Table 1

		Type of Transition*							
		Inter-unit / dept / team	Out of hospital	Intra-unit / dept / team	Hospital to hospital	Into hospital	Self-transfer	Unknown	Overall
Incident Classification and codes	**Pressure ulcer**	**70**	**18**	**2**	**8**	**3**			**101 (36%)**
	Pressure sore								
	Skin not intact								
	Moisture lesion								
	Identified after transition								
	Falls	**3**		**29**					**32 (12%)**
	Patient fall								
	Patient fall not reported on transfer								
	Medication	**8**	**18**	**2**		**2**		**1**	**31 (11%)**
	Incorrect dosage								
	Incorrect prescription/error								
	Medication not prescribed								
	Medication delayed								
	Medication incorrectly labelled								
	Missing medication								
	Unclear prescription								
	Documentation	**16**	**9**	**1**	**1**	**2**			**29 (10%)**
	Documentation missing/lost								
	Incomplete documentation								
	Incorrect (other patient) documentation								
	Documentation error								
	Delay in receipt of documentation								
	No transfer documentation								
	Delayed transition	**4**	**10**		**1**				**15 (5%)**
	Delayed discharge (communication)								
	Delayed discharge (family)								
	Delayed discharge (transport)								
	Delayed discharge (documentation)								
	Delayed discharge (tests)								
	Communication	**9**	**4**			**2**			**15 (5%)**
	No handover taking place								
	Sub-optimal handover of information								
	Referral not made								
	Diagnostic tests not done/delayed								
	Treatment not provided / delayed								
	Device / equipment	**5**	**4**	**2**	**1**				**12 (4%)**
	Device left in situ								

Equipment failure									
Infection control *Infection control failure* *Infection control risk / protocol breach*		**9**		**1**	**1**				**11 (4%)**
Potentially unsafe transition *Inadequate monitoring of patient* *Inappropriate transition* *Unsafe handover*		**9**		**1**	**1**				**11 (4%)**
Patient self-transfer *Self-discharged without informing staff* *Self-discharged against medical advice*			**1**				**9**		**10 (4%)**
Staff-related issues *Sub-optimal levels of staff* *Patient distress arising from staff actions* *Unable to provide safe care / meet patient needs due to staff shortages* *Patient allegations of abuse*		**2**	**1**	**1**					**4 (2%)**
Sub-optimal treatment *Breach of discharge protocol* *Treatment error*		**3**	**1**						**4 (2%)**
Patient injury *Abrasions* *Skin tear*				**2**					**2 (1%)**
Patient violence		1							**1 (<1%)**
	Overall	**139 (50%)**	**66 (24%)**	**41 (15%)**	**13 (5%)**	**9 (3%)**	**9 (3%)**	**1 (<1%)**	**278 (100%)**

*Types of transfer definitions:

- Into hospital - a patient is admitted to a hospital ward from their home or in the community
- Out of hospital - a patient is discharged home (with or without community care), or to a care home
- Inter-unit / department / team - a patient is moved from one ward to another in the same hospital
- Intra-unit / department / team - a patient is moved from a hospital bed to wheelchair or handover between day and night staff
- Hospital to hospital - a patient is moved from one hospital to another, dependent on the perspective of the reporter (receiving or sending the patient)
- Self-transfer - a patient expresses a wish to discharge themselves from hospital (irrespective of whether they followed through with it or not, and staff were informed or not)
- Unknown - it is not clear what type of transfer the patient went through based on the data included in the incident report

