94	1.25	334	

Outcome	Patient group	Baseline		Follow-up		t-test
		Mean	Sample size	Mean	Sample size	p-value
Reduced readmissions (% readmitted from total discharges)	Treatment	16.07%	1201	17.11%	450	0.611
Improved patient mood before and after volunteer activity (between 1 – 10 points)	Treatment	6.26	70	8.27	70	< 0.001*

7. Royal Free London NHS Foundation Trust

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	80.40%	46	80.84%	322	0.431
	Comparison	90.50%	21	81.26%	178	

Outcome	Patient group	Baseline		Follow-up		t-test
		Total	Per month	Total	Per month	p-value
Decreased number of requests made to front of house staff*	Both treatment and comparison	14,500	14,500	24,304	4,051	n/a

*as a result of volunteers supporting front of house staff

Outcome	Patient group	Baseline			Follow-up			Diff-in-diff
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Improved nutrition (% of meal consumed)	Treatment	57.89%	0.30	98	76.17%	0.21	1412	< 0.001
	Comparison	52.70%	0.29	102	53.51%	0.24	4967	

Outcome	Patient group	Baseline			Follow-up			t-test
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Patient experience (finding their way around the hospital) – between 1 and 5 points	Treatment	3.52	1.01	27	4.04	0.86	338	0.003*

8. University Hospital Southampton NHS Foundation Trust

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	96.00%	48	92.25%	285	0.678
	Comparison	97.00%	34	96.13%	416	

Outcome	Patient group	Baseline			Follow-up			Diff-in-diff
		Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size	p-value
Improved nutrition (calories intake at mealtime)	Treatment	346.28	231.13	25	334.33	212.86	33	0.582
	Comparison	347.50	196.45	36	375.68	165.01	38	
Improved nutrition (protein intake at mealtime)	Treatment	13.13	8.22	25	10.95	6.87	33	0.445
	Comparison	14.93	9.23	36	14.95	8.06	38	
Improved mood (between 1 – 5 points)	Treatment	3.56	1.03	99	3.39	0.97	1187	0.348
	Comparison	3.42	2.21	118	3.22	1.06	1214	

9. Western Sussex Hospitals NHS Foundation Trust

Outcome	Patient group	Follow-up		t-test
		Mean	Sample size	p-value
Improved patient experience (FFT) - % of patients recommending this hospital's care	Treatment	89.42%	855	0.289
	Comparison	90.91%	929	
Improved patient nutrition (patient experience) - % of patients satisfied with the mealtime support received	Treatment	85.48%	471	0.421
	Comparison	87.34%	420	
Reduced number of falls (percentage of falls per number of beds on the ward)	Treatment	11.07%	524	0.236
	Comparison	13.57%	442	

Outcome	Patient group	Baseline		Follow-up		Diff-in-diff
		Mean	Sample size	Mean	Sample size	p-value
Reduced anxiety levels (% of patients feeling confident in the hospital's care)	Treatment	100.00%	12	98.70%	327	n/a[10]
	Comparison	100.00%	39	98.00%	519	

[10] Insufficient variability and sample size to conduct a valid difference-in-difference analysis

APPENDIX 4: MEASUREMENT TOOLS

Additional detail on measurement tools

Below is the full table with more detail on the measurement tools, including the full questions, answer options and their advantages and disadvantages. The full copies of these tools are available and are free to use.

