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2 **Residents transitioning between hospital and care homes: Protocol**
3 **for co-designing a systems-level response to safety issues (SafeST**
4 **study)**
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27 Word count: 4,157

28 **Abstract**

29 **Introduction**

30 The aim of this study is to develop a better understanding of incident reporting in relation to
31 transitions in care between hospital and care home, and to co-design a systems-level
32 response to safety issues for patients transitioning between hospital and care home.
33

34 **Methods and analysis**

35 Two Workstreams (W) will run in parallel. W1 will aim to develop a taxonomy of incident
36 reporting in care homes, underpinned by structured interviews (N=150) with care home
37 representatives, scoping review of care home incident reporting systems, and a review of
38 incident reporting policy related to care homes. The taxonomy will be developed using a
39 standardised approach to taxonomy development. W2 will be structured in three Phases (P).
40 P1a will consist of ≤40 interviews with care home staff to develop a better understanding of
41 their specific internal systems for reporting incidents, and P1b will include ≤30 interviews with
42 others involved in transitions between hospital and care home. P1a and P1b will also examine
43 the impact of the SARS-CoV-2 pandemic on safe transitions. P2 will consist of a retrospective
44 documentary analysis of care home data relating to resident transitions, with data size and
45 sampling determined based on data sources identified in P1a. A validated data extraction form
46 will be adapted before use. P3 will consist of four validation and co-design workshops to
47 develop a service specification using NHS Improvement's service specification framework,
48 which will then be mapped against existing systems and recommendations produced.
49 Framework analysis informed by the heuristic of systemic risk factors will be the primary mode
50 of analysis, with content analysis used for analysing incident reports.
51

52 **Ethics and dissemination**

53 The study has received university ethical approval and HRA approval. Findings will be
54 disseminated to commissioners, providers and regulators who will be able to use the co-
55 designed service specification to improve integrated care.
56

57 **Keywords:** Transitions, patient safety, safeguarding, integrated care, incident reporting

58 **Strengths and limitations of this study**

- 59 • A key strength of the Safe System Transitions (SafeST) study is it will be the first
60 research examining how safety incidents are reported across the care home sector in
61 relation to transitions in care using data generated within the care home sector.
- 62 • The study will capture qualitative insight and reflection on patient safety from those
63 involved with and responsible for patient transitions across healthcare and care home
64 settings during the COVID-19 pandemic.
- 65 • The development of a taxonomy of incident reporting systems within the care home
66 sector will provide the foundations required for implementing changes that are required
67 for making improvements to patient safety.
- 68 • Co-designing a service specification will define the service standards expected from
69 organisations involved in patient transitions, and help to begin addressing the under-
70 reporting of incidents.
- 71 • A limitation is that Workstream 2 is focused on only two regions of England, though
72 application of the developed taxonomy will inform whether the findings will be
73 applicable across the wider health and social care sector.

74 **Introduction**

75 With the release of An Organisation with a Memory[1] and theoretical work on patient safety[2],
76 a movement for patient safety began which emphasised a systems approach to safety. As a
77 result, in the United Kingdom the National Patient Safety Agency (NPSA) was launched in
78 2001, which in 2003 established the National Reporting and Learning System (NRLS). The
79 NRLS is a central safety management system containing all patient safety incident reports
80 from National Health Service (NHS) organisations, though it is now situated within NHS
81 England and Improvement[3] and is currently being replaced with the Learn from patient safety
82 events (LFPSE) service. Reporting systems such as the NRLS have been important for
83 improving patient safety internationally, particularly for incident types that require larger (eg
84 national) solutions, such as medication errors.[4] However, in England, there is no such
85 system that is able to consistently capture safety incident reports for all levels of harm or for
86 near misses that occur when a patient transitions out of hospital and into a care home setting.
87
88

