SAFER-MH: FEASIBILITY STUDY OF A DISCHARGE PLANNING CARE BUNDLE

Natasha Tyler¹²³, Sarah Croke³, Richard Keers²⁴⁵, Andrew Grundy⁶, Catherine Robinson⁷, & Maria Panagioti¹²³

¹NIHR School for Primary Care Research, University of Manchester (UK)
²NIHR Greater Manchester Patient Safety Research Collaboration, University of Manchester (UK)
³Division of Population Health, Health Services Research and Primary Care, University of Manchester (UK)

⁴Division of Pharmacy and Optometry, University of Manchester (UK)
⁵Optimsing Outcomes with Medicines (OptiMed) Research Unit, Pennine Care NHS Foundation Trust
(UK)

⁶Mental Health Theme: NIHR Applied Research Collaboration - Greater Manchester (ARC-GM), (UK)

⁷Social Care and Society, School of Health Sciences, University of Manchester (UK)

Abstract

Care transitions are widely recognised as a vulnerable, high-risk stage in the care pathway with multiple professionals involved across sectors. In the UK, a large proportion of people who died by suicide have recently been discharged from secondary mental health services. Improving systems, processes and support during this critical period has the potential to be life-saving. Patients being discharged from inpatient mental wards often describe safety risks in terms of inadequate information sharing and involvement in discharge decisions. Through stakeholder engagement, we co-designed a care bundle intervention, SAFER Mental Health (SAFER-MH), to address these concerns through the introduction of new or improved processes of care. We conducted a feasibility study to understand whether a definitive trial for SAFER-MH is feasible and, if so, how it should be designed, and how many patients/wards should be included. A before-and-after feasibility study design with a 6-week usual care phase followed by 6-week intervention phase was conducted on three wards in the North of England. During the intervention phase, all participants received the intervention. We used quantitative (validated questionnaires, e.g. EQUIP, CTM) and qualitative (interviews) methods to assess the acceptability and feasibility of SAFER-MH. This study report presents the qualitative findings of using the Theoretical Domains Framework to assess and understand implementation with 16 clinician interviews conducted during the post intervention phase. The Framework analysis highlighted issues that can be used to guide future implementation of the SAFER-MH intervention, indicating that most clinicians felt they had the knowledge and skills to implement SAFER-MH. However, focus should be on integrating the intervention into standard practice to mitigate the effects of external factors such as ward acuity, which was identified as key driver for nonadherence. The findings highlight the importance of the development and embedding of targeted Behaviour Change implementation strategies in future studies.

Keywords: Mental health services research, care transitions, inpatient mental health services, communication, shared decision making.

1. Background

Individuals admitted to inpatient mental health services are at higher risk of adverse outcomes such as shorter life expectancy; increased risk of homelessness and many other adverse psychosocial outcomes, including loneliness and isolation (Walter et al., 2019). Transitions into and out of acute psychiatric hospitals are associated with risk factors for patient safety incidents. For example, the absence of continuity of care, difficulties with medication management across the care system, insufficient housing, social or community care provision resulting in delayed discharge and insufficient information sharing between services (Tyler et al., 2021; Walter et al., 2019).

Multifaceted interventions have been increasingly used to improve patient safety and reduce readmissions in complex care transitions (Tyler, Hodkinson, et al., 2023). The SAFER patient flow bundle is an exemplar multifaceted intervention, developed by NHS England/Improvement to improve discharge from acute hospitals to the community (Improvement, 2016). The SAFER patient flow bundle

consists of five components: (1) senior review (before midday); (2) expected discharge date and clinical criteria for discharge; (3) early assessments to improve patient flow; (4) early discharge (aiming to discharge patients before midday) and (5) a multidisciplinary review for patients with increased length of stay. Many of the individual components of the SAFER bundle are used as standard practice or best practice guidelines in policy (NICE, 2016). Preliminary evidence from case studies across the country is promising, demonstrating that SAFER has resulted in reduced length of patient stay in different hospitals, fewer discharge delays with minimal complications and decreased readmissions or contact with primary care. Furthermore, patient and clincian satisfaction have increased.