Outcome	Tool
Improved patient experience	**The Friends & Family Test (FFT)** All ten hospitals used the FFT question "How likely are you to recommend our ward to friends and family if they needed similar care or treatment?" to measure patient experience. Answer options range from "Extremely Likely" to "Extremely unlikely". The advantage of this tool is that all hospitals already routinely collect this data and the data are therefore nationally comparable. However, the tool is not particularly sensitive to impact from volunteers. Some hospitals were able to add a question to the survey ("Have you been helped or supported by a volunteer during your hospital stay?"), which improves the tool's sensitivity somewhat by identifying exactly what patients have actually have had volunteer support.
Improved mood	Most of the hospitals used a simple smiley face pictorial scale (e.g. "Please circle the number you think best reflects your mood") with five to ten options. Because of its simplicity, it can easily be used to measure patient mood before and after a volunteer activity. In addition, it is a dementia-friendly tool.
Reduced readmissions	The evaluation used total readmissions, admissions and discharges data to create proxy readmission rates due to data limitations. However, we strongly recommend using the standard readmission rate approach used by your respective hospital business intelligence teams to ensure the data are nationally comparable.
Reduced length of stay	Length of Stay is another outcome for which data is already collected routinely. Such data are thus nationally comparable and require minimal effort if collected for your volunteering service evaluation.
Reduced anxiety levels	Anxiety levels were measured in a variety of ways by hospitals. Barts Health measured levels of distress in dementia patients before and after a volunteer activity. Kingston added the question "Do you feel you got enough emotional support from hospital staff during your stay?" to their FFT survey. Western Sussex asked patients "Do you feel confident and safe in our care?".
Improved nutrition levels	Nutrition was measured in two ways by hospitals. Some measured the actual nutritional intake (in weight or calories). This can be done either by measuring what proportion of a meal the patient has consumed or by weighing individual food leftovers. Some hospitals instead measured nutrition used a proxy by asking about the patient's *experience* of the mealtimes ("We would like you to think about your experience of food on the ward. Did you get enough help from staff to eat your meals?")
Improved hydration levels	Only Sheffield measured hydration separately from nutrition. They similarly used a proxy by asking "Do you always get the help you need to drink?".
Releasing time to care	To test whether the volunteers allowed nurses to focus their energies more on tasks that require medical training, Barts Health asked nurses "As an overall percentage (%) of your working time, over the last week how long did you spend carrying out the following groups of tasks?", distinguishing between skilled and unskilled tasks. They also asked "If a volunteer assisted you during the last week on the ward, did you find this helpful?"
Reduced delayed transfer of care	Delayed Transfer of Care is another outcome for which data is already collected routinely. Such data are thus nationally comparable and require minimal effort if collected for your volunteering service evaluation.
Decreased number of	Some hospitals already collect these data routinely. Western Sussex hospital records the time, date, ward location and harm caused for each fall.

falls	
More patient voices heard	This can be measured easily by counting the number of patient surveys that include patient feedback, or by counting the number of patient complaints.

Copies of measurement tools

List of tools:

1. Derbyshire Community Health Services's confidence & well-being survey
2. Derbyshire Community Health Services's FFT survey
3. Kingston Hospital's anxiety survey
4. Kingston Hospital's mood & well-being for dementia patients survey
5. Cambridge University Hospital's nutritional intake form
6. Barts Health's Dementia mood & distress survey
7. Barts Health's Releasing time to care survey & nurse FFT

Derbyshire Community Health Services's confidence & well-being survey

Derbyshire Community Health Services NHS
NHS Foundation Trust

Home from Hospital Questionnaire

Please can we take a few minutes of your time to ask how you are feeling about going home. Please tick the option that best fits how you are feeling:

Q1. How do you feel about going home?

Very confident	A bit confident	Don't know	Not confident	Not confident at all

Q2. How well do you think you'll cope at home?

Very well	Quite well	Don't know	Not well	Not well at all

Q3. How able do you think you are to do the tasks you did at home before you came into hospital?

Very able	Able	Don't know	Not able	Not able at all

Q4. How safe do you think you'll be at home after leaving hospital?

Very safe	A bit safe	Don't know	Not very safe	Not safe at all

Derbyshire Community Health Services's FFT survey

Derbyshire Community Health Services NHS
NHS Foundation Trust

We Welcome Your Feedback

Your comments will help us to better understand patient experiences of our services. Your participation is voluntary.

Service: Voluntary Sector - Home From Hospital Volunteer **Locality:**

We would like you to think about your recent experiences of our service.

How likely are you to recommend our service to friends and family if they needed similar care or treatment?

1 Extremely Likely	2 Likely	3 Neither likely nor unlikely	4 Unlikely	5 Extremely Unlikely	6 Don't Know

Please tell us why

What could we do better?

Tick here if you **DO NOT** wish your comments to be made public ☐

Please turn over

About you:

What is your sex?	Male ☐	Female ☐

What age are you?					
0-15	☐	35-44	☐	65-74	☐
16-24	☐	45-54	☐	75-84	☐
25-34	☐	55-64	☐	85+	☐

What is your ethnic group? *(Please only tick one box)*	
Asian or Asian British	☐
Black or Black British	☐
Mixed	☐
Other Ethnic Group	☐
White	☐

Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months (including any issues /problems related to old age)?	
Yes, limited a lot	☐
Yes, limited a little	☐
No	☐
Prefer not to say	☐

Freepost Plus
Patient Experience Team
Babington Hospital
Derby Road
Belper

Kingston Hospital's anxiety survey

Volunteering
Kingston Hospital
NHS Foundation Trust

Kingston Hospital NHS
NHS Foundation Trust

Discharge Questionnaire

Name_____ H2H initial visit date_____

1. How anxious do you feel now about your return home from hospital?


10 9 8 7 6 5 4 3 2 1
Very content Very Anxious

2. Please give the main reason for your answer

3. Have you been given any information about local services and support in the community that could help you settle back home?

