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Creating Learning Environments for Compassionate Care (CLECC): The implementation and evaluation of a sustainable team-based workplace learning intervention

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Glossary

CLAHRC	Collaboration for Leadership in Applied Health Research and Care
CLECC	Creating Learning Environments for Compassionate Care
FTE	Full-time equivalent
HCA	Health care assistant
IHOS	International Hospital Outcomes Study
JSE	Jefferson Scale of Empathy
LQ	Lower quartile
MBI	Maslach Burnout Inventory
MOP	Medicine for Older People
NHS	National Health Service
NIHR	National Institute for Health Research
NPT	Normalization process theory
PDN	Practice development nurse
QuIS	Quality of Interactions Schedule
RCT	Randomised controlled trial
RN	Registered nurse
SD	Standard deviation
T1	First outcome assessment period
T2	Second outcome assessment period
UK	United Kingdom
UQ	Upper quartile

Abstract

Creating Learning Environments for Compassionate Care (CLECC) is a theory-based workplace learning intervention focused on developing sustainable leadership and team practices (dialogue, reflective learning, mutual support) theorised to support positive nursing and patient experiences of care. Building on previous research, this research aimed to implement enhancements to the CLECC intervention and to evaluate its impact and longer-term sustainability in improving staff retention and care quality in acute hospital nursing teams.

We implemented two new versions of CLECC: a "boost" version on two wards, that is team activities scheduled for a period of time after the initial CLECC implementation period to refresh CLECC ideas and boost CLECC activities and principles (CLECC1 Boost); and, on two wards in a different hospital, an enhanced version that included additional features with a focus on improving managerial support for CLECC (CLECC2). We measured nursing burnout, intention to remain, retention, empathy and quality of staff-patient interactions before and several months after implementation. We used qualitative methods to evaluate the processes of implementing and sustaining CLECC over time.

Different teams engaged differently with CLECC and the degree of engagement shaped its impact and sustainability over time. Implementation depended on ward manager and senior manager engagement and commitment to CLECC, and an alignment between CLECC, individual manager and wider organisational valuing of staff well-being and learning. We did not detect notable change in the outcomes measured. Qualitative findings that staff perceive benefits of CLECC to their own well-being and to patient care are consistent with findings from our earlier research.

Conclusions: CLECC is feasible to implement and may be of benefit in acute care settings when the local conditions are conducive. When conditions are not conducive, it may not be possible to implement CLECC or, if initially implemented, not possible to then sustain it. Organisations and individual teams considering CLECC may benefit from a "diagnostic check" to assess their readiness to participate, and an assessment of how wider organisational structures and processes may need modifying to support CLECC and its implementation over time.

Introduction

UK nurse retention problems and their consequences are well-documented.[1][2] Interventions to address retention are often costly and yet very little is known about what works and why. Research suggests that investment in positive practice environments is linked to better nurse retention and measures promoted include nurse participation in hospital affairs, autonomy to act, opportunities for professional development, nurse manager leadership capacity, staffing and resource adequacy and relationships with physicians.[3] However, intervention studies to date are mostly poorly designed and small-scale, providing insufficient detail on interventions used, and weak evidence of actual effectiveness and the contexts in which effectiveness is achievable.[3-6] Existing research evidence provides inadequate guidance to those seeking to support staff wellbeing and retention, and a step-change in the scale and quality of research in this field is needed.

Responding to a general absence of strong evidence for the effectiveness of strategies related to improving staff wellbeing (and thus retention) and care quality, and building on evidence indicating the potential for strategies targeted at improving leadership and local ward team climate, this study was designed to help address the need for well-designed and rigorous evaluation to understand what works best in terms of impact and long-term sustainability.

The study focuses on the implementation and evaluation of a workplace learning intervention called Creating Learning Environments for Compassionate Care (CLECC).[7] The work reported here follows on from an earlier phase of research.[8]

In the earlier phase, the National Institute for Health Research (NIHR) funded a feasibility study of CLECC1 with nursing teams in six wards in two NHS acute hospitals between 2015 and 2016.[8] The study used an experimental design and associated process and economic evaluations. Ward nursing teams were randomised to intervention or control. The implementation period for this original intervention was June 2015 to September 2015. Some aspects of this work were also supported by the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Wessex.

Interviews with nursing staff at all levels and observation findings confirmed that CLECC activities (p.10) were workable and most could be integrated with existing practices.[8][9] Mid-shift cluster discussions and away days seemed to provide all team members with novel opportunities to engage with colleagues, to reflect together and to offer support. Findings indicate that staff appreciated and were able to make use of these opportunities, resulting in reported benefits to personal well-being and capacity to care. There was also positive engagement with the away days, with 100% of staff attending and qualitative feedback reflected positive staff perception as to their benefits, such as "improved empathy and understanding". However, it was also clear that there was variation between individual ward teams in the extent to which CLECC activities had become embedded in practice, with two wards in one hospital not able to sustain the activity beyond the four-month implementation period. The findings, and the randomised controlled trial (RCT) piloting that also took place, laid the groundwork for further development and evaluation of CLECC, including assessing its longer-term sustainability. Further details of study findings were published in journal papers.[8-11]

In 2016, the Burdett Trust for Nursing funded further work to assess enhancements to the CLECC intervention and to further understand impact and longer-term sustainability. Some intervention funding at one Trust was provided by NIHR CLAHRC Wessex. This report details the findings from this later phase of the research.

The project reported here aimed to implement enhancements to the CLECC intervention and to evaluate its impact and longer-term sustainability in improving staff retention and care quality in acute hospital nursing teams.

Its specific objectives were:

1. Implementation: to implement two new versions of CLECC:

    a. a "boost" version of CLECC, involving team activities scheduled for a period of time after the initial CLECC implementation period to refresh CLECC ideas and boost CLECC activities and principles (CLECC1 Boost)

    b. an enhanced version that includes additional features designed to improve managerial support for CLECC (CLECC2)

2. Process evaluation: to use qualitative methods to evaluate the impact of implementing and sustaining CLECC over time, including follow-up of the original CLECC ward teams.

3. Outcome assessment: to examine impact on nursing burnout, intention to remain, retention, empathy and on quality of staff-patient interactions; and to contribute to the design of a future definitive evaluation.

Figure One illustrates an overview of the three versions of the CLECC intervention implemented in the overall CLECC programme of work, and the methods used to evaluate the implementation and impact at each stage. As explained above, this report focuses on the research involving CLECC1 Boost and CLECC2 versions.

Figure 1: Overview of CLECC study

CLECC1	CLECC1 Boost	CLECC2
Wards A, B, D, E (plus control wards C&F) **June–Sept 2015**	**Wards D, E** (no control) **Oct 2017–May 2018**	**Wards G, H** (no control) **April–June 2018**
Baseline + 12 month follow-up: Quality of staff-patient interaction; Patient evaluation of emotional care; Nursing staff empathy	Baseline + 12 month follow-up: Quality of staff-patient interaction; Nursing staff empathy; Nursing staff burnout	Baseline + 12 month follow-up: Quality of staff-patient interaction; Nursing staff empathy; Nursing staff burnout
Process evaluation	Process evaluation	Process evaluation

Hospital Trust A: wards A, B, C   Hospital Trust B: wards D, E, F   Hospital Trust C: wards G, H

Dates shown in figure are implementation period dates

Ethical approval for the research was granted by the National Social Care Research Ethics Committee 14/IEC08/1018.

Implementation

CLECC is a theory-based workplace learning intervention focused on developing sustainable leadership and team practices (dialogue, reflective learning, mutual support) theorised to support positive nursing and patient experiences of care.[7] Nurses' relational capacity can depend on ward level conditions, and low relational capacity may mean that nursing staff avoid relationships with patients and burn out, despite aspirations to a higher standard of care.[12] CLECC uses workplace learning principles to develop practices that enhance the capacity of the leader and work team to support the ongoing relational capacity of its individual members. This leadership and team capacity are key characteristics of the ward-level conditions needed to support nurses in their work, and thus improve staff and patient experiences.

CLECC's 3-4 month implementation period is the starting point for each team's engagement with the CLECC programme. The implementation period is facilitated by a senior Practice Development Nurse (PDN), and includes a combination of set activities that represent expansive workplace practices, with a view to embedding these practices to support sustainability: regular CLECC meetings between ward manager and matron, ward manager action learning sets, including one focused on influencing senior managers; team learning activities, including climate analysis and values clarification; peer observations of practice; team away days; mid-shift five-minute cluster discussions; and twice weekly reflective discussions. Teams also develop a plan to be shared with a senior hospital manager that includes sustainability measures for practices that underpin the delivery of compassionate care. Table 1 illustrates the implementation period activities for CLECC1. The additional CLECC2 activities are shown in italics.

