Becoming Fall-Safe - A Framework for Reducing Inpatient Falls

Abstract

This article describes a ten year programme of work that has reduced our inpatient falls rate by 46% and how this improvement has been sustained. The methodology applied in this initiative has forced us to challenge expectations about the inevitability of patient falls whilst in hospital. This initiative has resulted in approximately 568 fewer falls each year. Based on costings from NHS Improvement, (NHSI 2017), the estimated 5108 fewer falls between 2011 and 2019 have saved the Trust £13.3m.

Background

Inpatient falls are the most commonly reported patient safety incidents in the National Health Service (NHS). The most recent report by the National Reporting and Learning System (NRLS) recorded more than 230,000 falls per annum in acute (non-specialist) hospitals in England and Wales every year (i.e. 600 per day), estimated as costing the NHS £630 million pounds per annum. (NHS Improvement, 2017). With statistics like these, it is easy to see why inpatient falls are often viewed as ubiquitous and inevitable in hospitals. All falls, even those that do not result in injury, can cause patients and their families to feel anxious and distressed. For those who are frail, minor injuries from a fall can affect physical function, resulting in reduced mobility and undermining patient confidence and independence.

An NHS Improvement report on the incidence and costs of patient falls in hospitals (2017), identified that falls in hospital resulted in more than 3,000 serious injuries per annum, including hip fractures and head injuries which can result in patient death. Falls in hospitals are also expensive as they increase the length of stay and may require increased care costs on discharge. NHS Improvement (2017), calculated that the average cost of a fall in hospital is £2600.

This project started in the financial year 2009-10 at Brighton and Sussex University Hospital (BSUH) NHS Trust, at which time our incident data recorded 1,400 falls and reported a rate of 6.23 falls per 1000 bed stay days. This rate was slightly lower that the national falls rate of 6.63 per 1000 bed days as reported by the Royal College of Physicians in 2015.

At the time, we found a commonly held assumption that falls were an unfortunate side-effect of a patient's rehabilitation or an unavoidable part of their deterioration into frailty. Such cultural norms and expectations served to reinforce staff perceptions that falls were inevitable which can then become a self-fulfilling prophecy.

Project Timeline

Date	Event
April 2009	Catastrophic Fall on Acute Medical ward
July 2009	First Trust Wide Falls Project Launched (Falls rate reduced from 6.23 to 6.07 per 1000 bed days)
April 2010	Second Falls Project Launched (8 Ward Pilot – falls rate reduce their falls rate from 9.1 to 6.6 per 1000 bed days)
April 2011	Third Trust Wide falls Project Launched
2012-13	Falls Rate drops below 5.5 per 1000 bed days
2013-14	Falls rate for previous 12 months drops to below 4.2
2014-2016	Falls rate for previous 12 months drops to below 3.5
2016	Senior Nurse joins a neighbouring Trust
2016-2019	Annual Falls rate drops below 3.4

Literature Review

Our journey to reduce falls in BSUH began in April 2009. The catalyst for this work was, unfortunately, far from unique: a catastrophic fall leading to the death of a patient, a bereft family, guilt ridden staff and damning media coverage. The Trust' Chief of Safety made a commitment to the family of the deceased patient to reduce the number of inpatient falls in the Trust, mindful of the fact that tackling the problem of inpatient falls is a huge challenge. Cameron et al (2010) Cochrane Review of Interventions for preventing falls concluded that there are no 'quick fix' interventions which, when implemented on their own, significantly reduce the rate of inpatient falls.

Methodology – A Traditional Approach

In the First Falls Project (2009) we applied a traditional change methodology, organising a Trust wide launch of a falls programme, ensuring that every ward manager could attend. To emphasise the importance of this initiative we invited a national expert on falls to educate staff, a renowned speaker on leadership to inspire staff, a doctor passionate about reducing patient sedation as a strategy for reducing patient falls and physiotherapists and occupational therapists keen to work collaboratively with nurses.

At the launch, the ward managers and occupational therapists were given individualised reports detailing the number, rate, time, and other specific details of falls on their wards. Similar wards were grouped together in facilitated workshops to enable variations in performance to be compared and discussed. At the end of the workshop, each ward manager left with an individualised action plan detailing how they were going to reduce the falls rate on their ward. Collectively, the ward managers identified 150 actions that they and their teams were going to take in order to reduce the number of falls in the Trust.