   Yes /No/Don't know

4. If you answered yes to the above, will you be accessing support from any of these agencies(s)?

   Yes/No/Don't know

PTO

5. How would you describe your ethnic background?

a. WHITE
- ☐ White British
- ☐ White Irish
- ☐ Other White

b. MIXED
- ☐ White and Asian
- ☐ White and Black
- ☐ Other Mixed

c. BLACK/BLACK BRITISH
- ☐ Caribbean
- ☐ African
- ☐ Other Black

d. ASIAN/ASIAN BRITISH
- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Other Asian

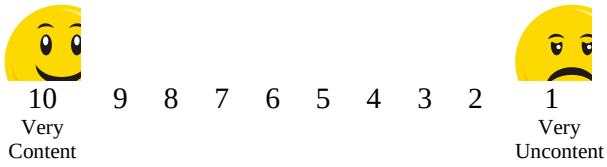
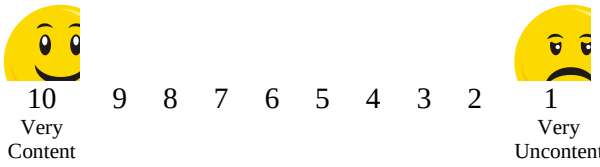
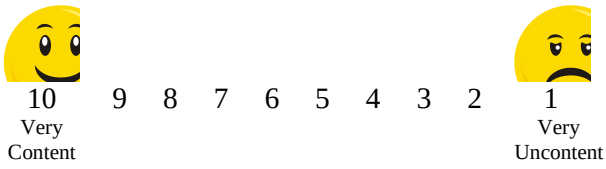
e. OTHER ETHNIC GROUP
- ☐ Chinese or other - Chinese
- ☐ Other (please specify)

Kingston Hospital's mood & well-being for dementia patients survey

Therapeutic Activity Record – Bedside Activities

Date:	Role (please circle): Nurse/HCA/Volunteer/Student	Patient Name:	Activity Completed:
Your Name:		Ward Name:	
Additional Comments About Activity:		Does the patient have suspected or confirmed dementia? Yes/No	Time Doing Activity (min):

Mood and Wellbeing

Please circle the number you think best reflects the **PATIENT'**s mood **BEFORE** the activity:  10 Very Content 9 8 7 6 5 4 3 2 1 Very Uncontent	Please circle the number you think best reflects **YOUR** mood **BEFORE** the activity:  10 Very Content 9 8 7 6 5 4 3 2 1 Very Uncontent
Please circle the number you think best reflects the **PATIENT**'s mood **AFTER** the activity:  10 Very Content 9 8 7 6 5 4 3 2 1 Very Uncontent	Please circle the number you think best reflects **YOUR** mood **AFTER** the activity:  10 Very Content 9 8 7 6 5 4 3 2 1 Very Uncontent

Thanks for completing the Therapeutic Activity Record Form! **Please Return to [specify]**.

Questions or Help Required? Please contact Therapeutic Activities Program Lead (email address)

Cambridge University Hospital's nutritional intake form

MEALTIME VOLUNTEERING IMPACT MEASUREMENT (PILOT).
DATE: OBSERVER:

Bed Number:	**Amount eaten:**	**Volunteer input:**	**Comments:**
Male/female: Bed/chair: Position:	None A few mouthfuls About a quarter About half About three quarters All	YES/NO	Encouragement: Practical: Observations:

Bed Number:	**Amount eaten:**	**Volunteer input:**	**Comments:**
Male/female: Bed/chair: Position:	None A few mouthfuls About a quarter About half About three quarters All	YES/NO	Encouragement: Practical: Observations:

Barts Health NHS
NHS Trust

Dementia Buddy Contact Sheet

Ward:		**Date:**	
Patient Name:		**Dementia Buddy name:**	
Activity start time:		**Activity finish time:**	

Please use this sheet to record what activities you do with the patient and how they respond. Please also ensure you complete the evaluation overleaf and follow instructions for passing this information on. If you have any questions, please contact the Dementia and Delirium Team.