Table 2

		N (%)	Active failures	Exemplar quotes
Incident Classification	**Pressure ulcer**	**101 (36%)**	• Skin bundle documentation inaccurate • Non-adherence/lack of follow-up to treatment of pressure ulcer in skin bundle • No mention of pressure ulcer in transfer documents • No skin assessment undertaken prior to transition • Skin assessment not thoroughly undertaken • Incorrect location of pressure sore in documentation • Pressure sore graded incorrectly in documentation • Tissue viability nurse was not alerted • Pressure ulcer worsening	• Patient transfered [*sic*] from [*name of sending ward*] to [*name of receiving ward*] found to have a stage 1 pressure sore on right buttock however skin bundle stated it was normal • Patient transfered [*sic*] into the care on our ward and stated on handover that skin was intact and has a grade 2 • Patient was handed over to have skin intact but fragile. on skin inspection this was not the case, patient had- Grade 2 spine; Scab to forehead; Grade three to left calf- sloughy; Grade 2 to left calf, scabbed.; Dry cracked skin to both heels and arms; Grade 2 to right forearm, • Nothing has been documented or handed over. No body map already in place and patient has been in hospital for a few days already. • Telephone handover given but no mention of any issues with skin damage
	Falls	**32 (12%)**	• Inadequate moving and handling • Failure to use equipment available • Failure to check patient understood instructions • Information in patient notes overlooked • Inadequate observation / monitoring of patient • Fall not documented in transfer notes • No medical review after previous falls	• OT and Physiotherapy joint transfer assessment. Sliding transfer from bed to chair. Somehow the wheelchair was pushed away. Patient fell to the floor. • Staff sat at nurses station having handover when heard a loud beng [*sic*]. when we stood up we saw pt on florr [*sic*] at doorway to bay 4. Pt had been walking out of bay when she fell but staff had not seen her due to board round screen blocking the view of bay 4 (falls bay). • Bank HCA C reports to me that she was supervising the patient transferring from bed to chair, on route to the bathroom when his legs gave way and he crumbled to his knees. • About to transfer [*patient name*] from the bed to a wheel chair to sit out. I had placed his slippers on and dropped the bed rail ready for him to move his legs out. I went to the end of the bed to get a zimmer frame, to assist with the transfer, when I turned round Mr C coughed and his legs moved and he turned and rolled out of bed. He landed on the floor next to his bed
	Medication	**31 (11%)**	• Discharge medication prescription incomplete • Discharged without prescribed medication • Incorrect medication prescribed • Incorrect medication prescribed (other patient) • Medication not administered • Unsigned for controlled medication • Prescription illegible / unclear • Lost medication • Medication labelled incorrectly	• The ward then checked their drug cupboard and it came to light that 1 vial (10 grams) had gone missing so they could not make up the full 30 gram dose • I came onto shift onto [date] and was administering the 8am medications. Noticed on drug chart,22:00 medications had not been given • Following handover checked prescription which was very unclear. • When discharging patient and gathering TTOS together it was noticed that patients insulin had not been prescribed on TTOs

		• Incorrect medication dosage in discharge notes • Medication not checked on arrival to ward	
Documentation	**29 (10%)**	• Patient documentation not signed • Missing information on patient documentation • Required documentation not completed • Lost/misplaced documentation • Incorrect (other patient's) information	• Patient discharged to [*name of hospital*] this pm. [*name of hospital*] contacted ward at 1700 stating no notes for the patient had been received • Patient transferred to [*name of receiving ward*] from [*name of sending ward*], and found to have another patient's PPM checklist in their notes • When speaking to staff and reading medical notes from [*name of sending ward*] there has been no documentaion [*sic*] around the wound • No post-op instructions or post-op care written by staff from previous day when patient returned from theatre
Delayed transition	**15 (5%)**	• Transport failed to arrive on time • Ambulance personnel not willing to wait • Ambulance arrived with no room for nurse escort • Miscommunication with ambulance service • Miscommunication between staff about availability of bed • Poor communication with family members • Delay in obtaining test results • Take home medications not documented or signed off	• The patient was made ready for transport at 10:00hrs. The patient's transport finally arrived at 16:30hrs. • Patient then turned up unannounced by hospital transport, but bed was unavailable • Patient should have been discharged today all TTO'S and paperwork completed, patient needed pacing check before discharge. We understand the technician was busy and there were emergency's he had to attend to • Patient was ready for collection two ambulance men arrived on the ward at 18:30 the patient had about 8 bags of property. I explained they were not going with her. As I was on the phone arranging for the bags to be collected the ambulance man shouted he had aborted it and I would have to rebook.
Communication	**15 (5%)**	• Failed to inform at handover that patient required cohorting • Not informed at transfer about deprivation of liberty being in place • No verbal handover took place • No handover of patient history/symptoms# • Not referred for advice / treatment / follow-up • Miscommunication between ward staff	• Stroke Outreach Service (SOS) had been told that her discharge was planned for [*date*]. No NOTIS referral had been made to SOS on [*later date*]. • Theatre coordinator was not aware of this patient and theatre was not booked. • Routine telephone call to nursing home after discharge- they report that recommendations were not passed over on transfer from nursing staff. • Patient transferred to [*name of ward*], with an inappropriate handover, was not informed that that the patient needed to be cohorted as gets confused during the night, even though this question was specifically asked.
Device / equipment	**12 (4%)**	• Sutures not removed • Cannula left in situ • Catheter left in situ • IVF in situ not replaced • IV pump running at incorrect rate	• Patient sent home with venflon still in situ. • On examination it was found that patient had 2 embedded sutures still in place from surgery undertaken in [*location of hospital*] over 6 weeks ago • Pt found to have catheter in situ, which was full and was drained of 1,500 ml urine. • During bad side hand over,7.20am (approx) an IV pump with Furosemide alarmed to say it had finished, was not due to finish until 1pm approx, the pump display showed it was running at 24ml/hr. It was prescribed to be running at 1.5ml/hr
Infection control	**11 (4%)**	• Failure to implement infection control procedures • Poor communication at handover/transfer between staff • Sub-optimal patient isolation	• Patient was being nursed in a closed bay due to Diarrhoea and Vomiting Outbreak. Phone call received from site manager over at the [*name of hospital*] that patient was to outlie on [*name of receiving ward*] as identified as medically stable for transfer. Therefore patient was transferred over resulting that other patients on