Table 1: CLECC activities

Activity	Month 1	Month 2	Month 3
Ward manager action learning sets	Session 1/setting up, setting ground rules	Session 2/workplace climate/ team values/valuing staff	Session 3/enhancing team capacity for compassionate care, influencing senior managers.
Team away day (all staff)	Team analysis of workplace climate. "I feel valued at work when…" exercise	-	-
Sustainability plan	Introduce and discuss	Discussion and draft by ward manager and team	Finalise, identify resources needed to support, present. Senior manager feeds back response to team plan.
Senior management engagement	*Train, discuss, agree their CLECC support role*	*Ongoing/review role*	*Ongoing/review role*
Ward manager/matron meetings	Introduce and discuss	Ongoing – every two weeks	Ongoing – every two weeks
CLECC champions	*Appoint and train*	*Ongoing/review role*	*Ongoing/review role*
Trust education team	*Train practice educators linked with team, agree their CLECC support role*	*Ongoing/review role*	*Ongoing/review role*
Peer observations of practice	Identify two volunteer observers from staff team	Train observers	Observations of practice and feed back to colleagues
Mid-shift cluster discussions (all staff)	Ongoing	Ongoing	Ongoing
Reflective discussions (twice weekly)(all staff)	Team values clarification exercise;[13][14] Best Practice for Older People activities[15]	Feedback from team analysis of workplace climate, and "I feel valued at work when…" exercise	Sustainability plan discussions

Activities shown in italics are activities added in CLECC2

CLECC1 Boost intervention

Findings from the earlier phase of the study indicated that a one-off implementation period may not be sufficient for some teams to sustain CLECC activities for long beyond the implementation period, particularly if team membership changed over time, and if a new ward manager joined the team. We were interested to find out if an additional period of facilitation, that focused on the individual team's development needs and progress to date with CLECC, would be helpful in refreshing CLECC ideas with the team and boosting CLECC activities and principles. Following agreement with senior managers and the two ward managers, the boost intervention (CLECC1 Boost) was delivered to two of the CLECC1 ward teams between October 2017 and May 2018, beginning two years after the end of the original implementation period.

We originally planned that the ward managers plus team members appointed as CLECC champions would be able to implement the boost with some support from an external facilitator. After attempting this over a five-month period, it became clear that teams did not have the capacity to take on and lead this work. Funded by NIHR CLAHRC Wessex, a Practice Development Nurse (PDN) was then employed for 15 hours a week for a three-month period (March to May 2018) to lead delivery of the boost. At an early stage, because of the passage of time and turnover of staff since CLECC1 (including a change of ward manager on both wards), the original set of CLECC activities was considered as a way of revisiting CLECC. However, because of staffing pressures, it was not possible to release staff for away days, and so repeating the full CLECC implementation period was deemed to be impossible. Instead, it was agreed with managers to appoint CLECC champions with the role of disseminating CLECC information to their colleagues. Two members of staff from each ward were identified and a half day release per week of these staff to attend CLECC training was agreed.

CLECC2 intervention

Following the evaluation of CLECC1, an enhanced version of CLECC, known as CLECC2, was developed with the addition of other activities aimed at:

1. a clarification of the matron and other senior nurse manager roles in supporting the team to engage in CLECC practices;

2. making sure that practice educators linked with participating teams understood about CLECC and saw their role in supporting the team to implement it;

3. ensuring on an ongoing basis that new staff joining the ward team were inducted to CLECC;

4. promoting ownership of CLECC by appointing team members as CLECC champions.

An implementation period for CLECC2 was delivered by a Practice Development Nurse (PDN) to nursing teams on two hospital wards over the period April to June 2018. These wards belonged to a hospital that had not previously been involved in the CLECC study. Multiple away days were held for each team, as it was not possible to release staff from the ward all at once.

This section has outlined the CLECC programme and explained the two versions of CLECC (CLECC1 Boost and CLECC2) piloted in this research. The following section focuses on the implementation of CLECC1 Boost and CLECC2, and on the longer-term follow-up of the teams involved in the original NIHR study.

Process evaluation

Methods

The evaluation of implementation aimed to identify and explain the extent to which the CLECC intervention had been implemented and sustained over the longer term, including following up the teams involved in the original NIHR study. The evaluation used Normalization Process Theory (NPT)[16 17] to focus on:

– how and in what ways CLECC was received, how individually and collectively people understood and made sense of it;

– the degree of ownership of and participation in CLECC by key individuals and teams during and following the implementation period;

– the work that individuals and teams did to enact new practices associated with CLECC during and following the implementation period;

– the perceived impact of CLECC on staff work and patient outcomes.

Semi-structured interviews were conducted at three hospitals as follows: i) interviews with nursing staff, managers and the PDN on the two wards where the CLECC1 boost was implemented (CLECC1 Boost); ii)) interviews with nursing staff, managers and the PDN on the two wards where CLECC2 was implemented (CLECC2) ii) interviews with nursing staff and managers on one ward where CLECC1 had been successfully sustained (CLECC1 sustainability). Interviews took place after the implementation period was complete, were up to one hour long and took place within the hospitals. We attempted to sample staff to ensure representation across staffing bands. All interviews were audio-recorded and fully transcribed.

Implementation processes were examined by using NPT[16 17] to inform data collection and analysis. Qualitative data were analysed using systematic reading, familiarization and coding of the data, undertaken by one researcher, with discussion of these with a second researcher.

Process evaluation: CLECC1 Boost

Participants
Interviews were conducted with the PDN, both ward managers, one other member of staff (Band 5) from one of the wards, and 5 other members of staff (two Band 2s, one Band 4 and two Band 5s) from the second ward.

Context
Previous evaluation work indicated that the original CLECC intervention had not become embedded on target wards in one of the participating hospitals (Wards D and E, Hospital B). This finding was reinforced in the current interviews, which indicated that CLECC activities had not continued for very long beyond the departure of the CLECC1 Practice Development Nurse (PDN) from the wards:

> "[The PDN] was very good and if she came up to the ward then we would definitely do our cluster meetings and things like that. But the nurse who was on the ward who was supposed to be kind of getting us all involved didn't really do that. So, as soon as the PDN sort of left it kind of just stopped." (Band 2)

People who had taken part in the original training still understood CLECC and its purpose. As found previously, the cluster discussions were remembered and valued more than other CLECC activities. The reported value of these "clusters" was for team working, support, sharing of workload, and information exchange:

> "the clusters, I just happen to think that did help make everyone feel that they were sort of, you know, valued and supported maybe a bit more than--- more because you had that, sort of, five minutes to say: "oh, no, I'm really struggling" or--- or, you know--- or: "I've got a poorly patient" or whatever. Do you know what I mean? So, I definitely feel as a--- as a team it helped sort of make us feel more of a team." (Band 2)

For this project, a PDN was reinstated on the wards in order to implement a three-month long boost to the CLECC1 initiative. However, the PDN had difficulty trying to implement the boost as planned. Interview analysis indicates a number of challenges to implementation, which are presented below.

Staff understanding of CLECC
At the start of the CLECC boost, there was a lack of collective understanding of CLECC. Staff turnover meant that few of the current ward staff, neither of the ward managers nor the matron (who oversaw several wards including the two boost wards) had been present for the original CLECC training.

> "Although, I'd heard the bits that people liked, I didn't know the ins and outs of the CLECC study. So, people used to come and tell me which parts of it they liked and: "can we get back to that?" I had a lack of understanding." (Ward Manager)

Staff pressures meant that the PDN was not able to rerun the CLECC away days and instead attempted to recruit CLECC champions to help introduce staff to CLECC ideas. Interviews revealed little awareness of CLECC boost activity beyond the ward managers and champions themselves.