89 The safety of a transition between hospital and care home is less well understood than other
90 settings such as emergency admission[5 6] or during the hospital stay.[7 8] Transitions
91 between hospital and care home are also particularly high in risk, with a third of transitions
92 resulting in adverse events.[9] Common challenges include communication failures,[10]
93 medication errors,[11] and incorrect documentation.[12] From an organisational governance
94 perspective, identifying safety incidents that relate to transitions in care is especially difficult;
95 care home and hospital organisations have different priorities,[13] health and social care
96 sectors use different definitions of safety,[14] and efforts to involve patients directly have had
97 mixed results.[15 16] Furthermore, the patient would be outside of the hospital's responsibility
98 when the incident would be identified, and therefore it would be unlikely that a hospital staff
99 member contacted by a care home would proceed to report a safety incident. Consequently,
100 integrated care between the health and social care sectors is lacking in relation to patient
101 safety, and opportunities for organisational, cross-sector learning are likely being missed.[14]
102 The COVID-19 pandemic, caused by the Severe Acute Respiratory Syndrome Coronavirus 2
103 (SARS-CoV-2), has had a significant impact on care homes within England due in part to a
104 poor policy response.[17] The pandemic has also placed a specific focus on the safety and
105 appropriateness of transitions between hospital and care home, with unsafe hospital
106 discharge into care homes being identified as a cause of anxiety amongst care home staff.[18]
107

108 **Aims & Objectives**

109 This study aims to develop a better understanding of incident reporting in relation to transitions
110 in care between hospital and care home, and to co-design a systems-level response to safety

111 issues for patients transitioning between hospital and care home. To meet these aims, the
112 study has the following seven objectives:

- 113 1. Investigate, using desk-based approaches, what policies exist for incident reporting,
114 the technology used to incident report, and the types of data captured within incident
115 reports.
- 116 2. Develop a taxonomy of approaches to incident reporting within care homes.
- 117 3. Identify, using qualitative methods, the socio-technical and cultural determinants of
118 incident reporting in care homes in relation to patient transitions, including how care
119 homes report safety incidents and how decisions are made to report or not.
- 120 4. Conduct a retrospective documentary content analysis of incident reports (and similar
121 systems) relating to patient transitions into the care home.
- 122 5. Co-design with relevant stakeholders a service specification for an integrated system-
123 response to safety incident reporting.
- 124 6. Map the co-designed service specification against existing systems to produce
125 recommendations for implementation.
- 126 7. Investigate how the COVID-19 pandemic has influenced the management of safe
127 transitions in care.

128 **Research questions**

129 We will answer the following research questions during the study:

- 130 1. How do care homes currently respond to and report safety incidents for patients
131 transitioning between hospital and care home?
- 132 2. What data do care homes currently collect on safety incidents relating to patients
133 transitioning between hospital and care home, and what do the data tell us about the
134 incidents that are reported?
- 135 3. What should an integrated system for learning from safety incidents that span health
136 and social care organisations look like, and what would be required to implement this
137 system?
- 138 4. To what extent has the COVID-19 pandemic influenced how transitions in care are
139 managed safely?

140 **Methods**

141 This is a multi-method qualitative study, running from 4th January 2021 to 31st December 2022,
142 consisting of two workstreams (see figure 1) that will run in parallel:

- 143 • Workstream 1: Scoping of existing systems for safety incident reporting.
- 144 • Workstream 2: Review of safety incident reporting and co-design of a service
145 specification.

146 **Setting**

147 For the purpose of this study a care home is defined as a residential care facility that provides
148 temporary or permanent accommodation with nursing and/or personal care. Assisted living
149 settings are excluded from the study. Workstream 1 will include data of relevance to all care
150 homes across England. Workstream 2 will be situated within care home providers
151 geographically separated (North East and South West England) representing approximately
152 30-50 care homes in each region, including nursing, residential and combined
153 nursing/residential care. This will also include specialist care homes, for instance dementia
154 care. Care home organisations will primarily be identified through existing networks and with
155 the support of the National Institute for Health Research (NIHR) Clinical Research Network
156 (CRN).

157 **Workstream 1**

158 Workstream 1 will utilise desk-based approaches, defined as the collation of secondary data
159 or data that can be collected without needing fieldwork, including searching online databases,
160 the internet and organisation websites,[19] to investigate policies for incident reporting,
161 technology used to incident report, and the types of data captured within incident reports. This

166 will consist of three components: (1) structured telephone interviews with care home
 167 managers, (2) a narrative scoping review of academic literature on existing incident reporting
 168 systems, and (3) a qualitative policy analysis of incident reporting policies related to care
 169 homes. This workstream will address study objectives 1 and 2. All three components will be
 170 used within the taxonomy development, but individually provide a full picture of incident
 171 reporting within care homes from research, practice and policy perspectives.