		• Sub-optimal ward cleaning • MRSA swab test not undertaken	[*name of ward*] where put at risk. Another patient transferred into empty bed space. • This meant that patient had been exposed to a side room environment, which had previously been occupied by a patient who had been very symptomatic with C Diff, without it being HPV • Patient transferred to [*name of ward and date*]. It was handed over that this patient was clear of Cdiff. [*date*] infection control came to ward and explained that patient was not clear of Cdiff and had not been made clear initially. • Pt transferred from *[name of ward]* to *[name of ward]* from a side room into a side room with active diarrhora [*sic*] and vomiting within the previous 48 hrs , ? why transfer to ward 35 and with these symptoms
Potentially unsafe transition	**11 (4%)**	• Transition without cardiac monitoring • Non-adherence to treatment protocols • Inaccurate handover of patient history • Failure to take into account well-being of patient • Patient transferred with chest pain	• Staff Nurse from [*name of ward*] phoned, and advised that they have an admission coming in from [*other ward name*], but they prefer us admitting the patient while they take one of our patients instead. The patient they want is having on going chest pain, he was on cardiac monitor and was to have Angiogram done the following day at 11:00hrs. The Staff Nurse insisted on having the patient moved to [*name of ward*] that night, despite the fact that no procedure was scheduled for him during the night. • Patient transferred [sic] from Catheter Lab without monitoring. Patient previously had HR 22, on arrival to Recovery, pre procedure, HR 36. Nil heart monitoring on transfer, additionally, no nurse attended during transfer. • Mr J H was transferred to *[name of ward]* from *[name of ward]* on the 03/01/15 , Stoke Rehab, with a 1 - 1 carer and still needing Specialist Stroke Rehab, felt to be an inappropriate transfer and was in fact transferrred back on the 05/01/15 • Pt handed over as being pleasantly muddled and just in hospital with increased confusion and was fine to go into the main ay. Explained that we had 3 pts already on the ward who required 1-1 care and we had no 1-1 carers. When pt arrived on the ward she immediately started climbing out of bed and becoming very aggressive
Patient self-transfer	**10 (4%)**	• Delayed diagnostic test • Mental health issues not addressed • Sub-optimal patient observation	• Following a conversation with the medical team in which pt was informed that he was medically fit for discharge pt voiced to the Dr that he had suicidal thoughts and may wish to harm himself if he went home. Shortly after the conversation pt left the ward without informing staff and without any discharge papers or medication. As pt had communicated that he felt suicidal and had left the ward abruptly concerns were felt for his safety. • Patient found reading own notes and taking photos of script on phone. patient very unhappy about what he had read, and started to remove electrodes, tried to diffuse and calm patient to stay in hospital appeared shaky not angry, saying wasting his time in hospital if no one believes these are epileptic seizures, explained that does not mean he isnt having seizures. refused to listen, statement supplied regarding conversion. patient self discharged, without waiting for dr to see.