Staff commitment to and engagement with CLECC
The PDN worked hard to promote engagement with CLECC while on the wards. There appeared to be a lack of commitment to and engagement with the CLECC boost from the ward leadership. CLECC was not a priority for the ward managers, who did not/were not able to organise their work or that of the ward in order to contribute:

> "it wasn't as if they said it was a bad idea but they just didn't (pause)--- they didn't seem as invested in it as, I think, they maybe needed to be for it to run well." (PDN)

> "with lack of management time, lack of staff, you know, it was on my list of things to do but not very near the top unfortunately." (Ward Manager)

The PDN found it very difficult to organise meetings with the ward managers and matron in order to discuss a way forward for the CLECC Boost. She also met with challenges trying to instigate the CLECC champion role; for instance, champions were allocated a half day during their working week for CLECC meetings and activities, but in reality they were counted in staff numbers at that time and one ward manager changed the people to be champions, (previously chosen by someone else) towards the end of the implementation period. The one champion who was interviewed did not feel empowered by her

ward manager to undertake the role on a day to day basis, the lack of empowerment also reflected by the ward manager herself:

"I was thinking, 'well maybe, I like it so much, maybe I should, maybe I should just (pause)--- just take the cluster meeting' There's nothing to stop me doing it really. I could go up to the ward, I, I could just go up there and get an update from them and just say, "oh, anyone going? What's the news? And..." I was contemplating it anyway but then I thought, 'I'll ask the boss first'" (laughing). (CLECC champion)

"I think I need to empower my champions and that to say, 'do you know what? It's your project as such, you are the lead for it. So, actually that's not me telling you, you need to take ownership'. So, I actually need to say to them, 'this is for you' and 'I will support you in all of those things and if you're struggling to get people to come, speak to me and I'll try and initiate that'. But for them--- for me to say to them, you know, crack on really. (Ward Manager)

On one of the wards, there was suggestion that some of the lack of engagement may have been due to a perception that CLECC was not very different to the way the ward was already working. There were accounts during interviews that they were already a good team, were already doing compassionate care, that senior staff were supporting other staff, and some defensiveness about being told to do compassionate care. For example:

"we were doing the almost same care. Explaining to the patient and doing everything. But CLECC was a bit more emphasising like, you know, we had to do it and so." (Band 5)

"I have my shift leaders who are normally our band 6's. Very much that throughout the day they go down to the team and see if everyone's OK. If they're up together. And if we need help from other teams they bring it down. So, it doesn't come together as a group but it sort of happens in trying to just keep the momentums running and, you know..." (Ward Manager)

In addition, one interviewee mentioned the challenge of trying to reinstate an intervention which had failed to become embedded:

"to try and relaunch it again, it's gonna be like: "well, it didn't work last time". That's what you've got to work around." (Band 2)

There was suggestion by one interviewee that it might not be legitimate to take part in CLECC, that it was not right to 'stop working' to join CLECC activities:

I think it looks bad if it's, you know, if there's relatives on the ward. Looks like we're all standing having a chat. They don't even like seeing you, you know, if you're standing having a handover, because we walk round, have a handover so that we can meet our patients, you know, it, people will say, "oh, but you girls are just having a chat. Can you come over here?" I'll say, "we're not just having a chat." (Band 5)

Operational work and barriers to implementation

The PDN was not able to initiate CLECC activities on the wards. The key barrier appeared to be lack of time, often caused by staffing shortages. This impacted on implementation in a number of ways: it was not possible to release staff from the ward for another round of study days; managers had little time to focus on CLECC; lack of time for champions to meet in order to plan and organise CLECC activities and lack of time to fit activities into the working day:

"So, I think (sigh), it ultimately boils down to time and staffing. That would be--- if we had our full account of staffing and I got all my management time that I'd--- you know, rotas to be up to date and sicknesses would be almost up to date. If all those things were in control from a managerial point of view, I'd have more time to step out and go: "let's do this". But it's the--- every minute of my time in my office, I'm like, "oh goodness, I'm so far behind". (Ward Manager)

"if our staffing numbers were slightly better--- they don't have to be massively better, they just have to be slightly better, to get some people to take ownership. But, at the moment, because it's so busy you can't--- I don't feel I can ask anyone to do anything they're not already doing because it's hard enough as it is" (Ward Manager)

The original CLECC evaluation found that the implementation of CLECC was mediated by the priorities of the wider hospital organisation and the resources available to the ward team.[9] This fact was also clear in attempts to implement the CLECC1 Boost at a time of staff shortage, when CLECC was not the main priority:

"the operational agenda drives everything at the moment and it's trying to find a time, or--- or make the time, to--- to make these sorts of initiatives as important as, you know, the--- four hour standard patient flow etc etc. I think, that's in combination with the staffing on the wards, which has really deteriorated in the last two years and also the ability of the ward managers to--- to be supervisory, to lead their teams, to give them the head space to do the things that they want and need to do rather than the--- I don't know, the top ten urgent things or not that have to be done. It's--- it's the things you want to do. So, I--- I feel that's a really negative statement but it's--- it's also ..what it actually is like, you know, on the wards at the moment." (Senior nurse manager)

"it was a difficult time for the Trust in terms of staffing and patient demand and--- and rightly so perhaps, that wasn't their priority, the intervention. Their priority was sorting out what was on the ward" (PDN)

Reflection and evaluation

Staff who were present for the original CLECC were able to articulate what they had found useful and had passed this on to ward leaders. This largely concerned the usefulness of the cluster discussions and the desire for them to be re-instated. Evaluation of the CLECC1 Boost was very much limited to ward managers, the champions and senior nurse manager, and was focussed on reasons that cluster discussions were not happening. There were ongoing attempts to find an optimum time for cluster discussions.

Process evaluation: CLECC2

Participants

Interviews were conducted with the PDN, three ward managers (one who left the ward as the implementation period ended), three other members of staff from one of the wards (one band 6, one band 5, one Band 2) and a senior nurse manager.

Context

Earlier evaluation work had indicated a number of adaptations to enhance the embedding of CLECC, including activities to engage nursing managers.[9] CLECC2 was designed with these adaptations and was implemented over a three-month period, within two wards in a hospital (Wards G and H, Hospital C) which had had no previous involvement with CLECC.

Staff understanding of CLECC2

There was a good understanding of CLECC2 among those interviewed, with the exception of one ward manager who had not been on the ward at the time of the training. The perceived value of CLECC2 was in supporting staff wellbeing, team working and empowering staff to suggest improvements to their workplace. As previously, staff most commonly identified with the clusters.

There were contrasting opinions among ward managers of the contribution that CLECC2 could make to their wards. On one ward, it was felt that the CLECC philosophy was not overly different from the way the team was already working, (already providing compassionate care; staff support; strong team working), another saw CLECC as supporting necessary changes:

> "So, I feel like this ward works well anyway and works really well as a team. And there's not really any issues really." (Band 6)

> "I personally felt, these are the things I had in my mind, you know, when I took charge, after a few weeks. Oh, these are the things I need to be doing, that's how I felt. Because that's how, what I did with my previous wards, you know. I go assess the situation, I make a plan. So I just felt, 'oh, why are you telling me this? (laughing) This is my plan', you know. But it fitted very well." (Ward Manager)

Staff commitment to and engagement with CLECC2

One ward manager stood out as particularly notable in her commitment to making CLECC happen and to initiating change on the ward:

> "for her it really, it's what she believed in. So, she really ran with it and got the reflective sessions and made people go and, you know, she would have it in her mind all of the time and it was--- she was really into the ethos of it all" (Senior nurse manager)

The same ward manager described how she checked on activities and addressed challenges to them:

> "I wasn't here yesterday, I was asking Sister: "what happened yesterday?" She was saying: "yeah, we had meetings and it went well". So just making sure it's happening." (Ward Manager)

Another ward manager reflected a more "hands-off" approach to activities.

> INT: And was there one person who was responsible for making that happen?
> RESP: We kind of tended to leave it to whoever was in charge that day. So, I think, it did happen more with some people than with others. Yeah. (Ward Manager)

The PDN felt that turnover of staff impacted on the embedding of CLECC:

> "I leave that ward with a manager who hasn't seen any of the study days or any of the process and although I've met with her and--- and the other ward manager to discuss how they're going to sustain it, she hasn't really seen what's been going on which makes--- makes me sort of question how well they--- she is able to keep it going as opposed to the other ward who's gone through the whole process" (PDN)

> "One ward was much more receptive than the other. And, again, I think, that is because they (pause) were, I was going to say better staffed but better staffed in the terms of better staffed of regular staff. So, they didn't rely so much on the agency and bank nurses, so they felt like they had a good team and they could work together and--- and find that time. Whereas, if you've got agency and bank nurses that... you need to keep an eye on more. And they didn't feel able to retreat from the ward to do reflective practice so much." (PDN)

Operational work and barriers to implementation

The PDN worked alongside ward staff to ensure that CLECC2 activities took place during the implementation period. Once the PDN had left, clusters did not happen consistently and reflective sessions no longer took place. Wards relied on a senior nurse to initiate the cluster, one ward manager indicating that clusters often did not happen on days she was not around. Clusters were reported as happening with some ward leaders but not others. While there were plans to recruit champions for this responsibility, this had not been achieved when the PDN completed her work with the wards.