The initial results appeared promising, indicating a reduction in the monthly rate of falls. However, by the third month the rate of falls had fallen back into a pattern of normal variation. At the three

month follow-up meeting, the wards reviewed their compliance with the action plans and generated new ones. This pattern continued for the rest of the year and despite the considerable effort exerted into reducing the rate of falls it remained stubbornly fixed, seemingly impermeable to change (see Figure 1). The review of performance in the first year divided opinion; some ward managers genuinely believed progress was being made and pointed to the analogy of stars in the midnight sky: that the harder one looks the more you will find, arguing that by focusing the telescope on falls, we had encouraged more reporting. Others suggested that the evidence base for falls reduction was weak, confirming their original contention that falls were inevitable. Another group suggested that we had chosen the wrong actions, or that staff were just not implementing them, or hadn't understood them.

With hindsight, we now see we followed a common approach to safety and quality initiatives when quality targets are not met. Namely, identifying best practice, (guidelines, policies, care bundles, action plans etc.) and monitoring performance to check this was done. If results failed to improve, we did more of the same; i.e. produce more detailed guidelines, more frequent scrutiny, and even more action plans. Whilst we believe the latter can be necessary and useful, a point raised by one of the team made us start to question this approach. They said: 'We've done everything agreed. If a drug didn't seem to be working - would we keep giving it to the patient?' This challenge provoked the project lead to start to question the underpinning theoretical assumptions behind our approach to quality improvement.

One of the observations during the course of this initiative was that much of the evidence base tells you what *to do* but the real challenge is making this practice what *you do* about incorporating actions that improve the individual patient safety into your daily activity.

By early 2010, it was clear that despite our best efforts, this approach was not going to deliver a significant reduction in falls. Simultaneously, we were beginning to consider alternative explanations for the results from the first year and developing a hunch that proved to be the key to unlocking our

eventual approach to reducing our falls rate. This hunch went beyond locating responsibility for reducing falls primarily with ward leaders and was informed by insights from improvement methods inspired by complexity theory. (Suchman 2011).

We became interested in whether the behaviour of nurses on the ward could be influenced so that they were 'falls-aware'. We were also speculating that if one individual member of staff behaved in a falls-aware manner, this behaviour might spread to other individuals who came into contact with this individual - in much the same way as a virus spreads through a group. Buchanan (2007) highlights that we are, by our very nature, born imitators: "We do not think entirely on our own, what we believe and why depends strongly on our interaction with others… [The] roots of imitative behaviour… seem to be automatic and unconscious, and instinctual, hardwired into our biological makeup. We may go through life thinking that we make up own mind but the reality is that when people are free to do as please they often imitate each other".

All too often it is these acts of imitation that brings our public bodies into disrepute; examples include the Panorama exposé of Winterbourne View care home in Bristol and the Mid Staffordshire NHS Foundation Trust Public Inquiry (Francis 2013). When the degradation of patient care spreads through an institution, we speculated that imitation appeared to be the vehicle. Believing imitation to be a powerful force, we decided that rather than taking the usual option of prescribing to staff what they should do through policies and guidelines, we would focus on how individuals should act on a busy ward to reduce the likelihood of their patient falling.

Methodology: Implementing an Emergent Design Approach

As an alternative to the planned approach used in the first year, the Project Team adopted a model referred to as 'Emergent design' - we abandoned our action plans and instead encouraged a mind-set of curiosity, flexibility and experimentation with the notion that "not knowing" is a virtue, not a deficiency. Rather than planning many stages in advance, by using an emergent approach, the next step was only planned when the results of the previous were seen. This allowed opportunities to

identify and utilise emergent patterns and ideas. The concept assumes there is no 'silver bullet'; small changes are continuously introduced hoping that some will have a ripple effect and encourage other changes (Suchman 2011). Another similar approach of "try a lot of things, keep what works" has been found to be the basis for sustainable success in larger corporations (Collins and Porras 1994).

A well respected senior nurse was recruited to lead the project. Although she did not see herself as an expert in falls, staff recognised her as a leader with high professional standards, unafraid to challenge the status quo, and with an intellectual curiosity that sought to question and account for the rationale behind the professional actions of all involved in the delivery of patient care. Multifactorial complex problems like falls have a tendency to be a challenge when applying the dominant approaches to quality improvement – care bundles, guidelines, educational programmes, action plans etc. Instead, we acknowledged no one individual, Project Lead included, held all the answers to reducing the Trust's falls rate. Utilising the Trust's on-line incident reporting system, the senior nurse augmented the incident investigation process to include an After Action Review (AAR) de-brief following each reported fall. The AAR process facilitates reflection and feedback on individual, team and collective performance, in a non-confrontational fashion, with the spirit of an AAR being one of learning not blame. Schindler and Eppler (2003) believe that creating an atmosphere that is conducive to encouraging openness and trust are crucial goals of the process to enable team learning, team building and team integrity.