172

173 **Structured telephone interviews**

174 *Participants and sampling*

175 Telephone interviews will be conducted with stakeholders who will be purposively sampled
 176 from 15 geographical regions in England based upon the NIHR CRN footprint. This will provide
 177 a representation of different sized care home organisations (categorised relatively as small,
 178 medium and large), type of care provided (residential, nursing home or dual registration) and
 179 type of resident (general, dementia, learning disability, mixed). By sampling ten care home
 180 organisations within each region, we anticipate a total sample of approximately 150 care home
 181 organisations, though some double counting may exist where large organisations span
 182 multiple regions.

183

184 *Data collection*

185 An interview guide has been developed and will be pilot tested prior to the start of data
 186 collection. Questions will cover topics related to incident reporting policy, approaches to
 187 incident reporting and management of incident reports. In addition to the structured interview
 188 data, data will also be collected on Care Quality Commission (CQC) ratings of care homes
 189 within the sampled organisations. The CQC ratings will be used retrospectively, in addition to
 190 the sampling criteria, to further determine representativeness of the sample. The ratings will
 191 be obtained from the CQC website (<https://www.cqc.org.uk/>) at the time of the telephone
 192 interview. Interviews will be voice recorded to allow the researcher to listen back, but will not
 193 be transcribed. Instead, data will be recorded in a spreadsheet based on the structured
 194 questions asked. The audio recording will be used to ensure an accurate interpretation is
 195 made of participants' responses, reducing the chance of researcher bias. Concurrent
 196 notetaking will also be conducted by the researcher, which together with the audio recordings
 197 has been recognised as a suitable process for standardised open-ended interviews.[20]

198

199 **Review of literature**

200 This review will follow the Preferred Reporting Items for Systematic Reviews and Meta-
 201 Analyses Protocols (PRISMA-P) statement.[21] The primary aim of the literature review will
 202 be to develop an understanding of incident reporting in care homes, with objectives focused
 203 on understanding policy, technology and types of data collected within incident reports.

204

205 *Eligibility criteria*

206 To determine eligibility, inclusion criteria will be applied, and a hierarchy of inclusion and
 207 exclusion has been developed to aid the sifting process (table 1). The hierarchy will be used
 208 to support the review team in highlighting at which point the paper was deemed to be
 209 ineligible for inclusion. At any point if the reviewer answers no, the paper will be deemed to
 210 be unsuitable for inclusion in the review with the reason recorded.

211

Eligibility criteria and hierarchy of inclusion	<ul style="list-style-type: none"> • Published from 2000 onwards • English language • Empirical, peer-reviewed studies • Populations must be in care homes (including residential and nursing homes) • Issue or intervention must include incident reporting system(s), safety learning system(s), accident(s), and incident investigation system(s)
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212 Table 1: Eligibility criteria and hierarchy of inclusion

213

214 *Search Strategy*

215 The SPIDER framework (**S**ample, **P**henomenon of Interest, **D**esign, **E**valuation, **R**esearch
216 type) will be used throughout the review. Specifically, the S, PI elements will inform the
217 keywords, consisting of variations of “care home” (S) and “incident reporting” (PI), which
218 have been adapted from previous relevant reviews.[22 23] To search for and identify any
219 academic literature that is eligible the following platforms will be used:

- 220 • CINAHL, MEDLINE and PsycINFO will be searched using the EBSCO platform.
- 221 • EMBASE and HMIC will be searched using OVID
- 222 • ASSISA and Nursing & Allied Health Database will be searched using ProQuest
- 223 • Web of Science will be searched using Web of Science
- 224 • Scopus being searched using the Elsevier.

225

226 In addition to the formal academic database searches, grey literature will be searched using
227 MedNar and OpenGrey. Hand-searching will also take place of any included papers’
228 reference lists to identify any potentially suitable papers that have not been identified via the
229 database searches. A list of all search strings are reported in supplementary material. The
230 D, E and R elements of the framework will be used to inform data extraction.

231

232 *Data management*

233 All results from the academic literature databases will be retrieved. The first 100 hits from
234 each of the grey literature databases will be retrieved as the first 100 hits are deemed to be
235 sufficient.[24 25]. All results will be downloaded into bibliographical software such as
236 EndNote (Clarivate Analytics, Version X9). Upon transfer into bibliographical software,
237 duplicate entries will be removed then the process of study selection will begin.