As with the previous evaluation,[9] staff prioritised patient care activities over CLECC activities. There were reports that both staff and team leaders were reluctant to give the time to clusters:

> "I think, they felt that it was quite stressful for them than I--- they were having to be pulled away to go to the huddle. So, they might have been still needing for--- they've still got things to do and I'm--- you know, and--- and even though it was only a couple of minutes it still seems like inconvenient (laughing) that--- been pulling away to go into a huddle with that or have a little meeting when they've got things to do. So, I think, they--- they were quite relieved when it wasn't happening but, at the same time, they would like to make sure that someone was asking if they were OK." (Band 6)

> "If you were to turn around and try and approach one of the staff nurses and say: "can we have a huddle?". They just look at you and go: "what? No. Haven't got time for that". (Band 2)

Time pressures meant it was challenging for staff to plan or to undertake CLECC activities:

> "I know it's no excuse but it's been winter and it's so much busier and we just don't get that much time to get off

altogether to be able to sort things out. But we have still got all the ideas that we got from CLECC and I do keep having it on my list that we need to get together, like especially with the [Band 6s], to put some of the ideas into practice. But it's just, at the moment, finding time to be able to get that when they don't pull you back onto the ward all the time." (Ward Manager)

The senior nurse manager was invested in CLECC2, and the ward managers were aware of her support. The senior nurse manager was keen to expand CLECC across the Trust but did not have the resource to do so. In particular, it was not possible to release staff from other wards for CLECC away days:

"I would really, really like to do it as a Trust wide project but it would be quite challenging to roll it out as we are at the moment with the resource that we have." (Senior nurse manager)

Reflection and evaluation
Wards engaged in informal reflection on both an individual and group level about CLECC2 processes, and these were both positive and negative, illustrating some resistance to CLECC:

"I don't want it to be (pause)--- a couple of the girls in the team have told me it was a bit condescending. That they found the meeting a bit--- you know, let's give--- a bit like weight watchers when you lose a pound and (laughter) everyone's like: "we-hey". So, I don't want it to feel condescending." (Ward Manager)

Respondents were able to articulate some impacts of CLECC2 on ward practices, mainly with a focus on the clusters and the training sessions. This included improved team working and support, and empowering staff to raise concerns and issues. Impact appeared to vary according to the culture of the ward.

"That is the key thing, I think, out of all of the things in, you know, this career, the teamwork is the key word. And CLECC would definitely help people to stick to each other and get working together." (Ward Manager)

"The health carer who told me said it was good to just vent everything out. I know it's not meant to be a slanging thing but it's so good because you're building it up and then, obviously, you're going to patient, patient, patient with this tension, aren't you? And it was just good to go: "ohhh" like that and then get it out in the open and then that's it. And she said it--- it was a lot better, that she felt better for that." (Band 5)

The challenges of attributing a change directly to CLECC were noted:

"So we are using the concept of those reflective huddles in getting together and going through those elements. But whether or not the people who are--- were involved with CLECC would say: "CLECC" and talk about it specifically, I--- I--- hand on heart, I couldn't say that, but we certainly still have the models around the reflective piece happening." (Senior nurse manager)

There was commitment at the time of the interview of both ward managers to continue to work with CLECC and to try to embed clusters into the daily running of the ward.

Evaluation of CLECC1 longer-term sustainability

Participants
Interviews were conducted with staff on one of the wards at Hospital A, including the Ward Manager, two Band 3s and a senior manager.

Context
Previous evaluation work and informal discussions indicated that CLECC1 had become embedded on Wards A and B at Hospital A and had also spread to other wards in the hospital. It was possible to revisit one of these wards to conduct interviews approximately three years after the implementation of CLECC1.

Staff understanding of CLECC1
There was a continued understanding of CLECC1 among those who had been part of the intervention. The primary emphasis for most was on clusters within the everyday practice of the ward. Staff valued clusters as a tool for enhancing team working, which then enabled them to spend better time with patients. The ward manager had embraced the whole philosophy of CLECC, valuing it both for the working of the ward but also for her leadership style:

"CLECC, for me, was enabling the staff to spend time with patients, not just task orientated time but spending time doing activities with patients. And listening to patients and talking to them. Getting to know them. Helping them feel reassured. As a leader, it was about me actively supporting that but also supporting the staff. So making sure that they get time to reflect with me.. talk through things with me and develop that morale on the ward, and that team working ethos. That, actually, we are one group. It doesn't matter who you are, what grade you are, you're still a valued member of my team." (Ward Manager)

Levels of staff turnover since the original training meant that only a few of the current ward staff had attended the study day, and thus there was not a ubiquitous understanding of the underlying principles and aims of CLECC. The CLECC philosophy was embedded on the ward and new members of staff were initiated into the cluster activity as part of normal ward activity, while not necessarily understanding the underlying reason for the activity.

Staff commitment to and engagement with CLECC1
The ward manager had clearly embraced clusters as a leadership tool for her ward and incorporated CLECC into her leadership style. She was key to driving CLECC forward, evident in a number of ways, both on the ward (e.g. ensuring staff engagement by legitimising attendance at clusters, explaining to individual staff how to organise their work in order to attend, giving examples of how to fit patient-focused care into their work; intervening with people who did not attend), and as a strong champion for the intervention within the wider division.

INT: So, what do you think has been important in maintaining these CLECC activities and the whole sort of philosophy within?
RESP: I think, it's commitment. I think, it's commitment from myself. I think, a lot of it has come (pause) from me saying: "I want you to do this. This is why this is important". And the staff understanding that (Ward Manager)

Operational work and barriers to implementation

It was possible to fit the cluster discussions into the daily life of the ward. It was more challenging, because of staffing levels, to fit other longer activities into the routine:

> "And we do a check-in and--- at night as well. And on my ward, I have continued with the one in the afternoon, at half past four. That's one that's not so much on all the other wards but I do think it's important to just keep coming--- coming back and checking-in. I'd say the other activities we probably do less of, just because of staffing constraints. As much as I hate using that as an excuse!" (Ward Manager)

The ward manager saw her role as facilitating and legitimising participation in CLECC activity. Other staff understood the role for themselves and others in making clusters happen (making sure they organise their work in order that they are able to take part, reminding self and others, organising for the cluster).

The ward manager felt supported by colleagues and the general management culture of the Division in taking CLECC forward:

> "I think the culture in itself is very CLECC--- it's very CLECC culturally whilst we might not have labelled it as the "CLECC culture", if that makes sense, from a ward leader point of view. So, there's very much that peer support and that--- that peer discussion without putting that label on it." (Ward Manager)

It was recognised by senior management that CLECC fitted into the wider staff wellbeing agenda:

> "I think, it's sort of come at a time where that's quite a (pause)... a resounding belief within the NHS and is more visible anyway that, you know, the--- the staff, so, we're doing quite a lot of work around staff wellbeing. A staff survey. What are staff saying about the culture? And all of those sorts of things. So, actually now is a--- culturally in the NHS it's quite a good time to focus on that fundamental element: "if you look after your staff the staff will look after your patients". So, it's sort of--- the time is right for it as well. So, I think, that's probably why. You know, very, very challenged time in the NHS where, you know, the risk of not getting your breaks and the risk of all those other things are quite high. I think, people cling on to the things that are helpful to get the teams together." (Senior nurse manager)

Reflection and evaluation

Staff were able to articulate the impact of CLECC1 on their everyday work. The ward manager felt it had developed her leadership style, as one supporting staff in their work, and had given her confidence to lead in this way; other staff reported benefits of team working and staff wellbeing:

> "It helped me become the leader that I am and the leader that I want to be in that area, if that makes sense. Because it's all about supporting the staff to spend time with patients, helping the patients feel happier because you're spending time with them and you've got to know them, and you've had those conversations. I think, that's something that, as a leader--- at a ward level that's what we aspire to be. We aspire to be there for our patients. You know, the Trust values patients first. It's very important, to me--- that--- that

was something that was very important to me anyway but, I hadn't really thought about how I was going to deliver that" (Ward Manager)

> "There's so many benefits from it that it's made like the ward a nicer place. It's made, so for me to come to work, it's made me feel, you know, it's more beneficial and that I get, you know, help that I need or--- so, it makes you--- when you come to work just feel a bit more happy in a sense coz you know that--- you know, when you're coming in that everyone's a really good team and, you know, you get them five minutes and (pause) like from it to come from like our managers to support it as well. It's just nice that everyone gets involved and that we come together as a team which is nice." (Band 3)

CLECC activities had been adapted to fit the ward. For example, clusters were used additionally to provide a drink for staff ("It's making sure the staff have a drink, which wasn't part of the original cluster thing but actually it sold it to the staff at the time" (Ward Manager), and to give out clinical information:

> "It's become a bit more clinical than what it was, I would say. So, whilst we're still asking the--- the two questions of, you know: "how--- how are you doing? Do you need any help with anything?" You also then have the medical updates. So, if the ward round's happened then--- then that's sort of been tagged onto the end of it which, I think, is a good thing because you're then--- you're conserving your time if you like. You're doing it all at the same time. So, you don't have to think about then going back and finding everyone to tell them" (Ward Manager).