An AAR is based around the following four overarching questions:

- What was expected to happen?
- What actually happened?
- Why was there a difference between what was expected and what actually happened?
- What are the lessons that can be learnt?

The process was designed to establish the extent of the deficit between the expectations of those involved and the facts surrounding each adverse event (Morrison & Meliza 1999; Schindler & Eppler 2003).

In practice, this meant that the senior nurse was alerted immediately, via e-mail, to every fall as soon as it was reported via the Trust's on-line clinical incident reporting system, a well-established system that had been in use since 2007. This rapid notification fostered maximum opportunities for immediate learning via the AAR for everybody involved with the care of the patient who had fallen. The AAR framework provided a structure for talking about what was expected in relation to how to act in a way that minimised the chances of the patient falling again and future patients from falling. At the same time the debriefs allowed the opportunity to review the difference between what was expected and what actually happened. The expectation-reality deficit was identified for each patient fall and the ward staff given the opportunity to discuss and reflect how events might have been prevented and how local systems or patterns of working could be improved. The emphasis was on constantly improving the learning about falls in each specific local context with the staff involved in caring for the patient that had fallen, thus empowering staff to affect change rather than portraying the process as punitive. The focus was exclusively on the local context of the ward, its layout, patients, staffing and leadership were critical. The senior nurse was also mindful of generalising the results to a wider context. For example, when intentional toileting made a difference on one ward the results were shared but not imposed on other wards. Thus through continuous After Action Reviews, wards learnt how to manage the risk of patients falling on their individual ward.

The AAR debriefs were with the staff directly involved in the care of the patient who had fallen (and when possible also the patient) and focussed on exploration of their expectations of the outcome of their actions prior to the patient falling. In some cases, they had not anticipated the risk of a fall, in others; they had been forced to make pragmatic choices between other care priorities for patients which had been judged of greater importance at the time. An important finding was that in these group reflections, the Senior Nurse moved beyond the more conventional use of the AAR tool as

solely a technique for identifying a 'root cause' of the fall, to engaging in reflexive acts of imagination and exploration of future consequences and creative challenge to local constraints and habits, i.e. 'The way it is around here' or 'We've always done it like this.' Learning was generated by working with front-line staff in developing safety solutions, which resulted in the continual updating of our mutual expectations around nurses behaviour in relation to falls-aware practice. Instead of being told what to do solely through policies and guidelines, we contended that it is the staff delivering the care who hold the answers to improving the safety of care. At that time, our belief was that behaviours spread through social groups by imitation, thus, if one nurse (particularly, an influential nurse) acts in a certain way, this increased the likelihood that others will follow this individual's behaviour through role modelling (Buchanan 2007). Because this approach has focussed on behaviours (and behaviours are habitual), we contend that (as evidenced by the consistent falls rate in recent years) that because habits are hard to break sustainability is built into the programme for reasons explained below.

Staff were encouraged to develop practical ideas on how they would prevent the patient falling again. All ideas were embraced and tested through constant measurement of the wards falls rate. Through countless iterations, the expectations around falls-aware practice evolved. For example, an early expectation was that a patient with a high falls risk should have a rapid response when they use the call bell, this becomes a habit, but the patient still falls as they are left alone in the toilet. The expectation is then that the patient's call bell is answered rapidly and that a member of staff waits for the patient whilst they are in the toilet in order to accompany the patient back to bed. This challenged the notion of 'best practice' as something fixed, towards it being understood as something which is continuously evolving and being re-tested in a local context. It also problematised the idea of 'best practice' as a simple rule to follow - devoid of the need for re-evaluation and consideration of the application of the rule locally. For example - weighing up the competing values such as 'patient safety' with others like 'maintaining dignity' when choosing whether to remain present whilst the patient uses the toilet. If a familiar practice delivers an outcome which is

unexpected or detrimental, it makes sense to re-evaluate whether or not it is still the right thing to do. If not, an alternative emerges through acts of group reflection in the AAR. If that worked, we found the revised practice becomes habituated because it then seemed the obvious thing to do. This is in line with the pragmatic tradition which underpins our approach. (Stacey & Mowles 2016).