238

239 *Study selection*

240 Papers will be assessed in line with the inclusion and exclusion criteria and study selection
241 will be reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-
242 Analyses (PRISMA) flowchart.[26] Papers will initially be sifted based on their title and
243 abstract and coded as potentially eligible or not eligible. One reviewer will sift all results and
244 20% of the results will be double sifted by another reviewer from the research team, with
245 disagreements discussed to resolve conflict. Full texts of all potentially eligible papers will
246 then be reviewed, with each paper independently assessed for eligibility by two reviewers
247 and coded as eligible, not eligible or unsure. Any disagreements will be discussed until
248 agreement is reached. If no agreement can be reached, a third reviewer will make the final
249 decision. If a paper is considered not to be eligible, a reason for exclusion will be recorded
250 based on the hierarchy of inclusion/exclusion. Finally, references and citations of all included
251 papers will be compiled into a separate library, and the full study selection process will be
252 conducted again and repeated until no new eligible papers are identified.

253

254 *Quality assessment*

255 Critical Appraisals Skills Programme (CASP) tools[27] will be used to critically appraise any
256 papers which are to be included and data extracted. The CASP tools have been chosen,
257 over others, as there are various versions of the tools which fit with different methods,
258 including Randomised Controlled Trials, Qualitative research, and Cohort studies. Quality of
259 studies will not determine inclusion or exclusion.

260

261 *Data extraction and synthesis*

262 Bespoke data extraction tools have been developed and will be independently piloted by two
263 reviewers on six papers (three quantitative and three qualitative) and adapted iteratively to
264 answer the review’s research questions. For primary research, the authors, year of
265 publication, country of study, aim of the research, study design, methods, and study setting

266 will be extracted. Following the review’s research questions, data will also be extracted
267 relating to the context of incident reporting, types of safety incident data reported, and the
268 systems / technology used to facilitate incident reporting. Extraction of quantitative studies
269 will also include the study measures, type of analysis, descriptive and inferential statistics.
270 Extraction of qualitative studies will include the type of analysis, and summary of findings
271 (including themes, categories, theories/models). Final data extraction will then be conducted
272 by one reviewer, with a minimum of 10% independently double extracted. Disagreements
273 will be resolved by discussion between the reviewers. If a consensus cannot be reached
274 between the two reviewers, another member of the research team will be consulted.

275
276 Following data extraction, data will be synthesised using a three stages process: 1) free line-
277 by-line coding of the findings, 2) organisation of these 'free codes' into related areas to
278 construct 'descriptive' themes following the review’s research questions, and 3) the
279 development of 'analytical' themes.

280 **Policy review**

281 *Sampling*

282 Policies and guideline documents for incident reporting relating to care homes will be identified
283 through internet searches, with a specific focus on providers (care homes), commissioners
284 (Local Authorities, Clinical Commissioning Groups) and the main regulator (CQC). The search
285 strategy will consist of keyword searches using Google search engine by combining each of
286 these with 'incident reporting', for example: (“local authority” OR “care home” OR “Clinical
287 Commissioning Group” OR Care Quality Commission”) AND “incident report”. This will be
288 supplemented by manual searching of the CQC website (<https://www.cqc.org.uk/>) for policies
289 mentioning incident reporting and care homes, and all structured interview participants will be
290 asked to share policies from their care home. To be included in the sample, policies must
291 relate to safety incident reporting and either partially or wholly related to care homes. The first
292 100 hits will be retrieved, in line with recommended guidance for evidence reviews using
293 Google.[24]

294 *Data collection*

295
296 Data relating to the completion of incident reports, the process(es) for sharing incident reports,
297 types of data collected, and technologies used will be extracted. Descriptive information, such
298 as who the policy is aimed at and the date of the policy will also be extracted and a description
299 of the wider context of the policy will also be created. Data will be extracted into a spreadsheet,
300 and the data extraction process will be modified iteratively to allow for unexpected data to be
301 identified. A portion (10%) of policies will be double-coded at the start of the process, and
302 major disagreements will be discussed between the coders prior to completing the remainder
303 of the analysis.