CLECC was seen by management staff as a toolkit, rather than a prescriptive set of activities that had to be implemented:

> "I'm still developing through it and using it. It's--- it's gone in my toolkit, if you like. It's something that there's bits of it that I will continue to use and there'll be things that I'll--- I will dip in and out of and wouldn't necessarily call it a--- a CLECC--- part of the CLECC project but actually it has come from that and that's--- that's why I do what I do." (Ward Manager)

> "it's really about harnessing the--- the principles and the value and what your aims are for it rather than necessarily you--- you do follow this recipe and this is what you'll get. (Senior Manager)

The ward manager reflected on the process of CLECC during the interview concluding that, in the absence of away days for new staff, that she should put effort into helping people understand the CLECC philosophy and its influence on the way she runs the ward.

It was recognised that evaluation of the wider impact of CLECC on patient care was challenging:

> "You know, like I said, earlier there's things that I have brought with me to my new ward. There's things that have developed as part of our ethos on--- on (...) but there's--- it's never had that label attached. So, you know, with our peer support with the band sevens it's something that actually I've done and our matron has encouraged us to do, but he wasn't part of the CLECC project and I've never gone: "oh, do you know what? This--- this is a--- part of--- part of what I did as part of CLECC

when I had to go to (place) or the university". So, I think (pause), it's--- it's difficult coz I don't--- I don't think I need to label things necessarily" (Ward Manager)

"harder to measure the benefits of that as opposed to anything else that you might do. You know, is it--- you know, is it CLECC itself and the approach to that that's done that?" (Senior Manager)

Overall conclusions from process assessment

This qualitative work was conducted with three hospital sites which were at different stages of CLECC implementation (one where CLECC1 had become embedded and spread, one experiencing a boost where CLECC1 had not been embedded, and one taking part in the adapted CLECC2). This work has given further insight into the potential benefits of CLECC and into how interventions of this kind can be implemented and sustained.

Evaluation across a variety of settings shows that CLECC can be partially implemented and sustained within the right conditions. CLECC was welcomed by some individuals, teams and team leaders more than others. The main CLECC activity that staff engaged with was cluster discussions, with staff who valued these seeing benefits for team working and individual well-being. It was more challenging for staff to implement other activities which required more time input. Engagement of the ward manager was facilitated when they envisaged the collection of CLECC activities as a useful toolkit to support their management aspirations and style rather than a prescriptive set of additional activities to be added into their work.

The current analysis reflects the previous evaluation which found that CLECC activities were mediated by the context of working in a busy environment, with staff struggling to find time for CLECC activities. The current analysis illustrates that success relies on the ward manager working to legitimise and to prompt participation in activities which take staff away from direct patient care and that this is possible when supported by the wider management environment. Attempts to hand the day to day running of activities to others relies on this legitimation work having taken place.

Within the current NHS context of increasing patient complexity and shortage of staff with resultant workload pressure, it is difficult to introduce interventions of this nature. While valued as a concept to support compassionate care and staff well-being, it sometimes proved challenging to find time for planning and delivery of the intervention in practice. It is a paradox that those wards with more severe staffing issues, who may benefit more from CLECC activities designed to support team working, may have greater challenges in implementation and embedding.

On wards where CLECC activities were implemented, staff identified benefits to their everyday work and to patient care. However, it was challenging to quantify these impacts in the absence of formal systems to do so. Such evaluation and feedback can support and strengthen engagement with an intervention.

It may be particularly challenging to reinstate an intervention where it has failed to embed in the past. There is a need, in these circumstances, to directly address staff perceptions of previous challenges to implementation, feelings of lack of previous success and largely to start again with promoting understanding and commitment.

Outcomes

Methods

This phase of the study used a before-and-after assessment of outcomes, with no control wards. The purpose of measuring outcomes was primarily to develop and test methods in advance of a more definitive evaluation, but although not powered or designed to detect change over time or attribute any such change to CLECC, we also compared outcomes before and after CLECC implementation.

Outcome data were collected on both CLECC1 Boost (wards D, E) and CLECC2 wards (G, H) at T1 (before the intervention, September 2017 to March 2018) and T2 (after the intervention, September to December 2018). Staff outcomes included burnout, empathy, satisfaction, intention to leave and assessment of work environment. We also assessed the quality of interactions between staff and patients.

All nursing staff (registered nurses (RNs), nursing associates and health care assistants (HCAs)) were invited to complete a nursing survey before and after the CLECC implementation period. Questionnaires were distributed by ward managers or the PDN and were returned via the PDN or through internal hospital mail. On Wards G and H, T1 questionnaires were distributed for completion on the CLECC away days. The questionnaire included the 22 item Maslach Burnout Inventory™ (MBI) (Human Services version),[18] the 20 item Jefferson Scale of Empathy (JSE)[19] and five selected items from the International Hospital Outcomes Study battery (IHOS)[20] [21] focused on job satisfaction, intention to leave and assessment of work environment. Questionnaires were completed anonymously. Staff vacancy information provided by ward managers enabled staff turnover to be assessed.

The quality of staff-patient interactions was assessed using the Quality of Interactions Schedule (QuIS), a time sampling tool that records the volume and quality of interactions through observation by researchers.[22] Staff-patient interactions are rated as positive social, positive care, neutral, negative protective or negative restrictive. Earlier piloting work established the validity and reliability of QuIS in acute settings, and Table 2 shows guidance for QuIS rating in acute care settings.[23] All adult patients on participating wards were assessed for eligibility to be included in observations. Patients were excluded if they were unable to communicate their choices about taking part in the research and a consultee could not be contacted. We also excluded patients who were unconscious or where there were clinical concerns (critically ill, in receipt of palliative care, high infection risk). An index patient for the observations was determined by random selection from all eligible patients on the ward on the day of observation. Index patients were informed about the planned observations and if they consented, up to two other eligible patients in the researcher's field of view were approached for inclusion. If the index patient declined to take part, another index patient was randomly selected, and approached as before. If an individual lacked the capacity to decide about taking part in the research, attempts were made to ascertain the views of a personal consultee regarding participation. It was possible for individual patients to be involved in more than one observation session (up to three sessions per patient was permitted, provided the patient consented each time). Staff were informed about observations with the option to withdraw if preferred. All interactions between recruited patients and staff (of any discipline) were directly observed by a single researcher for two hours and rated using QuIS.

Each ward had a planned two-hour observation session scheduled daily for ten continuous days (including weekends), with the timing of each daily session randomly selected to start at 0800, 1000, 1200, 1400, 1600 or 1800 hours. In total, 80 sessions were planned. When a planned observation could not go ahead (due, for instance, to researcher sickness), observation took place at the next opportunity on the same ward and day of the week.