Our continued focus on expectations, and the evolution of these expectations in conjunction with the immediate discussion and re-examination of our expectations of 'falls-aware' behaviour meant that learning from each specific fall was immediately translated into practice rather than through a written action plan to be enacted at a later date.

When talking about our work, we are often asked for practical examples of what we do. Our policy is that all patients are risk assessed on admission for any known risk factors that may precipitate risk of falls. These include age, whether there is a previous history of falls, mobility, level of comprehension, any sensory impairment, medication, sleep patterns, neurological problems, continence. Other factors such as alcohol abuse, anticoagulant therapy, postural hypotension, recent surgery, sepsis or epidurals are also taken into account.

The assessment chart includes practical suggestions (see Table 1) for how staff can mitigate the risks of their patients falling, ranging from practical issues like ensuring the bedside area is clutter free, through to measures such as the need for increased supervision and observation, consideration of 1-1 specialing, and the implementation of our multidisciplinary visual observation chart. Consideration is also given to the use of a low-level bed and the patient is assessed for suitability for a bed or chair alarm. In the event of a patient falling, an algorithm is followed for post-fall management and care. Each fall is reviewed to ensure lessons are learned, as outlined above. This may include further revision of both the risk assessment tool and our falls action care plan for that patient.

Table 1 : Falls Interventions
1. Ensure call bell within reach, is working and patient can use it (consider other ways of communication

if required)
2. Ensure footwear is non-slip, low heeled and well fitting. Check hospital slipper socks daily for grip. Check feet, refer any problems to podiatrist.
3. Ensure spectacles are within reach and are clean
4. Urinalysis to be taken on admission. Respond to requests for toilet facilities with urgency no more than 5 minutes (consider communication needs)
5. Ensure correct use of hearing aids
6. Assess needs / ensure walking aids are appropriate and within reach at all times
7. De-clutter bed space
8. Ensure personal belongings are within easy reach
9. Discuss normal activities of daily living with patient & carers
10. Nurse in high visibility bed
11. Nursing staff to accompany/be within arms reach of patient for high risk activities i.e. dressing, toileting etc
12. Assess frequency of “Comfort/Toileting rounds”. implement toileting chart
13. Request medication review is undertaken on ward round
14. Perform bed rails assessment
15. Consider referral to falls clinic
16. Refer to physiotherapist for range of movement, strength, balance and/or gait exercises
17. Identify risk of falls on handover sheet; ensure that all staff are aware of risk status
18. Check Lying and Standing B/P using manual sphyg at least three times a week at different times of day. Report any postural drop to medical staff for their review.
19. Assess the need for increased supervision/observation- consider one to one specialing
20. Implement Multidisciplinary visual observation chart
21. Consider low level bed
22. Assess for suitability for bed/chair alarms

The focus was on exploring each fall and finding solutions within the existing resources. As the falls rates fell, we asked staff what had made the most difference. One replied, 'I don't know, but preventing falls just seems more at the front of my mind.' It was also noticeable that staff were beginning to behave differently, for example, asking if a patient was high risk before they were transferred into their ward and automatically putting them in a high visibility area if they were. Or, accompanying the patient to the toilet and waiting for them rather than leaving alone in the bathroom. These subtle shifts in behaviour and in how staff were talking about falls have, we argue, collectively made a big difference to the falls rate, as outlined in the results below.