Staff-related issues	**4 (2%)**	• Poor communication between transferring & receiving ward staff • Inadequate staffing levels / staff shortages	• Staff transfered [*sic*] patient to ward and was told by staff nurse that patient was not expected, no hand over given and they did not have mattress for the patient. The receiving staff on the ward was very unwelcoming to the patient stating that she was not supposed to be coming to their ward. • Short staffed with x2 RN's and 1 HCA. bed manager informed an 2nd HCA sent to ward. Lots of confused high falls risk patients. very loud on ward all night with patients using call bell, patients not using call bells and just getting up, lots of patients unwell, short of breath chest pains ect. All staff on ward constantly attending patients. one patient especially noisy shouting out an wake other patients or making it so other patients couldn't sleep at all, which is exacibating [*sic*] other high falls risks patient to get up and be unsettled. • Short staff- 6 members of staff working [*date*] Late shift. Discharging many patients- Discharge meds (controlled drugs) not going with the pt as ambulances arrive and want a quick discharge. Spending 35 minutes on the phone booking ambulances which left patients without staff to provide care.
Sub-optimal treatment	**4 (2%)**	• Temperature probe used incorrectly • Patient on incorrect SLT fluid regimen • BM not taken according to protocol • Patient returned from X-ray without neck collar	• Patient met discharge protocol, oral temperature being 36.3 degrees c. When arriving on the ward, the ward nurse failed to take an accurate reading, due to the fact they did not insert the probe all the way down the ear canal. • Pt had an unstable neck fracture and was sent to x-ray for imaging with neck collar in situ. On pts return to the ward she was found to have been transferred back to the ward without the collar on. • I'm not sure whether the error occurred with [*sending ward name*] handing over SLT recs or with *[name of ward*] receiving them but the pt was put on out of date SLT recommendations. • Patient transferred from [*name of ward*] after having had a lumbar puncture. it was noted that his bm had not been taken since 17.10hrs.
Patient injury	**2 (1%)**	• Staff failed to notice an injury had occurred during transfer • Sub-optimal use of bed hoist	• Noticed a bump and small bruise to the patient's left eyebrow, and according to the husband, the patient bumped her left eyebrow on the hoist while being transferred from wheelchair to bed, and again according to the husband, it appears that the day staff did not notice what she had done • Whilst patient being transfered [*sic*] off hoist sling on bed, patient suffered skin tear to left forearm.
Patient violence	**1 <1%)**	• Information about patient mental health and behavioural history not handed over	• Documented in the nursing notes "can become aggressive and angry very quickly .... this puts others at risk" information that was not handed over prior to transfer…….The patient was verbally aggressive to staff immediately on arrival to [*name of ward*] she was wandering around the ward threatening to hit staff and other patients
Overall	**278 (100%)**		

Table 3

		N (%)	Latent conditions n (%)	Patient/family involvement, n (%)	Patient well-being, n (%)	Individual learning, n (%)	Organisational learning, n (%)
Incident Classification	**Pressure ulcer**	**101 (36%)**	1 (1%)	18 (18%)	4 (4%)	1 (1%)	7 (7%)
	Falls	**32 (12%)**	3 (9%)	4 (13%)	2 (6%)		3 (9%)
	Medication	**31 (11%)**	5 (16%)	10 (32%)	8 (26%)		3 (10%)
	Documentation	**29 (10%)**	3 (10%)	6 (21%)		2 (7%)	1 (3%)
	Delayed transition	**15 (5%)**	6 (40%)	6 (40%)	2 (13%)		1 (7%)
	Communication	**15 (5%)**	3 (20%)	2 (13%)	2 (13%)		1 (7%)
	Device / equipment	**12 (4%)**	1 (8%)	2 (16%)	1 (8%)		1 (8%)
	Infection control	**11 (4%)**	4 (36%)			1 (9%)	
	Potentially unsafe transition	**11 (4%)**	3 (28%)	1 (9%)		2 (18%)	
	Patient self-transfer	**10 (4%)**	1 (10%)	7 (70%)	2 (20%)		
	Staff-related issues	**4 (2%)**	3 (75%)	3 (75%)	3 (75%)		2 (50%)
	Incorrect treatment	**4 (2%)**					
	Patient injury	**2 (1%)**		1 (50%)			
	Patient violence	**1 <1%)**	1 (100%)	1 (100%)		1 (100%)	
	Overall	**278 (100%)**	**33 (12%)**	**61 (22%)**	**24 (9%)**	**7 (3%)**	**19 (7%)**