Table 2: Quality of Interactions Schedule (QuIS) categories

QuIS Category	QuIS Category Definitions	
	Dean et al. (1993)[22]	Additional acute care guidance (developed as reported in McLean et al. 2017)[23]
Positive Social	Interaction principally involving 'good, constructive, beneficial' conversation and companionship	Interactions, which may be expected to make the service user feel valued, cared about or respected as a person. This is achieved through: – Polite, friendly and respectful interactions in which any element is: Casual / informal and relating to 'everyday' social topics (e.g. family; sport; weather; TV programmes) or – Responding to concerns / interests / topics introduced by the service user
Positive Care	Interactions during the appropriate delivery of physical care.	Interactions, which may be expected to make the service user feel safe, secure, cared for or informed as a patient. This is achieved through polite, professional, respectful or good humoured interactions in which the topic is largely determined by staff and restricted to issues of care delivery (E.g. "your discharge"; "your wash"; "your medication"; "your surgery").
Neutral	Brief, indifferent interactions not meeting the definitions of the other categories.	Interactions which would not be expected to impact on the feelings of the service user, which they would be indifferent to or which they may barely notice. Interactions with no positive or negative aspects
Negative Protective	Providing care, keeping safe or removing from danger, but in a restrictive manner, without explanation or reassurance: in a way, which disregards dignity or fails to demonstrate respect for the individual.	Interactions that may be expected to make the service user feel rushed, misunderstood, frustrated or poorly informed as a patient. Such interactions fail to fully maintain dignity or demonstrate respect due to the focus of staff on doing their 'work'. Staff may appear rushed or task orientated.
Negative Restrictive	Interactions that oppose or resist people's freedom of action without good reason, or which ignore them as a person.	Interactions which may be expected to leave the service user feeling ignored, devalued or humiliated as a person. Such interactions may be rude, abusive or controlling and pay no regard to the perspective of the patient. Patient's expressed needs / preferences are ignored or denied and staff may be authoritative, controlling, rude or angry.

Adapted from Barker et al. (2016)[24] with permission from authors

Analyses of outcome data were conducted on an intention to treat basis and focused on the description of trends over time by ward team and by hospital.

1. **Empathy, burnout and intention to leave**
   A total Jefferson Scale of Empathy score was calculated by scoring the 20 items on the questionnaire on their Likert weights (i.e. Strongly Disagree=1...Strongly Agree=7). Items 1, 3, 6, 7, 8, 11, 12, 14, 18 and 19 are reverse scored (i.e. Strongly Agree=1... Strongly Disagree=7). The total score is the sum of all the item scores. Possible empathy scores range from 20 to 140, with higher scores indicating higher empathy. Mean and median were calculated.[25] In accordance with the Jefferson Scale of Empathy guidelines, only questionnaires with 16 or more completed items were included in the analysis; where respondents had up to four missing items, a mean score was calculated for the missing item from those that had been completed.
   The Maslach Burnout Inventory requires complete data on all items. Each of three aspects of burnout - Emotional Exhaustion (9 items), Depersonalization (5 items) and Personal Accomplishment (8 items)- is measured with a separate subscale of the MBI. Emotional Exhaustion relates to the depletion of emotional resources, such that "workers feel they are no longer able to give of themselves at a psychological level".[26] Depersonalization describes "negative, cynical attitudes and feelings about one's clients".[26] Low Personal Accomplishment refers to the "tendency to evaluate oneself negatively, particularly with regard to one's work with clients" and may mean that workers feel "unhappy about themselves and dissatisfied with their accomplishments on the job".[26] Different scores represent different levels of these three elements. Means

were calculated for each domain, and mean scores compared to published reference categorization.[27] If a score was missing for any of the items within a domain, the participant was excluded from the calculation of that domain.
Frequencies and proportions were calculated for each of the five items of International Hospital Outcomes Study battery.

2. **Staff turnover**
   We analysed the proportion of staff who had left since previous assessment period by individual ward and hospital.

3. **Quality of staff-patient interactions**
   The proportion of QuIS (quality of staff-patient interaction) interactions rated for each of the five categories was described at each time-point, including a further analysis for total negative ratings (sum of negative protective and negative restrictive ratings). Differences between groups were tested using a chi-squared test with p value of <0.05 used to indicate significance. We also used the QuIS data we collected to test if the day of the week made a difference to patients' chances of a negative interaction. Further details and results of these analyses can be found in Appendix C.

Results: CLECC1 Boost

This section provides an overview of the results from outcome assessment over time on the CLECC1 Boost wards, that is the two intervention wards involved in the original NIHR study who received a CLECC "boost" in this study. References to T1 and T2 refer to the timing of the two assessment periods for this study phase, that is September 2017 (T1, before CLECC intervention in this phase) and

September-November 2018 (T2, after CLECC intervention). Further details of results can be found in the tables in Appendix A.

Ward profile and staffing

The CLECC1 Boost wards were both Medicine for Older People wards in the same hospital. Ward D had 30 beds with a mean length of stay of 14 days, while Ward E had 32 beds and a mean stay of 13 days. The planned staff full-time equivalent (FTE) was close to 45 for both wards, with 63% planned RNs and mixed length of shifts. At the outset of this phase of the study, the ward managers had been in post for around two and three years respectively. From staffing data shared by managers, we calculated that 24% of Ward D nursing staff and 33% of Ward E nursing staff left between T1 and T2.

Staff empathy, burnout and intention to leave

On Ward D, nursing questionnaire response rate at T1 was 63% (n=24 out of 38) and this decreased to 24% (n=10 out of 42) at T2. On Ward E, staff questionnaire response rate at T1 was 41% (n=16 out of 39) and improved slightly at T2 at 44% (n=19 out of 43). These low response rates mean that the results presented below should be treated with caution as the staff who responded may not represent the views and experiences of the wider staff team. Overall response rate across both wards and both time periods was 43% (69 out of 162).

The characteristics of the questionnaire respondents are shown in Appendix A, Table A.1. The majority were female and white British. A range of staff bands were represented.

Empathy scores for wards D and E across time are shown in Appendix A, Table A.2. Empathy scores are similar across time-points suggesting no important change. Ward D had a mean score of 114 at T1 and 114 at T2. Ward E mean was 114 at T1 and 110 at T2. JSE authors do not offer any reference scores to enable comparison of individual or group scores for what is typical for similar job roles, but these scores fall with the range of ward-level mean empathy scores (107-120) observed in the NIHR phase of the study.[8]

Appendix A, Table A.4 presents the mean score for each of the burnout subscales, (with reference scores from the MBI Manual – high, moderate or low – shown in Table A.3). On average, Ward D scored high Emotional Exhaustion and moderate Depersonalization and personal accomplishment at both T1 and T2 (Table A.4). The ranges (minimum to maximum) scores show us that at each of the time-points, individual Ward D staff member Emotional Exhaustion, Depersonalization and Personal Accomplishment scores ranged from high to low, suggesting a range of experiences between staff members.

On average, Ward E staff were stable in their burnout levels, remaining at moderate Emotional Exhaustion, low Depersonalization and moderate Personal Accomplishment between T1 and T2. The ranges (minimum to maximum) scores show that, at each of the time-points, individual staff member Emotional Exhaustion and Personal Accomplishment scores on Ward E ranged from high to low, suggesting a range of experiences. At T1, individual Depersonalization scores ranged from moderate to low, and at T2 it ranged from high to low.

Data on intention to leave current job are presented in full in Tables A.5-A.9. When asked "How satisfied are you with your current job in this hospital?", most respondents said they were "moderately satisfied or "very satisfied". The proportion of respondents answering "very dissatisfied" or "a little dissatisfied" was higher for Ward D (32%, n=8 at T1; 40%, n=4 at T2) than Ward E (24%, n=4; 23%, n=4) at both time-points (Table A.5). Ward D saw a decline in reported job satisfaction over time and Ward E an improvement but, as outlined earlier, the overall numbers are small and so caution must be applied to interpreting these results.

When asked "How would you rate the work environment at your job in this hospital?", the proportion of respondents answering "poor" or "fair" was higher for Ward D (48%, n=12; 70%, n=7) than Ward E (24%, n=4; 56%, n=10) at both time-points (Table A.6). The responses over time for both wards suggest a decline in work environment.

The proportion of people answering "Yes" to "If possible, would you leave your current hospital within the next year as a result of job dissatisfaction?" was higher in Ward D (56%, n=14; 40%, n=4) than Ward E (24%, n=4; 33%, n=6) at both time-points (Table A.7). Ward D results suggest a decline over time and Ward E an improvement. Of those who answered "Yes" (n=28), 39% (n=11) would seek work outside of nursing (mean of both wards over both time-points) (Table A.8).

When asked "Would you recommend your hospital to a nurse colleague as a good place to work?", most respondents replied "probably yes" or "definitely yes". This varied across wards and time-points from Ward D at T1 (68%, n=17) to Ward E at T2 (94%, n=17) (Table A.9). The proportion increased for both wards over time.