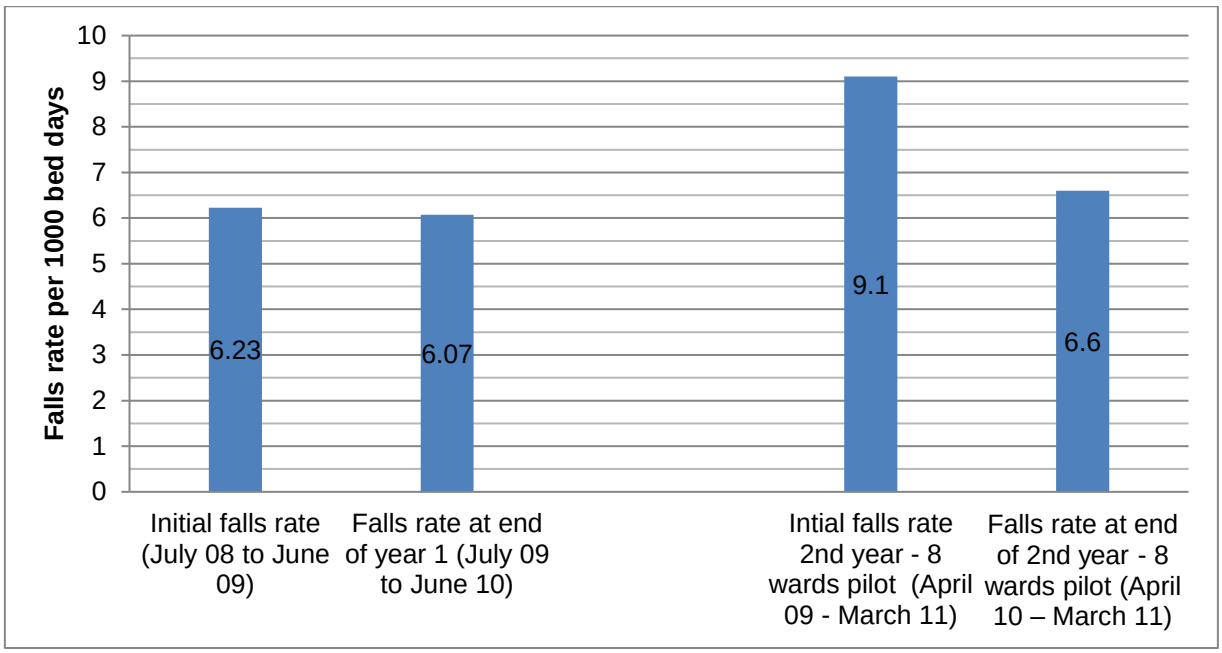
Results

In the second year, as well as changing the theoretical approach to the project, we also curtailed its ambition by focussing on one geographical block which housed eight elderly care and medical wards. This block was chosen as it accounted for almost a third of the falls in the Trust and the wards had some of the highest falls rates in the hospital. During the first year, these eight wards reported 484 falls at a rate of 9.1 falls per 1000 bed stay days. In the second year, the rate of falls was reduced by 29% to 6.6 falls per 1000 bed stay days. As Table 1 illustrates, six of the eight wards reduced their falls rate during 2010-11.

Table 1: Falls Rate for the eight wards involved in the second falls project

Ward	April 09 - March 10		April 10 - March 11		% Difference in falls rate 09-10 to 10 – 11
	Reported Falls	Falls Rate per 1000 bed days	Reported Falls	Falls Rate per 1000 bed days	
Ward 1	32	5.3	32	5.3	-0.3
Ward 2	75	11.5	36	5.0	-56.3
Ward 3	28	3.3	42	5.3	60.6
Ward 4	104	16.2	59	8.0	-50.5
Ward 5	39	4.3	60	7.3	47.2
Ward 6	51	8.2	42	5.7	-30.6
Ward 7	54	9.57	43	6.9	-28.3
Ward 8	103	16.3	63	9.4	-42.5
Total	484	9.1	376	6.6	-27.5

Figure 1: Results of First Year Trust Wide Project and Second Year 8 Ward Pilot



During 2011-12, the BSUH project expanded to focus on reducing the rate of falls across an additional 31 acute inpatient wards, which between 2011-19 accounted for 84% of the Trust's total number of falls. Areas excluded from the programme included intensive care, maternity and paediatrics as these areas had a relatively low rate of falls. Accident and Emergency were also excluded as they do not have beds and therefore it was not possible to calculate a rate, similarly outpatient clinics, discharge lounges, dialysis units and day case areas etc. were also excluded.

Table 3 and Figure 2 illustrate, the annual falls rate has continued to decline with a rate of approximately 3.4 falls per 1000 bed days being sustained over the past 5 years, (despite the absence of the senior nurse who left the Trust in 2016)[1]. By the end of 2018-19, the overall reduction in falls was 46%, based on the rate in 2010-11 of 6.23 falls per 1000 bed days. Based on costing's from NHS Improvement, the 5108 fewer falls between 2011 and 2019 saved the Trust £13.3.