Although protocols, webinars, and/or other tools have been developed to facilitate the implementation of SAFER, there is currently a lack of evidence examining its appropriateness within a mental health setting. To address this gap, we conducted expert consensus exercises using the RAND/UCLA methodology (Tyler, Planner et al., 2022) and a series of co-design empirical studies with multiple stakeholders including patients, carers, clinicians and academics (Tyler, Angelakis, et al., 2023). Through stakeholder engagement, we co-designed the SAFER care bundle for inpatient mental health settings (SAFER-MH, hereafter) which aims to address these concerns through the introduction of new or improved processes of care. Since the co-production of SAFER-MH, we have aimed to generate data on its feasibility and acceptability, which will contribute to the evidence base for its potential wider adoption within the NHS (Tyler, Angelakis, et al., 2023). Implementing new practices and/or changing existing practices in healthcare services require changes in individual and collective behaviour (Atkins, Francis, Islam, O'Connor, et al., 2017). Changing clinician behaviour requires an understanding of the influences on behaviour in the context in which they occur. This paper outlines how we used the Theoretical Domains Framework of behaviour change (Atkins, Francis, Islam, O'Connor, et al., 2017) to investigate clinician behaviour change during implementation in the SAFER-MH Feasibility study.

2. Objectives

The primary objectives were as follows:

- To identify specific principles of SAFER-MH that need adaptation to enhance feasibility, acceptability and increase the likelihood of long-term implementation.
- To explore healthcare professional behaviours associated with implementation and investigate whether engagement with the SAFER-MH intervention can be improved using evidence-based behavioural science techniques.

3. Methods

3.1. Intervention

SAFER-MH is a co-designed adapted version of the SAFER patient flow bundle (NHS Improvement) intervention and was delivered to patients as part of their normal care pathway. The intervention was adapted based on 35 stakeholder interviews and RAND consensus methods with multidisciplinary experts and clinicians (Tyler, Planner et al., 2022). First, we aimed to identify the elements of existing practice in the pilot sites before implementing the SAFER-MH intervention. The intervention focused on promoting best practice guidance and has three key stages: admission, discharge and weekly tasks, and are discussed below:

- Admission: at admission, the intervention group will complete three key tasks: (1) setting criteria for discharge and an estimated discharge day, (2) identifying early social information that will help plan for discharge and (3) introducing the patient written discharge plan. This will be structured within two documents including the admission's social information capture document and the transition's checklist, which will be completed at multiple times in the patient journey.
- Weekly tasks: there are three weekly tasks that will form part of this assessment: (1) senior review of discharge readiness, (2) multidisciplinary discharge team meeting and (3) multiagency discharge team meeting.
- **Discharge:** at discharge, there will be two key tasks: (1) co-producing a high-quality patient written discharge plan and (2) ensuring the patient has their copy of the patient written discharge plan.

3.2. Design

A before-and-after feasibility study with a 6-week usual care phase followed by 6-week intervention phase in each participating ward. We examined the feasibility and acceptability of the SAFER-MH intervention in inpatient mental health settings for patients aged 18 years or older, from admission through to discharge. SAFER-MH was implemented in three wards, across different trusts within the North England. During the intervention phase, all patients received the intervention.

3.3. Analysis

The feasibility study used quantitative (validated questionnaires, e.g., EQUIP, CTM) and qualitative (interviews) methods to assess the acceptability and feasibility of SAFER-MH. Qualitative data were analysed in three ways: (1) Thematic analysis to assess key themes across the study participants and periods relating to discharge quality and safety pre and post intervention (2) Framework analysis of interviews with clinicians using the Theoretical Domains Framework and Theoretical Framework of Acceptability to assess professional perceptions of implementation and associated behaviour change, and (3) Collaborative coding with members of the patient and public involvement and engagement group to assess perceptions of the data from a lived experience perspective. This paper reports on the learning from the framework analysis using the Theoretical Domains Framework.