Quality of staff-patient interactions

In total, there were 77 approaches across Wards D and E for the observations of staff-patient interactions. In 74 of these approaches, the patient concerned agreed to take part, a recruitment rate of 96%. This resulted in 55 patients recruited overall (as some were approached and recruited more than once). This figure included seven patients assessed as not having capacity to consent. Data were gathered on Wards D and E on 574 interactions at T1 and 399 interactions at T2, a total of 973 interactions.

The observed quality of staff-patient interactions is shown in Table A.10. Most interactions were rated as positive care at all time-points. On Ward D, 62% (n=137) of interactions were rated as positive care at T1 and 55% (n=106) at T2. On Ward E, 56% (n=197) of interactions were rated as positive care at T1 and 54% (n=112) at T2. For both wards combined, there was an increase in negative restrictive interactions between T1 and T2 (from 2% to 10%), but the increase in total negative interactions (a combination of negative protective and negative restrictive) was smaller (10% to 13%) and not statistically significant.

Results: CLECC2

This section provides an overview of the results from outcome assessment over time on the CLECC2 wards, that is the two intervention wards that were new to CLECC in this study and that received an improved (CLECC2) version of the CLECC programme. References to T1 and T2 refer to the timing of the two assessment periods for this study phase, that is September 2017 (T1, before CLECC intervention) and September 2018 (T2, after CLECC intervention). Further details of results can be found in the tables in Appendix B.

Ward profile and staffing

The CLECC2 wards were an Acute Frailty unit (Ward G) and a Diabetes and Endocrine ward (Ward H). Ward G had 21 plus 2 escalation beds and Ward H had 23 beds. The mean length of stay was slightly longer for Ward G (9-11 days on Ward G and 7 days on Ward H). The planned staff full-time equivalent was 29.7 for Ward G and 25.65 for Ward H, with 55% (Ward G) and 54% (Ward H) planned RNs and mostly long shifts. At the outset of the study, the ward managers had been in post for 3½ years and just over two years respectively.

From staffing data shared by managers, we calculated that 52% of nursing staff left the ward team on Ward G between T1 and T2. Thirty-five percent of nursing staff (RNs and non-RNs) left the ward team on Ward H between T1 and T2.

Staff empathy, burnout and intention to leave

On Ward G, nursing questionnaire response rate at T1 was 48% (n=12 out of 25) and this decreased to 17% (n=3 out of 18) at T2. On Ward H, staff questionnaire response rate at T1 was 96% (n=22 out of 23) with

a decrease at T2 to 35% (n=8 out of 23). These low response rates, especially at T2, mean that the results presented below should be treated with caution as the staff who responded may not represent the views and experiences of the wider staff team.

The characteristics of the sample are shown in Table B.1. The majority of respondents at both time-points were female and most were white British. A range of staff bands were represented.

Empathy scores for Wards G and H across the two time-points are shown in Table B.2. Ward G had a mean score of 113 at T1 and 121 at T2. Ward H was 112 at T1 and 116 at T2. The mean empathy score increased for both wards from T1 to T2. These scores fall with the range of ward-level mean empathy scores (107-120) observed in the earlier NIHR research,[8] with the exception of Ward G at T2 which exceeded this range but the number of respondents here was particularly low (n=3).

Table B.4 presents the mean score for each of the burnout subscales, (with reference scores from the MBI Manual – high, moderate or low – shown in Table B.3). Both wards scored, on average, moderate Emotional Exhaustion and low Depersonalization at both T1 and T2 (Table B.4). Levels of Personal Accomplishment improved from moderate to high on Ward G and stayed moderate on Ward H. The ranges (minimum to maximum) scores show us that at each of the time-points, individual Ward G staff member Emotional Exhaustion scores ranged from low to high, suggesting a range of experiences between staff members. Individual Ward G staff member Depersonalization scores ranged from low to moderate at both time-points. Personal Accomplishment scores ranged from low to high for individual staff on Ward G at T1, and were all high at T2. On Ward H individual Emotional Exhaustion and Personal Accomplishment scores ranged from low to high, suggesting a range of experiences between staff members. At T1, individual Ward H Depersonalization scores ranged from low to moderate, and at T2 from low to high.

Data on intention to leave current job are presented in full in Tables B.5-B.9. When asked "How satisfied are you with your current job in this hospital?", most respondents said they were "moderately satisfied or "very satisfied" (Table B.5). On Ward G 75% (n=9) said they were "moderately satisfied or "very satisfied" at T1, and 67% (n=2) at T2. On Ward H, this was 95% (n=21) at T1 and 75% (n=6) at T2. As noted earlier, the overall numbers are small and so caution should be applied to interpreting these results.

When asked "How would you rate the work environment at your job in this hospital?", the proportion of respondents answering "poor" or "fair" was higher for Ward G (50%, n=6; 67%, n=2) than Ward H (14%, n=3; 38%, n=3) at both time-points (Table B.6). The responses over time for both wards suggest a decline in work environment.

The proportion of people answering "Yes" to "If possible, would you leave your current hospital within the next year as a result of job dissatisfaction?" was higher in Ward G (17%, n=2; 33%, n=1) than Ward H (5%, n=1; 25%, n=2) at both time-points (Table B.7). Results from both wards suggest an increased intention to leave over time, but numbers are small. Of those who answered "Yes", one person expressed an intention to seek work outside of nursing (Table B.8).

When asked "Would you recommend your hospital to a nurse colleague as a good place to work?", most respondents (93%, n= 42) replied "probably yes" or "definitely yes". This varied across wards and time-points from Ward H at T2 (88%, n=7) to Ward G at T2 (100%, n=3) (Table B.9). The proportion increased for Ward G and decreased for Ward H over time.

Quality of staff-patient interactions

Recruitment was at the individual patient level for observation of staff-patient interactions. It was possible for individual patients to be involved in more than one observation session (up to three per patient was permitted, provided the patient consented each time). In total, there were 86 approaches. In 75 of these approaches, the patient concerned agreed to take part, a recruitment rate of 87%. This resulted in 52 patients recruited overall (as some were approached and recruited more than once). All patients were assessed as having capacity to decide about taking part in the study. Data were gathered on 334 interactions at T1 and 291 interactions at T2, a total of 625 interactions.

The observed quality of staff-patient interactions is shown in Table B.10. Most interactions were rated as positive care at both time-points. On Ward G, 57% (n=102) of interactions were rated as positive care at T1 and 52% (n=72) at T2. On the same ward, the proportion of positive social interactions improved over time from 17% (n=31) to 31% (n=42). On Ward H, 58% (n=90) of interactions were rated as positive care at T1 and 65% (n=100) at T2. On Ward G, there was a notable decrease in total negative interactions (a combination of negative protective and negative restrictive) over time from 15% (n=26) to 9% (n=12), while on Ward H the proportion of total negative interactions rose slightly from 8% (n=13) to 10% (n=15). These differences were not statistically significant.

Overall conclusions on outcomes

CLECC1 Boost: Staff turnover was high, similar to rates in the NIHR study intervention and control wards. Staff empathy and average burnout scores did not change over time. Staff perceptions of work environment suggest a deterioration in quality of environment over time, although the proportion of staff who would recommend their hospital as a good place to work improved on both wards. One ward (D) showed a decline in job satisfaction but a decrease in intention to leave. The other ward (E) saw a slight increase in job satisfaction but an increased intention to leave. Both wards saw a decrease in the quality of staff-patient interactions over time, but this was not statistically significant.

CLECC2: Staff turnover was very high. Staff empathy scores improved and average burnout scores remained the same, with the exception of an improvement in personal accomplishment on one ward. Job satisfaction deteriorated, while intention to leave appeared to increase over time. Perceptions of work environment declined over time. On one ward (G), the proportion of staff who would recommend their hospital as a good place to work improved over time. On the other ward (H), the proportion deteriorated. One ward (G) saw an improvement in the quality of staff-patient interactions over time, while the other ward (H) saw a deterioration. These results are not statistically significant.

There are a number of limitations that must be taken into account when considering outcomes following CLECC intervention. These include the small number of wards involved, the low response rate to the staff survey and the lack of a control group. Any results that indicate improvement or deterioration over time therefore need to be treated with caution because they could be due to chance variation rather than actual change.