Record of Activities

Detail of activities	Comments on patient engagement, tips for carrying out activity again

ACTIVITY IDEAS

- Complete Forget me Not document with important info, likes and dislikes
- Look at newspapers/ magazines and talk about articles
- Picture books/ flash cards
- Playing cards/ dominoes
- Talk about their life history – employment, where they grew up, hobbies, family
- Listen to music

Nesta

Barts Health NHS Trust: The London Chest Hospital, Mile End Hospital, Newham University Hospital, The Royal London Hospital, St Bartholomew's Hospital and Whipps Cross University Hospital

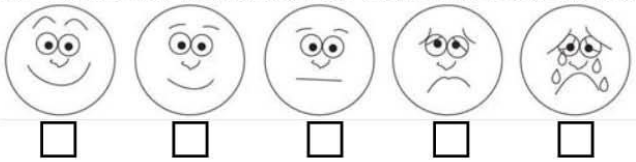
Barts Health NHS
NHS Trust

Dementia Buddy Contact Sheet

Ward:		**Date:**	
Patient Name:		**Dementia Buddy name:**	
Activity start time:		**Activity finish time:**	

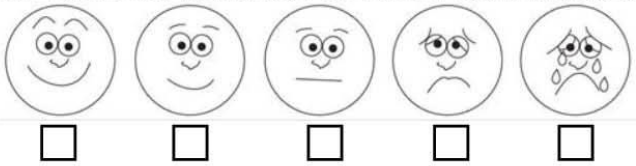
Before activity - **"How are you feeling?"**

To be completed by the patient (or the volunteer on behalf of patient)



After activity - **"How are you feeling?"**

To be completed by the patient (or the volunteer on behalf of patient)



Observable behaviours of anxiety, pain and/or distress - Please rate as appropriate:
1 = not at all / **2** = not much / **3** = to some extent / **4** = very much

	BEFORE	AFTER		BEFORE	AFTER
Withdrawn/ apathy			Frowning/ grimacing		
Angry/ aggressive			Tense posture		
Crying			Frightened expression		
Calling out repetitively			Other (please specify)		

Once complete, please photocopy this side using the photocopier on the ward. Please send the photocopy to the Dementia & Delirium Team and leave the original sheet in the Patient Folder.

Nesta

Barts Health NHS Trust: The London Chest Hospital, Mile End Hospital, Newham University Hospital, The Royal London Hospital, St Bartholomew's Hospital and Whipps Cross University Hospital

Barts Health's Releasing time to care survey & nurse FFT

Barts Health NHS
NHS Trust

Volunteer Impact questionnaire for Nursing staff

Name: **Job Title:**

Date: **Location:** **Ward:**

Question 1

As an overall percentage (%) of your working time, over the last week how long did you spend carrying out the following groups of tasks?	
Group 1 • Talking to/Reassuring patient • Keeping patient company • Providing patient with refreshments	
Group 2 • Completing medicine rounds • Providing direct, hands-on care • Taking patients to the toilet • Sharing patient information with AHPs and doctors • Any other role only trained nurses can complete	
Please note: These two scores do not need to add up to 100%	

Question 2

How likely are you to recommend your ward to friends and family if they needed similar care or treatment?

- ☐ Extremely likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely
- ☐ Extremely unlikely
- ☐ Don't know

Continued overleaf

Nesta

Barts Health NHS Trust: The London Chest Hospital, Mile End Hospital, Newham University Hospital, The Royal London Hospital, St Bartholomew's Hospital and Whipps Cross University Hospital

Barts Health NHS
NHS Trust

Volunteer Impact questionnaire for Nursing staff

Question 3

If a volunteer assisted you during the last week on the ward, did you find this helpful?

- ☐ Yes
- ☐ No
- ☐ I did not need any assistance
- ☐ I did not see any volunteers

Thank you for your time and for completing this questionnaire.

Nesta...

Barts Health NHS Trust: The London Chest Hospital, Mile End Hospital, Newham University Hospital, The Royal London Hospital, St Bartholomew's Hospital and Whipps Cross University Hospital

GET IN TOUCH

www.tsip.co.uk
contact@tsip.co.uk
+44 (0)20 7148 4610
@TSIPtweets