304 **Workstream 2**

305
306 Structured into three sequential phases (P1-P3), W2 will explore how care homes report safety
307 incidents that relate to the wider health and social care system, and how non-care home
308 stakeholders report incidents relating to other organisations. Workstream 2 will also examine
309 how transition safety has been managed during the COVID-19 pandemic.

310 **Phase 1a: Qualitative interviews with care home staff**

311 *Participants and sampling*

312 Up to 40 semi-structured interviews, which will allow for emerging and unexpected discussion,
313 will be conducted with care home staff. Participants will be purposively sampled based on
314 possible involvement in the transition of a patient, such as managers, nursing staff, and
315 healthcare assistants. It is anticipated that 40 interviews will provide sufficient information
316 power [28] to meet the study objectives, and this will be reviewed regularly by the research
317 team.

318
319
320

321 **Phase 1b: Qualitative interviews with non-care home staff involved in transitions**

322 *Participants and sampling*

323 Up to 30 semi-structured interviews will be conducted with non-care home stakeholders
324 involved in the transition of patients to understand how incidents involving other care
325 providers, particularly care homes and/or wider social care, are reported and how informal or
326 formal reports from those organisations are responded to. Participants will be purposively
327 sampled to cover a spectrum of professionals, including social workers, nurses, care home
328 linked general practitioners, occupational therapists and physiotherapists. We anticipate 30
329 participants to provide sufficient information power.[28]

330

331 *Phases 1a and 1b data collection*

332 Semi-structured interviews will be more in-depth than in workstream 1 and will specifically
333 focus on transitions both into and out of hospital. Questions will focus on what incidents are
334 currently reported, who reports the incidents, to whom they are reported, the systems
335 (technological or otherwise) they use to report the incidents, and the social conditions that
336 influence reporting, including the 'work-as-done'[29] actions related to formal and informal
337 incident reporting. Additional questions relating to COVID-19 will also explore with participants
338 how the pandemic has influenced transitions between hospital and care home, including how
339 safety behaviours and practices have (or have not) occurred during the pandemic, whether
340 reporting of safety incidents has changed as a result of the pandemic, and the drivers for any
341 such changes. Interviews will be conducted either face-to-face or remotely either by telephone
342 or Microsoft Teams, digitally voice recorded, and transcribed verbatim using an external
343 transcription company.

344

345 **Phase 2: Retrospective documentary analysis**

346 *Data collection*

347 A retrospective documentary analysis of the systems identified in Phase 1a will be conducted,
348 covering two financial years; 19/20 and 20/21. This time period will allow for seasonal variation
349 and also pre- and intra-pandemic variation. Data will include risk management incident reports
350 (eg Datix or equivalent), safeguarding reports, serious incident reports, generic health and
351 safety reports, and others identified as relevant in Phase 1a. The definition of a transition in
352 care can be difficult to specify because effects of a poor transition can be long-lasting.[30 31]
353 For the purpose of this study, data will be included where there is specific mention of
354 organisations or staff not part of the care home from which the data is obtained from. All data
355 will be anonymised prior to transfer to the study team.

356

357 As the quantity of data will not be known until data collection begins, a decision will be made
358 with advisory group input as to whether all data will be included. If not, a hybrid sampling
359 model combining both purposive and random sampling will be used to ensure data is
360 manageable and representative. Purposive sampling will be conducted initially so as to ensure
361 representation between relevant characteristics, such as the different technologies and
362 systems in which the reports are contained, the type of harm, the person reporting and the
363 incident and the level of harm. Where there is excessive data in any category to analyse within
364 the study timeframe, we would then randomly sample within each category.

365

366 **Phase 3: Service specification co-design**

367 *Participants and sampling*

368 Co-design is recognised as a valid approach to sharing knowledge and expertise so long as
369 power differentials are recognised and addressed to encourage inclusiveness.[32] Four
370 validation and co-design workshops will be hosted (two representing North East England, two
371 representing South West England), where results from Phases 1 and 2 will be presented to
372 care home and NHS staff involved in transition of patients. We will also invite commissioners
373 of health and social care services, local authority safeguarding teams, regulators and patient
374 and public involvement representatives. Care home managers and nurses will be recruited,
375 as will nursing staff from local NHS Trusts, specifically from wards or units that are most likely

376 to discharge patients to nursing homes such as care of older people wards. We will endeavour
377 to include participants from earlier phases, but this will depend on participant availability and
378 provision of informed consent again. It is anticipated that each workshop will consist of
379 between 12 to 15 participants, with participants in each workshop split into two groups for
380 discussion, with one facilitator per group. Participants will only participate in one workshop
381 each.