Online Appendix 1: Data extraction form

ITEM	RESPONSE
Incident number	
Coder initials	
Eligible *If no, do not complete rest of form and exclude*	Yes No Possible (requires second review)
Type of transfer	Into hospital Out of hospital Inter-unit / department / team Intra-unit / department / team Hospital to hospital Self-transfer Unknown Other [please describe]:
Reason for transfer	
Incident classification	
Active failure(s)	
Latent condition(s)	
Was responsibility for the incident identified? *If yes, provide details*	
Staff actions taken as result of incident *Include brief description*	Patient-facing actions (treatment) Documentation Communication with other staff Communication with patient / family Other [please describe]:
Role of reporter in incident	
Patient / family involvement	
Patient wellbeing	
Evidence of individual learning	
Evidence of organisational / systems learning	

Does level of harm match the incident description? *If no, explain*	
Reflections on incident *(sentence or short paragraph)*	
Does this record require additional review? *This field is for primary reviewer only*	

Online Appendix 2: Coding Manual

The purpose of this coding manual is to provide detailed instructions on how to code staff incident reports relating to handover, transfer and discharge. Reviewers should avoid making assumptions about the incident, and use only the data explicitly reported in the incident report (otherwise code as none reported).

Item-by-item instructions

Incident number
The unique ID assigned to each incident.

Coder initials
Initials of the person coding the incident.

Eligible
An eligible incident is one that explicitly relates to any type of care process (collect, assess, plan, supplement or follow-up/monitor or evaluation - https://jcpp.net/patient-care-process/) as part of a patient transfer (completed or planned), defined as the movement of a patient from one location to another. Self-transfer in the form of self-discharge were also eligible for inclusion.

Type of transfer
There are numerous types of transfer that a patient can go through:

Type of transfer	Example / description
Into hospital	A patient is admitted to a hospital ward from their home or in the community
Out of hospital	A patient is discharged home (with or without community care), or to a care home
Inter-unit / department / team	A patient is moved from one ward to another in the same hospital
Intra-unit / department / team	A patient is moved from a hospital bed to wheelchair or handover between day and night staff
Hospital to hospital	A patient is moved from one hospital to another, it is dependent on the perspective of the reporter (receiving or sending the patient)
Self-transfer	A patient expresses a wish to discharge themselves from hospital (irrespective of whether they followed through with it or not), whether or not staff were informed
Unknown	Where it is not clear what type of transfer the patient went through based on the data included in the incident report
Other	Any other type of transfer not listed above

Reason for transfer

This code attempts to determine whether a reason for the transfer was identified within the incident report. It is likely that the reason for the initial transfer is not identified within the incident report unless it directly contributes to the incident. Where the reason is not identified, it should be recorded as 'unknown'.

Incident classification

This code is the type of incident that occurred, such as a patient fall, medication error, pressure sore, delayed discharge. All incidents should receive a single classification, which is the primary 'reason' for the incident being reported. Note that this may not match the incident type provided in the incident report system, and should instead be coded using details provided in the incident.

Active failure(s)

According to the Swiss-Cheese model of safety, *Active failures* are the unsafe acts committed by people who are in direct contact with the patient or system. They take a variety of forms: slips, lapses, fumbles, mistakes, and procedural violations. Failures have a direct and usually short-lived impact on the integrity of the defences.

Latent condition(s)
According to the Swiss-Cheese model of safety, *Latent conditions* are the inevitable "resident pathogens" within the system. They arise from decisions made by designers, builders, procedure writers, and top level management. Latent conditions have two kinds of adverse effect: they can translate into error provoking conditions within the local workplace (for example, time pressure, understaffing, inadequate equipment, fatigue, and inexperience) and they can create long-lasting holes or weaknesses in the defences (untrustworthy alarms and indicators, unworkable procedures, design and construction deficiencies, etc.).