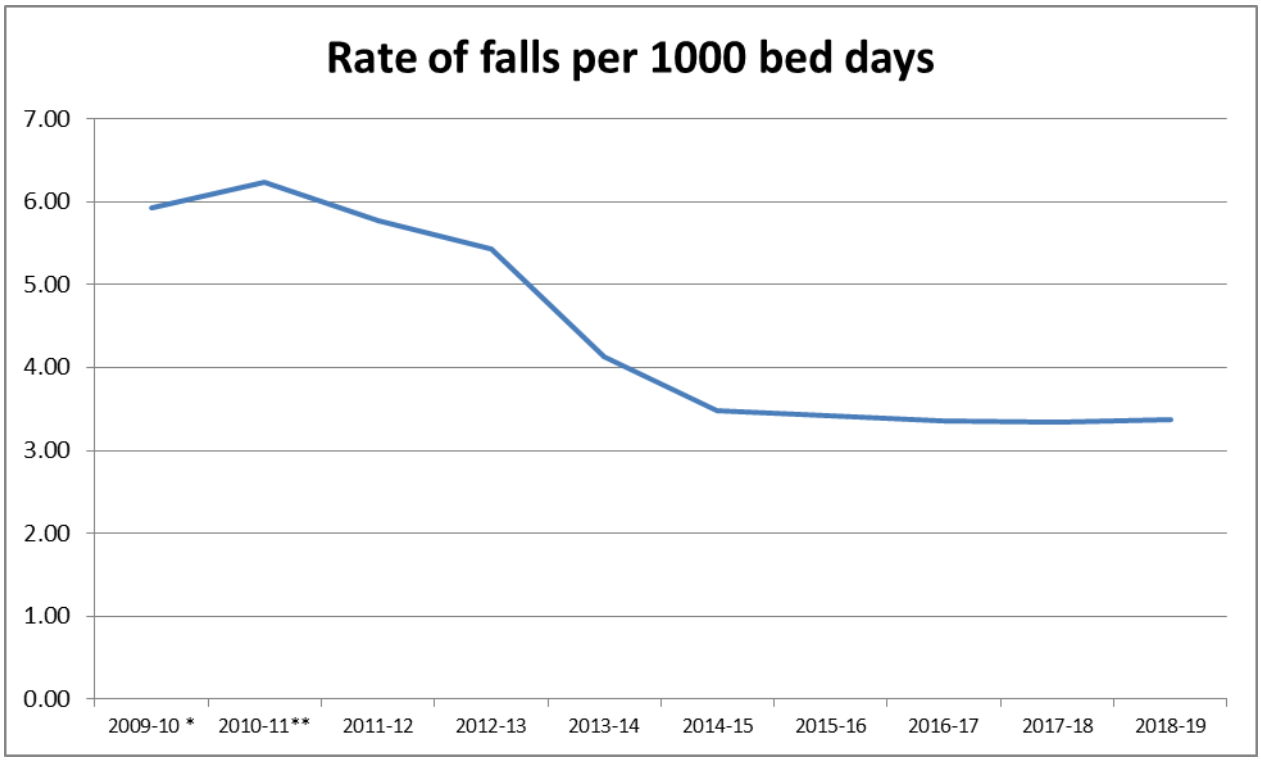
[1] For reference: between 2009 and 2018 the Trust opened new wards and closed some services, for the purpose of consistency analysis in the paper only contains data on those wards that remained unchanged. We were conscious that the measurement of the impact of this initiative was reliant on self-reported data (clinical incidents). Throughout the initiative we constantly monitored the distribution of reported falls each day using the Poisson distribution. This approach allowed us to calculate the probability of a certain number of reported falls on any particular day, whilst comparing to the actual number of reported falls. Over the duration of this project course compliance or fit against the Poisson distribution curve rose from 86.8% in 2009-10 to 94.2% for the wards involved in the Second Falls Project. A finding that suggests the focus on falls did encourage a greater level of reporting.

The 2015 audit by the Royal College of Physicians reported that the national falls rate was 6.63 falls per 1000 bed days, fairly similar to BSUH's falls rate in 2010. (Prior to the Trust's falls project commencing, the Trust falls rate in 2015 was 48% lower in than the national average).