382

383 *Data collection*

384 During the workshops, a service specification will be co-designed for an integrated system-
385 response to safety incident reporting, and mapped against existing systems to produce
386 recommendations. To co-design the service specification, the NHS Improvement[33] service
387 specification template will be used, with discussions amongst participants centred on the key
388 components of (1) Overview, (2) Scope, (3) Service Delivery and (4) Performance and Quality
389 Measures. A final discussion will also focus on recommendations for how to implement the
390 service specification. During all discussions, we will employ various methods to encourage
391 inclusion, based on previously published co-design research, and we will converge ideas
392 between groups following each discussion.[34] Due to the COVID-19 pandemic, the
393 workshops may be held online using specialist collaborative software (eg Miro;
394 www.miro.com) that allows participants to brainstorm, comment, draw and map plans
395 asynchronously. Data from the four workshops will be collected independently, meaning that
396 once data analysis is complete, outcomes from this phase may differ from those that
397 participants have co-designed. To ensure any produced outcomes are valid they will be shared
398 using Miro with all workshop participants for final discussion and verification.

399

400 *Data analysis*

401 Data from Workstream 1 will be used to develop a taxonomy of approaches to reporting
402 incidents in care homes using a standardised approach to taxonomy development,[35] aligned
403 with a combination of objective and subjective ending conditions. Objective conditions will
404 include no new dimensions being added or amended in the final iteration, there is no
405 duplication across dimensions, and each dimension has a minimum of one characteristic.
406 Subjective conditions include the taxonomy being concise, robust, comprehensive, extendible
407 and explanatory.

408

409 Framework analysis will be used concurrently to analyse data from across the whole study,
410 whilst also allowing for the emergence and identification of new themes.[36] The framework
411 will be based around the study objectives, with an additional analysis heuristic of systemic risk
412 factors, specifically latent conditions and active failures that contribute to organisational
413 learning, as well as the proximal and distal factors. This heuristic will provide evidence for the
414 wider system-level factors that contribute to safety incidents that are reported in care homes.
415 The exception to this approach is in Phase 2, where content analysis will be used to analyse
416 documents.[37] Whilst documentary analysis has the benefit of not being influenced by the
417 data collection method, other biases are likely to exist,[38] particularly related to under-
418 reporting of incidents. Documentary analysis will focus specifically upon safety issues related
419 to transitions in care, using a pre-validated method and data extraction tool.[39]

420

421 Analysis will include triangulation, particularly examining conflicts or disagreements within the
422 data. A convergent coding matrix[40] will be utilised to facilitate the triangulation of data from
423 multiple sources. Following completion of both workstreams, the results of Workstream 2 will
424 be cross-referenced to determine the transferability of the findings across the taxonomy
425 developed in Workstream 1.

426

427 **Ethics and dissemination**

428 The study has received ethical approval from Northumbria University (ref: 120/2450) and has
429 received Health Research Authority (HRA) approval (ref: 20/HRA/5272).

430

431 Study findings will be disseminated via numerous avenues. A study website, which is publicly
432 accessible, will be launched (<https://research.northumbria.ac.uk/SafeST>) and will provide an
433 overview of the study design, study findings and completed dissemination. Findings will also
434 be disseminated directly to participants where they have been requested, will be published in
435 peer-reviewed journal articles, and disseminated at academic and practice conferences.
436

437 **Patient and public involvement**

438 Patient and public involvement (PPI) is embedded in the study. As a co-applicant, MS has
439 been directly involved in helping to design the patient and public involvement strategy,
440 including identifying the need to involve additional patient, carer and public representatives in
441 the wider advisory group, with appropriate support, to ensure that their voice is heard. MS
442 helped to facilitate a presentation to the North Tyneside Community and Health Care Forum,
443 specifically in relation to the appropriateness and value of the research question, how best to
444 raise awareness of the study whilst it is underway amongst patients, carers and the wider
445 public, and how best to disseminate the findings to patients, carers and the wider public. The
446 Forum will provide advice throughout the study as a PPI advisory group, and there will be PPI
447 representation on the study advisory group. We will engage with these groups on an ongoing
448 basis to determine how best to disseminate the findings to patients and the public. Box 1
449 presents a lay summary of the research.
450