3.4. Ethics

Ethical approval was obtained from the National Health Service Cornwall and Plymouth Research Ethics Committee and Surrey Research Ethics Committee (reference: 22/SW/0096 and 22/LO/0404).

4. Results

Interviews were conducted with 55 participants across the pre and post intervention phases. Questionnaires were completed by 80 participants. This analysis focuses on interviews with 16 clinicians in the post-intervention phase. The Theoretical Domains Model Framework analysis, highlighted barriers and facilitators to clinician behaviour change during SAFER-MH implementation. The Theoretical Domains Framework consists of 14 domains based around the capability, opportunity and motivation of clinicians. Findings suggested that while most staff felt confident in their knowledge, skills, and capacity to deliver the intervention, environmental factors (e.g., time, resources, and workload), decision-making processes (e.g., prioritisation), and intentions/consequences needed to be addressed. These elements must be optimised to seamlessly integrate SAFER-MH into existing practice by streamlining the process. Table 1 summarises the Framework analysis of the professional interviews in relation to each domain of the theoretical domains model.

5. Discussion

This research found that the biggest barriers to effective implementation of SAFER-MH were clinicians perceived lack of time, resources and workload challenges. Other key challenges included prioritisation of SAFER-MH alongside other procedures and cognitive processes (forgetting, not meeting deadlines). These findings mirror similar research studies that address clinical behaviour change (Barley et al., 2011; Mather et al., 2022; O'Brien et al., 2016), with a recent systematic review finding that time, workload and general resources (in addition to knowledge) were the most important themes when assessing barriers to implementation of clinician behaviour change (Mather et al., 2022). This framework analysis provides an evidenced-based resource to develop and embed targeted behaviour change techniques into future iterations of testing SAFER-MH. Addressing these common barriers through associated behavioural change intervention functions such as education, training, restriction, environmental restructuring and enablement, and policy changes, should be prioritised. These efforts could encourage clinicians to modify clinical practice and adhere to the principles of SAFER-MH.

Table 1. Framework analysis of the professional responses in line with the theoretical domains framework.

TDF domain	Summary of theme
Knowledge	Every professional that was interviewed felt that had the knowledge to adequately engage with
	the intervention. Many clinicians described it as 'self-explanatory'. S4 'I think a lot of it very
	straightforward, it was easy to use, self-explanatory on there yeah, there was nothing really I
	felt was yeah, that I would struggle with.'
Skills	Every professional that was interviewed felt they could draw upon pre-existing skills to engage
	with the intervention and felt it was simple and self-explanatory. S5 'Yeah, yeah, pre-existing
	skills, yeah, I thought it was straightforward.'
Social/professional role and identity	The intervention was primarily used by nursing staff, most of the clinicians interviewed felt that
	engaging with SAFER-MH was a key part of the professional role and saw the benefits that it
	offered. S8b 'Yeah, I suppose, yeah, 'cause it's something that's necessary, isn't it, and
	beneficial.'
	However, whilst many nurses engaged with the premise of the intervention aligning with their
	professional role, some expressed how factors like ward acuity and workload pressures make it
	difficult to engage with it and suggested that many components of the intervention
	implementation might be better suited to nursing assistant role. S7b 'Yeah, it felt like the
	nursing assistants could also support with some of the information'