Table 3: Falls rate and number of falls 2009-19

Year	Reported Falls	Bed Days	Falls rate per 1000 bed days	Cumulative % Diff since 10-11	Number of falls saved (based on rate of 6.23)	Financial Saving
2011-12	1401	242553	5.78	-7.27	110	286,273
2012-13	1356	249497	5.43	-12.75	198	515,752
2013-14	1088	263285	4.13	-33.66	552	1,435,890
2014-15	895	257454	3.48	-44.19	709	1,843,240
2015-16	896	261827	3.42	-45.06	735	1,911,474
2016-17	877	261603	3.35	-46.18	753	1,957,245
2017-18	845	252819	3.34	-46.34	730	1,898,162
2018-19	862	255091	3.38	-45.75	727	1,890,764
Total	8220	2044129			5,108	13,280,539

Figure 2: Rate of Inpatient Falls 2009-18



Discussion

It was evident at the early stages of this initiative that there was a generalised attitude and belief that falls were largely unavoidable and therefore it was accepted that patients may fall whilst in hospital. Our work together over the last ten years has reinforced the project team's belief that understanding how such nursing behaviours and beliefs arise is the key to reducing patient falls. The initial hunch about the importance of imitation and positive role modelling in facilitating falls safe behaviour and habits to spread through our ward based teams was a helpful starting point, but a research grant and subsequent study enabled a more detailed understanding about the processes involved in changing professional values and norms regarding falls safe practice (Norman et al 2015).

Our findings built on and developed our initial assumption (informed by change and educational theories we had worked with over the years), that we learn through mimicking others more experienced or powerful than ourselves, and that knowledge is something that is transferred from an expert to a novice, to a different understanding of behaviour change drawing on the pragmatic

tradition (Mead, 1934). It became evident from our research that there was much more going on in the complex social interaction between the senior nurse and staff than 'role modelling' or simple mimicry.

By adopting the AAR framework in the way described, where reflexive conversation, rather than completion of the clinical incident investigation form (previously normally completed by the most senior staff for expediencies sake, if at all), was the main focus, the project team recognised that that the practising nurses and healthcare assistants often held the solution to many complex safety and quality problems. Thus the specialist expertise of the senior nurse involved the skilful facilitation of the debriefing, providing reflexive space in which she and others were able to have potentially difficult conversations about who had done what and why. We recognised that such conversations had often been avoided, because they may cause conflict and provoke strong emotions, especially if the patient has sustained a serious injury. Staff reported feeling guilty, ashamed, angry and blamed - both with themselves and with each other. They often found it hard to talk about such feelings: both because of fear of being blamed themselves, or of upsetting others by calling their professional judgement and practice into question. This is consistent with pragmatist John Dewey's definition of definition of reflection as 'the painful effort of disturbed habits to readjust themselves.' (Dewey 1922). Thus as our habits become problematic in each local context, we formulate conscious ideas which are tested through active action, i.e. in this way of thinking, thought *is* action , rather than something that precedes it, as assumed in the action planning activities described earlier. The AAR debriefing provided the opportunity for the team to develop a shared understanding about possible causes for each fall, and renegotiate together whether their habitual practices (norms) for falls prevention were fit for purpose in their specific local environment. In this way of understanding, learning arises from their shared reflection about a specific incident, after which it no longer makes sense to follow previous habits of practice. This is because staff expectations about the possibilities of the outcomes of their actions/inaction are no longer the same, due to the insights gained from hearing others perspectives about what happened when a patient fell, why they all did what they

did, and the unforeseen consequences of their own and others actions. Although initially anxiety provoking for all concerned, as the debriefings became the norm and valued by those participating, something seemed to shift, with staff coming to see themselves as having the potential to influence the emergent patterns of practice in their ward; both by their actions and omissions. Subsequent research (Norman et al 2015), helped us to recognise that what also shifted fundamentally was how staff were talking more frequently about preventing falls, and also how they were talking about this topic. As Shaw notes: 'Conversation itself is the key process through which forms of organising are dynamically sustained and changed.' (Shaw, 2002). We concluded that the capacity of the team to keep alive this narrative theme and its ongoing evolution may be one of the main reasons for sustaining the lower falls rate after the Senior Nurse Leader left the project.