When people move between hospital and a care home, it is quite common for something to go wrong with their care that does or could affect their safety. This is called a safety incident. Some examples include medicines being lost or delayed, or important documents containing mistakes or going missing. It is important to find out when and why safety incidents happen so that improvements can be made. Finding this out does not happen enough because care homes and hospitals sometimes have different priorities other than the person's care. They also have different understandings of what unsafe care means. Hospitals generally think of unsafe care as being a problem with the system that affects everyone, whereas care homes usually think of someone being unsafe because of problems with the care provided to just them.

Because of these different approaches, it can be difficult for care homes, hospitals, or even organisations that oversee them, to learn from safety incidents. As such, this study aims to understand how care homes and care home staff report safety incidents when a person moves between hospital and care home. Using this understanding, we aim to work with care homes and hospitals to jointly design a better way of reporting and learning from safety incidents.

The study will be split into two parts that run alongside each other. During the first part (workstream 1), we will review how care homes respond to safety incidents. This will include looking at what policies exist, what technology is used and how reports are captured. This review will be desk-based, combining internet searches, telephone interviews and academic papers. From this, we will create categories of the different systems being used to capture safety incidents. During the second part (workstream 2), we will work with two care home organisations, one in North East and one in South West England. Each will contain around 30-50 care homes, and will cover all different types of care homes (eg nursing, residential, dementia). We will begin by speaking with up to 40 care home staff to find out how they report incidents. Separately, we will also speak with up to 30 staff from other organisations, such as hospitals, who are involved in people moving between hospital and care home. We will then review the information that the care homes hold, using a method that we have developed and used previously. Using what we learn, we will jointly design a new system for learning from safety incidents by hosting four workshops and inviting people who will have suitable experience. This will include care home managers and nurses, clinical staff from NHS trusts, commissioners of health and social care services, local authority safeguarding teams, regulators and patient and public involvement representatives. This

new system will be compared with existing systems and recommendations will be made for how it can be put into practice.

Box 1: Lay summary of the study

Discussion

The novelty of this research is threefold. Firstly, this will be the first study examining how safety incidents are reported across the care home sector in relation to transitions in care using data generated within the care home sector. In doing so the study will produce knowledge of relevance to both health and social care services that can improve transitions in care. Also by developing a better understanding of incident reporting within this setting, the study will be able to make recommendations for improving incident reporting, which can improve organisational learning and therefore the quality of care of older people. By investigating the impact of the COVID-19 pandemic on the safety of care transitions, the study will provide additional vital insight and learning. Secondly, by co-designing a service specification, we aim to begin to address the under-reporting of incidents within this setting by defining the service standards expected from organisations involved in patient transitions, for instance hospital and care home providers, as well as commissioners and regulators. Thirdly, the developed taxonomy of approaches to incident reporting systems within the care home sector will provide a foundation for future research within this setting. The taxonomy will also provide the foundations required for implementing changes within the sector that are required for making improvements to the care and support of older people transitioning between hospital and care home.

Figure caption

Figure 1: Flowchart showing the configuration of the study's workstreams and phases

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576 **Authors' contributions**

577 JS, KBr, PD, LYM, MS and JW contributed to the conception and design of the study and are
578 the grant holders. KBy and SM will lead data collection and analyses with input from all
579 authors. JS wrote the manuscript with all authors contributing to the drafting and revision of
580 the manuscript, and all authors approved the final version.
581

582 **Funding statement**

583 This work is supported by The Dunhill Medical Trust, grant number RPGF2006\226.
584

585 **Competing interests**

586 None declared.
587

588 **Acknowledgements**

589 The authors would like to acknowledge the support of the National Institute for Health
590 Research Clinical Research Network. The views expressed are those of the authors and not
591 necessarily those of the NIHR or the Department of Health and Social Care. We would also
592 like to thank members of the North Tyneside Community and Health Care Forum for
593 providing valuable input into the design of the study.
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SafeST Study Flowchart