Beliefs about	All of the nurses interviewed believed they had the capability to deliver SAFER-MH, but
capabilities	concerns were raised around the capability to effectively deliver SAFER-MH during times of high acuity and staff shortages. Ensuring SAFER-MH is integrated into existing admission and discharge processes was often discussed as a way to improve beliefs in individual practical ability to realistic incorporate the intervention. Some felt that extra training for nursing assistants would be beneficial in ensuring they felt capable to deliver SAFER-MH. S7b 'But if we had it in, like, just to be done on the full admission I think it'd be done more, completed well.'
Optimism	The majority of clinicians interviewed had initial optimism about SAFER-MH and could see the value it had in terms of improving quality and safety of care transitions, whilst many remained optimistic, some felt that optimism reduced as ward pressures increased. Many felt that when SAFER-MH was integrated into standard practice and duplication was avoided, optimism would be less likely to reduce at times of high acuity. S4 'Yes, I would say more initially, but I think again that's only because of that really busy patch we had in the middle.'
Beliefs about	As the intervention was introduced as part of a research study, the majority of clinicians agreed
consequences	there weren't any significant consequences if the intervention wasn't delivered (or wasn't delivered as intended) and research was generally not prioritised over existing clinical duties. Many identified the critical patient safety consequences of an unsafe discharge and understood the importance of the intervention from this perspective. S8b ' it would be a disadvantage when they are discharged and they do need support and they don't know where to find it.'
Reinforcement	As this was a research study, many staff felt that there was little reinforcement for delivering the intervention, but that there was reinforcement for not delivering existing transitions standard practices. Many felt that when the intervention integrated with standard practice, there would be significant reinforcement around disengagement. S6 'you can't forget. Because youlike I said, the care plan, the discharge plan is there. So towards the end of discharge, like I said, the discharge plan/care plan has to be involved.'
Intentions	At the beginning of the study most clinicians agreed they had strong intentions to use the intervention. As the study progressed many clinicians felt less able to commit to their intentions and didn't always deliver the intervention as intended, largely due to ward pressures. Also the timelines that the intervention specified sometimes caused issues for implementation. S4 'we did struggle a little bit with that So, the 24 hours and the 48 hours. We did have a period in the middle of the studywhere we were rally acuteunfortunately, that little part of the study in the middle it did drift off.'
Goals	The majority of the ward managers had intended to deliver the intervention as expected, but sometimes felt ward pressures made it hard to achieve the goals, despite putting procedures in place with staff to try to achieve implementation. S4 ' you know. 'Cause [name] kept a track of it for me and she'd feedback, you know, somebody's gone and they've not done this'
Memory, attention and decision processes	There was a lot of the discussion around clinicians mental capacity to remember, give attention and make decisions around implementing the intervention. Firstly, as this was not standard practice forgetting to deliver the intervention often happened, many described how the time specifications affected this, when the deadline passed people didn't adhere to it. S7b 'I feel like it got missed because people are seeing them as deadline dates and it's like, oh it's passed it now so there's no point in doing it kind of thing, In terms of the effort and decision processes around prioritisation, certain elements of the intervention were not prioritised and staff made a decision not to engage with some components during busy periods. S5 'I think the medication was quite lengthy having to fill that bit in' Decisions around whether to deliver the intervention were often made based on ward acuity, and some described it as an unconscious decision. S4 'To be honest it wasn't more of a conscious decision, it was more of awhat was going on at the time in the ward yeah, yeah, I would say.'
Environmental context and resources	Environment of a busy acute inpatient ward was a key influence throughout all of the interviews in relation to adherence of the intervention, almost all instances of nonadherence were related to environmental pressures such as time, document storage and duplication and staffing. S8b 'We're very time-limited on the ward sometimes with the demands, especially on an acute mental health ward…on top of all the other documents…along with everything else that's happening on the ward…it does get missed.'
Social influences	From a patient perspective, staff identified some particular social groups that were less likely to engage with the intervention, such as patients with a strong desire to leave or stay on the ward, those who don't speak English and illicit drug users or people with social elements of their life that they might not want to disclose. S6' Soand they might need, kind of, convincing, you want to give thembecause they just want to leave the ward'