The subsequent wider conversations between wards in this growing community of practice identified generalised themes about what constituted falls-safe practice and these were then re-tested and adjusted once again in each specific ward situation. As one clinical manager noted in one of our focus groups when asked what had changed their mind:

'So what's changed is that, rather than "okay we've had a fall last night, okay, is she alright? Yes, she is fine." It's; "you've had a fall; have you done the after action review? Yes. What was the learning? What have you done now? What actions have you put in place to remove that? Well, I've moved that patient into a high visibility bed. Or: have you put the falls alarm on? Or: if you haven't got one, well, this is what you would you like them to do on the day shift. It's just linking it all, in a more intelligent way, rather than, "What a shame, is she okay? Is she fine, Okay, well then, fine." and just moving on, rather than learning from that. And I think that learning comes over time, you don't instantly learn over, you know, after one after action review, it's that knowledge we're building on a ward, within that community, to allow them to see things and prevent them before they happen. …You know, what's been done, it's like, instinct, it's a normal reaction for this to the information, this is what we've done, and this is what we going to do to prevent it. I just think we are more intelligent.'

So rather than seeing 'best practice' as something located 'in' an expert who empowers others, or a policy or guideline, we now see this as an ideal, a value, which is constantly tested in practice, which may require further investigation and need revising when this fails to deliver what was expected or we are surprised in some way. We also learnt that nurses' knowledge of falls prevention was seldom the problem in terms of falls awareness when assessing and documenting the risk of patients falling. Which helped explain why approaches like ensuring staff are aware of policies and guidelines whilst having some impact, on their own, failed to yield the more radical improvements shown from Year 2 onwards. The real challenge arose when staff had to make contextual judgements about falls safe practice in complex situations, with competing priorities, in which every patient and each ward setting is slightly different and best practice is more nuanced than simply following the protocol, as in the above example, where beliefs about patients' dignity and privacy conflicted with those of safety when deciding whether or not to stay with a frail patient whilst using the toilet.

Rather than now seeing falls solely as either a 'systems' problem, (system failure), or one that locates the cause of the fall with individual staff, (poor performance or lack of competency), as informed by the traditional improvement methods taught at the start of the project on 2009, our falls reduction programme drew on insights form complexity science and its helpful concept of emergence. In this way of thinking, a fall is understood as an event that emerges out of the micro-interactions between nurses and their patients, i.e. because of what everyone is doing/not doing. From this perspective, relationships are fundamental and falls happen emerge from complex interactions, not in isolation. This understanding emphasises the importance of the interactions *between* individuals, groups and their environment, since this determines the prevailing culture and the likelihood of a patient falling. Rather than solely training staff about techniques of falls prevention, as in the first year of our project, the senior nurse also worked with ward teams, supporting ward managers in facilitating post falls debriefs. We concluded that it was during her conversations with staff about their expectations of their 'fall safe' interventions in the light of each specific fall that new insights emerged about fall safe practice which were either accepted or rejected. In that sense, we now see such reflexive

conversations as ‘the work’ of the change. If staff come to see that a previously regarded intervention has the potential for harm, this is called to mind next time another intervention is called for, and usually it no longer makes sense to carry on doing what they did before. Or at the very least, they are able to imagine how they would give an account of their choice in the light of what they had learned. Because of the nonlinearity of these interactions small changes can have large effects. The falls rate in the Trust has come down progressively since 2010. By the project leads participating and co-creating a habitual way of reflecting together with those involved in situations in which patients have fallen, different conversations and practices emerged and the culture and the narrative in relation to falls has shifted away from seeing falls as an inevitable part of a patient’s pathway to frailty. It is important to note that we are not suggesting there is a ‘special’ way of communicating which individuals can learn. A central insight from our work (backed by the initial hunch of the project lead regarding how poor practice might spread) is that is in our ordinary everyday complex processes of relating: how we converse about who we are and what we think we are doing that cultural patterns of behaviour emerge. These are then judged retrospectively (and sometimes differently) by ourselves and others to be either ‘good’ or ‘bad’ practice. Our work has emphasised that teamwork is a practice, often involving conflict, as values and expectations are contested and renegotiated. Keeping wider perspectives than our own in view may help offer a broader range of choice to staff facing complex situations where there may be conflicting safety demands which they have to prioritise.

We argue that it is this process of habitual reflection that has led to the emergence of new behaviours. The fact that the behaviours tend to be habitual also explains the sustainability of the falls rate after the nursing lead left the Trust in 2016.

Our experience over the past ten years has led us to conclude that a substantial number of inpatient falls are preventable. It is an old adage that ‘conversations are the mainstay of safety.’ Which is why our approach emphasised the importance of paying careful attention to how people are talking about them. If these results were replicated across the NHS this would equate to 105,800 fewer falls

per annum: a saving of £275m. As one Ward Manager said: if we'd invented a pill that halved the rate of falls in hospitals, why wouldn't we take it?

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