Was responsibility for the incident identified?
In some cases, the incident reporter will attribute responsibility or even blame for the incident. This may be acknowledging that they themselves had made a mistake, another healthcare professional made a mistake or even the patient making a mistake. If responsibility is attributed, it is important to code who it was attributed to in this field, and any other relevant information not coded elsewhere, such as in the active failures or latent conditions field.

This field is different to active failures and latent conditions; an active failure could be written in a passive tense without identifying responsibility, such as 'patient not on correct mattress'. Whereas in some incidents responsibility may be attributed to the active failure, 'healthcare assistant did not place patient on the correct mattress'. This does not just apply to active failures, for example a latent condition (staffing issues) may have responsibility attributed at an organisational level, or not at all (or even to an individual).

Staff actions taken as a result of the incident
There are different types of actions that staff took as a result of an incident. These broadly include patient-facing actions that relate to treatment and immediate care of the patient (e.g. taking patient observations, applying a care plan, dressing a wound), documentation (reporting the incident cannot be classed as documentation), communication with other staff (e.g. informing others of the incident, requesting further information or actions to be taken), and communication with patient / family (e.g. apologising, explaining the incident, requesting information, providing education).

Role of reporter in incident
This is about what the reporter's role was in the incident. Examples may include directly witnessing the incident, identifying an incident had occurred, causing the incident or having to deal with the outcomes of the incident.

Patient or family/carer involvement
This code is attempting to understand how the patient and/or family were involved in the incident beyond being the 'recipient'. Types of involvement may include making staff aware of the incident, providing information about the incident, contributing to the incident through their own (non)actions. Reports with no patient or family involvement should be coded as 'none', on the assumption that only information explicitly stated in the incident report is coded. It is possible for some repetition with the active failures code, and this is acceptable.

Patient wellbeing
The duty of candour legally requires the health service to inform and apologise to patients if there have been mistakes in their care that lead to significant harm, though there is no such duty of candour for lower levels of harm. The purpose of this coding category is to identify how the patient's wellbeing has been taken into account as a result of the incident, including providing reassurance, apologising, demonstrating dignity or taking into account patient feelings. Note that there may be some crossover with the staff actions coding category. The purpose of having this as a discreet category is to identify where patient wellbeing has not been reported to be taken into account.

Evidence of individual learning
Evidence may exist in the form of reflections by the reporter about what they may do differently in the future. It is possible for there to be no evidence of individual learning, and reporting the incident is not evidence of critical reflection. If evidence is identified then further details should be provided within the response.

Evidence of organisational / systems learning
Evidence may exist in the form new barriers, defences or safeguards established to prevent a similar incident occurring in the future, or of attempting to understand the cause of the incident, such as through a team meeting. It is possible for there to be no evidence of organisational / systems learning, and reporting the incident is not evidence of this. If evidence is identified then further details should be provided within the response. Look out for mention of a RCA – this should be coded as evidence of organisational / systems learning.

Does level of harm match the incident description?
This code is trying to determine whether the level of harm reported is appropriate. It can be difficult to establish whether the harm is the result of the incident when a patient is being transferred. In these cases, it should be assumed that harm has occurred where the incident either caused new harm, or exacerbated existing harm. For example, a patient with a grade 2 pressure ulcer that had not been diagnosed or documented before the transfer would have exacerbated the harm. In rare cases, the level of harm may not be reported. The reviewer should assess the reasons for this on a case-by-case basis using the NHS criteria for reporting of harm (National Reporting and Learning System (NRLS):

No harm

Low: *Any unexpected or unintended incident that required extra observation or minor treatment and caused minimal harm to one or more persons.*

Moderate: *Any unexpected or unintended incident that resulted in further treatment, possible surgical intervention, cancelling of treatment, or transfer to another area, and which caused short-term harm to one or more persons.*

Severe: *Any unexpected or unintended incident that caused permanent or long-term harm to one or more persons.*

Death: *Any unexpected or unintended event that caused the death of one or more persons.*

Reflections on incident

These are the reviewer's own reflections on the incident, and are intended to be no more than a sentence or short paragraph summarising any key thoughts/views or reactions to the incident report. Reflections are intended to inform discussions amongst data analysts.