Emotion	From an emotional perspective, many staff agreed that discharges need to be safer and engaging with the intervention can improve this by delivering person centred care. Many felt like SAFER-MH aligned with their core personal and professional values. S7b 'It's moreit makes the care more centred, like, patient centred when you're looking into it'
Behavioral regulation	Some clinicians that were interviewed took action to try to encourage other staff to engage with the intervention and some felt they were able to change behaviours of other staff as they advocated for the value of SAFER-MH, however this was more positive with less experienced staff. S9 'The preceptees, yes, the ones that have been there a while, no'

Acknowledgments

This study is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (NIHR SPCR Postdoctoral Fellowship C015).

The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

References

- Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., & Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*, 12(1). https://doi.org/10.1186/s13012-017-0605-9
- Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., Michie, S., Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., . . . Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*, 12, 77. https://doi.org/10.1186/s13012-017-0605-9
- Barley, E. A., Murray, J., Walters, P., Tylee, A., Barley, E. A., Murray, J., Walters, P., & Tylee, A. (2011). Managing depression in primary care: A meta-synthesis of qualitative and quantitative research from the UK to identify barriers and facilitators. *BMC Family Practice*, *9*(12), 47. https://doi.org/10.1186/1471-2296-12-47
- Improvement, N. (2016). Rapid improvement guide: the SAFER patient flow bundle. https://improvement.nhs.uk/resources/rapid-improvement-guide-safer-patient-flow-bundle/
- Mather, M., Pettigrew, L. M., & Navaratnam, S. (2022). Barriers and facilitators to clinical behaviour change by primary care practitioners: a theory-informed systematic review of reviews using the Theoretical Domains Framework and Behaviour Change Wheel. *Systematic Reviews*, 11, 180. https://doi.org/10.1186/s13643-022-02030-2
- NICE. (2016). National Institute for Health and Care Excellence. Transition between inpatient mental health settings and community or care home settings | Guidance and guidelines https://www.nice.org.uk/guidance/ng5
- O'Brien, D., Harvey, K., Howse, J., Reardon, T., & Creswell, C. (2016). Barriers to managing child and adolescent mental health problems: a systematic review of primary care practitioners' perceptions. *British Journal of General Practice*, 66(651). https://doi.org/10.3399/bjgp16X687061
- Tyler, N., Angelakis, I., Keers, R. N., Planner, C., Hodkinson, A., Giles, S. J., Grundy, A., Kapur, N., Armitage, C., Blakeman, T., Campbell, S. M., Robinson, C., Leather, J., & Panagioti, M. (2023). Evaluating a co-designed care bundle to improve patient safety at discharge from adult and adolescent mental health services (SAFER-MH and SAFER-YMH): protocol for a non-randomised feasibility study. *BMJ Open*, *13*(4). https://doi.org/10.1136/bmjopen-2022-069216
- Tyler, N., Hodkinson, A., Planner, C., Angelakis, I., Keyworth, C., Hall, A., Jones, P. P., Wright, O. G., Keers, R., Blakeman, T., & Panagioti, M. (2023). Transitional Care Interventions to Improve Outcomes After Hospital Discharge. *JAMA Network Open*, 6(11). https://doi.org/10.1001/jamanetworkopen.2023.44825
- Tyler, N., Wright, N., Panagioti, M., Grundy, A., & Waring, J. (2021). What does safety in mental healthcare transitions mean for service users and other stakeholder groups: An open-ended questionnaire study. *Health Expectations*, 24(S1), 185-194. https://doi.org/10.1111/hex.13190
- Walter, F., Carr, M. J., Mok, P. L. H., Antonsen, S., Pedersen, C. B., Appleby, L., Fazel, S., Shaw, J., & Webb, R. T. (2019). Multiple adverse outcomes following first discharge from inpatient psychiatric care: a national cohort study. *The Lancet Psychiatry*, 6(7), 582-589. https://doi.org/10.1016/S2215-0366(19)30180-4