Online Appendix 3: Inter-rater reliability

Table 1: Inter-rater reliability between *[author 1]* (20% of incidents) and *[authors 2,3, 4 and 5; initials redacted for review]* (5% incidents).

Variable	Percent agreement (≥75% deemed acceptable)	Scott's Pi (≥0.6 deemed acceptable)
Eligibility	**91%**	**0.813**
Type of transfer	**76%**	0.517
Reason for transfer	45%	-0.103
Hazard / nature of incident	**83%**	**0.655**
Active failure	48%	-0.034
Latent condition	**88%**	**0.759**
Who was involved	62%	0.241
Role of staff	43%	-0.138
Role of patient / family	**84%**	**0.690**

Level of harm	**81%**	**0.621**
Actions taken	**81%**	**0.621**
Reflections	48%	-0.034

Table 2: Inclusion/exclusion agreement between *[author 1]* and *[author 7; initials redacted for review]*

	DF	JS	
Case #	**Eligible (yes / no)**	**Eligible (yes / no)**	**Notes**
6	Yes	Yes	
8	No	Yes	Agreed to exclude
75	No	No	Unwitnessed fall
94	Yes	Yes	
102	Yes	Yes	
125	Yes	Yes	
133	Yes	Yes	
134	Yes	Yes	
138	Yes	Yes	
139	Yes	Yes	
163	Yes	Yes	
184	Yes	Yes	
190	Yes	Yes	
207	Yes	Yes	
251	Yes	Yes	
259	Yes	Yes	
282	Yes	Yes	
326	Yes	Yes	
358	Yes	Yes	
366	Yes	Yes	

Online appendix 4: Reasons for ineligibility of incident reports

#	Case	Notes	JS
1.	**2**	Not related to a patient transfer – patient fall with no involvement of staff	OUT
2.	**8**	Staff complaint about a relative's behaviour	OUT
3.	**10**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
4.	**11**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
5.	**14**	Not related to a patient transfer - lost property of patient (NOT SAFETY INCIDENT)	OUT
6.	**17**	Not related to a patient transfer - patient handover sheet found in male toilet	OUT
7.	**21**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
8.	**27**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
9.	**38**	Patient documentation found in disabled parking bays	OUT
10.	**39**	Not related to a patient transfer –patient found in distress	
11.	**42**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
12.	**55**	Not related to a patient transfer – delayed review by registrar/senior medic	
13.	**65**	Not related to a patient transfer – unwitnessed fall	
14.	**66**	Staff complaint about a member of staff	OUT
15.	**75**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
16.	**79**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
17.	**84**	Not related to a patient transfer - inappropriate patient behaviour	OUT
18.	**85**	Not related to a patient transfer - Doctor who processed a sample was not BGA (blood gas analysis trained) and processed under the log in of another Dr	
19.	**86**	Not related to a patient transfer – unwitnessed fall	
20.	**87**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	
21.	**88**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	
22.	**97**	Not related to a patient transfer - no patient-related transfer incident reported	
23.	**99**	Not related to a patient transfer – unwitnessed fall	
24.	**103**	Patient deceased	
25.	**113**	Patient deceased	
26.	**114**	Patient deceased	
27.	**115**	Duplicate of case 229	
28.	**116**	Duplicate of case 231	
29.	**117**	Duplicate of case 235	
30.	**122**	Duplicate of case 317	
31.	**127**	Staff report of concerns about delays in booking ambulances – no patient-related transfer incident reported	
32.	**128**	Staff report of concerns about delays in booking ambulances – no patient-related transfer incident reported	
33.	**129**	Duplicate of case 372	
34.	**132**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
35.	**149**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT

36.	**150**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
37.	**152**	Staff concern about a staff member's level of expertise	OUT
38.	**153**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
39.	**161**	Staff complaint about a relative's behaviour	OUT
40.	**166**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
41.	**170**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
42.	**171**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
43.	**173**	Not related to patient transfer – staff injury	
44.	**174**	Staff complaint about a relative's behaviour	OUT
45.	**185**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
46.	**187**	Duplicate of case 120	
47.	**191**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
48.	**194**	Duplicate of case 193	OUT
49.	**196**	Repeat of case 121	
50.	**200**	Not related to a patient transfer – patient was out of hospital	
51.	**204**	Duplicate of case 108	
52.	**207**	Not related to a patient transfer – unwitnessed fall	
53.	**208**	Duplicate of case 110	
54.	**210**	Repeat of case 111	
55.	**213**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
56.	**215**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
57.	**218**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
58.	**227**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
59.	**234**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
60.	**236**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	
61.	**241**	Duplicate of case 119	
62.	**243**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
63.	**244**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
64.	**249**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
65.	**251**	Staff incident (injury to staff member) – NO POTENTIAL FOR PATIENT HARM	
66.	**253**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
67.	**256**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
68.	**258**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
69.	**261**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
70.	**267**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
71.	**268**	Not related to a patient transfer - Inappropriate patient behaviour	OUT
72.	**269**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT

73.	**271**	DATA PROTECTION ISSUE NOT A SAFETY ISSUE	
74.	**280**	Not related to a patient transfer – unwitnessed fall, patient found on floor	
75.	**285**	Staffing issue – scheduling problem with staff member	OUT
76.	**287**	Staffing issue – refusal to help cover nurse re childcare issues	OUT
77.	**291**	Not related to a patient transfer – delayed review by registrar/senior medic	
78.	**292**	Not related to a patient transfer – Patient documentation found out of place	
79.	**300**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
80.	**303**	Duplicate of case 124	
81.	**305**	Inappropriate patient behaviour – left ward with friend for cigarette – suspected smoking cannabis. Injury to security guard	OUT
82.	**306**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	
83.	**315**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
84.	**318**	Not related to patient transfer – patient hidden and distressed	OUT
85.	**324**	Staff report of inadequate staffing levels – no patient-related transfer incident reported	OUT
86.	**325**	DATA PROTECTION ISSUE NOT A SAFETY ISSUE	OUT
87.	**327**	Patient aggression – not transfer related	OUT
88.	**329**	Administration issue – not related to patient transfer	
89.	**330**	Staffing level concerns –NOT A PATIENT TRANSFER	OUT
90.	**331**	Cleaning (HPV) of ward delayed – NOT A PATIENT TRANSFER	OUT
91.	**332**	Bed not cleaned as per trust policy – NOT A PATIENT TRANSFER	OUT
92.	**341**	Staff complaint about a member of staff	
93.	**350**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT
94.	**354**	Staff incident (injury to staff member) – NO POTENTIAL FOR PATIENT HARM	OUT
95.	**363**	Duplicate of case 125	
96.	**371**	Not related to a patient transfer – unwitnessed fall	OUT
97.	**374**	Not related to a patient transfer – unwitnessed fall, patient found on floor	OUT

Online appendix 5: Cross tabulations of clinical area and incident classification

		Clinical Area				
		Older people	**Cardiology**	**Orthopaedics**	**Stroke**	**Overall**
Incid	**Pressure ulcer**	44	22	24	11	**101**
	Falls	9	6	7	10	**32**
	Medication	12	9	7	3	**31**

	Documentation	6	8	9	6	**29**
	Delayed Transition	7	4	1	3	**15**
	Communication	2	2	6	5	**15**
	Device / equipment	8	2	2		**12**
	Infection control	4	3	1	3	**11**
	Potentially unsafe transition	6	3	2		**11**
	Patient self-transition		7	3		**10**
	Sub-optimal treatment			3	1	**4**
	Staff-related issues	4				**4**
	Patient injury	2				**2**
	Patient violence	1				**1**
	Overall	**105**	**66**	**65**	**42**	**278**

Online appendix 6: Cross tabulations of type of transition and clinical area

		Type of Transition							
		Inter-unit/dept/team	**Out of hospital**	**Intra-unit/dept/team**	**Hospital to hospital**	**Into hospital**	**Self-transfer**	**Unknown**	**Overall**
Clinical Area	**Older people**	55	34	12	1	2			**104**
	Cardiology	33	13	8	1	5	6		**66**
	Orthopaedics	32	12	10	5	2	3	1	**65**
	Stroke	19	7	11	6				**43**
	Overall	**139**	**66**	**41**	**13**	**9**	**9**	**1**	**278**