Conclusions

The findings in this report add to those of the earlier NIHR study[8] and enable the following conclusions to be drawn:

In spite of working conditions of high intensity, the CLECC principles and some of the implementation period activities are feasible to implement with nursing teams in acute hospital settings under certain conditions. These conditions include ward manager and senior manager engagement and commitment to CLECC, and an alignment between CLECC, individual manager and wider organisational valuing of staff well-being and learning. We saw that where CLECC takes hold particularly successfully, provided the ward manager stays in place, CLECC ways of working become routinised into practice and can survive the turnover of other staff over a period of at least three years. In these circumstances, though, there may still be benefit in a future boost although we did not try this in this research.

Where staff vacancy levels are particularly high and/or where the ward manager is unable to envisage how CLECC can be accommodated and used to support nursing work on the ward, it may be that CLECC is unlikely to take hold, regardless of quality or frequency of facilitation. This may be particularly the case in organisations that are under great pressure and where staff well-being and learning is seen to have to take a lower priority, however differently individual managers may value this.

These differences suggest that organisations and individual teams considering CLECC may benefit from a "diagnostic check" to assess their readiness to participate and where they are ready, to identify how wider organisational structures and processes may need modifying to make sure that individual teams are well supported in their journey with CLECC. The next phase of our development work will focus on how organisations and teams can go about this.

We also addressed the question "does CLECC make a difference?". As mentioned earlier our study design and small sample size for this phase of the research does not allow us to confidently answer that question on the outcomes data alone. We did not see much change in the chosen outcomes, but the qualitative data from Wards D and E indicates that CLECC was not in place and so would not be expected to have an effect. On Wards G and H, other events (for example a change of ward manager) may have undermined any benefit from CLECC. Our earlier work suggested a positive benefit on patient outcomes, although, being a pilot RCT, the research was not powered to show a difference, and the difference found was not statistically significant once relevant variables had been controlled for.[8] The research reported here did however enable us to further pilot possible outcome assessment methods for use in a future definitive evaluation and the findings on, for instance, response rates and inclusion of people with cognitive impairment will be very useful for future evaluations.

Finally, the positive evidence (from this and the earlier phases) that many staff value CLECC and perceive that it has a positive effect on staff well-being and patient care is an important lesson for nurse retention, and lends support to its wider use and further evaluation.

Appendix A:
CLECC1 Boost wards - tables of outcomes assessment

T1 and T2 refer to the timing of the assessment periods in this phase of the CLECC research.

T1 = September 2017

T2 = September 2018 to November 2018

Percentages in tables may not total 100% due to rounding.

SD = standard deviation

LQ = lower quartile

UQ = upper quartile

IHOS = International Hospital Outcomes Study

Table A.1: CLECC1 Boost wards staff questionnaire sample characteristics

	Frequency (proportion)	Ward D N (%)		Ward E N (%)	
		T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Age	25 or under	3 (12%)	1 (10%)	2 (12%)	1 (6%)
	26-35 years	7 (28%)	2 (20%)	3 (18%)	5 (28%)
	36-45 years	6 (24%)	3 (30%)	7 (41%)	4 (22%)
	46-55 years	4 (16%)	2 (20%)	3 (18%)	5 (28%)
	56 or over	4 (16%)	2 (20%)	2 (12%)	3 (17%)
	Missing	1 (4%)	0	0	0
Gender	Male	1 (4%)	1 (10%)	0	0
	Female	23 (92%)	9 (90%)	17 (100%)	18 (100%)
	Missing	1 (4%)			
Ethnic group	Prefer not to say	0	0	0	0
	White British	19 (76%)	8 (80%)	10 (59%)	15 (83%)
	Irish	0	0	0	0
	Any other white	0	0	1 (6%)	0
	White and black Caribbean	1 (4%)	0	0	0
	White and black African	1 (4%)	0	0	0
	White and Asian	0	0	0	0
	Any other mixed	0	0	0	0
	Indian	0	0	3 (18%)	1 (6%)
	Any other Asian	2 (8%)	1 (10%)	1 (6%)	1 (6%)
	Caribbean	0	1 (10%)	0	0
	Other black/African/Carribean	1 (4%)	0	0	0
	Missing	1 (4%)	0	2 (12%)	1 (6%)
Job title	Health care assistant	9 (36%)	3 (30%)	9 (36%)	13 (72%)
	Staff nurse	7 (28%)	5 (50%)	7 (28%)	5 (28%)
	Sister/Charge nurse	2 (8%)	1 (10%)	2 (8%)	0
	Other	3 (12%)	1 (10%)	3 (12%)	0
	Missing	4 (16%)	0	1 (6%)	0
Current band	2	10 (40%)	3 (30%)	7 (41%)	13 (72%)
	3	2 (8%)	0	0	0
	4	1 (4%)	1 (10%)	1 (6%)	0
	5	8 (32%)	5 (50%)	7 (41%)	5 (28%)
	6	2 (8%)	0	0	0
	7	1 (4%)	1 (10%)	1 (6%)	0
	Missing	1 (4%)	0	1 (6%)	0
Full time	Yes	19 (76%)	8 (80%)	12 (71%)	12 (67%)
	No	4 (16%)	2 (20%)	5 (29%)	5 (28%)
	Missing	2 (8%)	0	0	1 (6%)
Years on this ward	N (missing)	16 (9)	9 (1)	13 (4)	17 (1)
	Mean (SD)	3 (3)	4 (2)	4 (3)	5 (4)
	Median (LQ,UQ)	2 (1,6)	3 (2,5)	3 (1,7)	4 (2,9)
	Min to max	0.5 to 10	2 to 8	0.4 to 10	0.3 to 10

Table A.2: Empathy scores for CLECC1 Boost wards over time

	Ward D		Ward E	
	T1	T2	T1	T2
N included in analysis	24	10	16	18
Empathy mean score (SD)	114 (12)	114 (8)	114 (12)	110 (16)
Median	117	111	114	114
(LQ, UQ)	108, 122	109, 118	103,123	94, 122
Range	86 to 129	107 to 129	87 to 131	80 to 133

Table A.3: Maslach reference categorisation[27]

Frequency	Low	Moderate	High
Emotional exhaustion	0-16	17-26	27 or over
Depersonalization	0-6	7-12	13 or over
Personal accomplishment*	39 or over	32-38	0-31

Interpreted in opposite direction to emotional exhaustion and depersonalisation

Table A.4: Burnout scores for CLECC1 Boost wards over time

	Ward D		Ward E	
	T1	T2	T1	T2
Emotional Exhaustion (0-54)				
N (missing)	21(4)	10(0)	15(2)	17(1)
Mean (SD)	30(10)	28(11)	18(10)	22(12)
Category	**High**	**High**	**Mod**	**Mod**
Min to max	9 to 45	13 to 44	3 to 35	0 to47
Depersonalization (0-30)				
N (missing)	21(4)	10(0)	15(2)	17(1)
Mean (SD)	8(6)	8(5)	4(3)	6(7)
Category	**Mod**	**Mod**	**Low**	**Low**
Min to max	0 to 19	2 to 18	0 to 12	0 to 28
Personal Accomplishment (0-48)				
N (missing)	24(1)	9(1)	16(1)	18(0)
Mean (SD)	36(8)	34(6)	36(9)	32(8)
Category	**Mod**	**Mod**	**Mod**	**Mod**
Min to max	19 to 47	26 to 42	17 to 48	13 to 42

Table A.5: CLECC1 Boost wards International Hospital Outcomes Study (IHOS) job satisfaction

How satisfied are you with your current job in this hospital? Frequency (proportion)	Ward D		Ward E	
	T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Very dissatisfied	1 (4%)	1 (10%)	1 (6%)	1 (6%)
A little dissatisfied	7 (28%)	3 (30%)	3 (18%)	3 (17%)
Moderately satisfied	14 (56%)	4 (40%)	6 (35%)	9 (50%)
Very satisfied	3 (12%)	2 (20%)	7 (41%)	5 (28%)

Table A.6: CLECC1 Boost wards IHOS work environment

How would you rate the work environment at your job in this hospital? Frequency (proportion)	Ward D		Ward E	
	T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Poor	7 (28%)	1 (10%)	1 (6%)	1 (6%)
Fair	5 (20%)	6 (60%)	3 (18%)	9 (50%)
Good	12 (48%)	3 (30%)	8 (47%)	5 (28%)
Excellent	1 (4%)	0	5 (29%)	3 (17%)

Table A.7: CLECC1 Boost wards IHOS intention to leave

If possible, would you leave your current hospital within the next year as a result of job dissatisfaction? Frequency (proportion)	Ward D		Ward E	
	T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Yes	14 (56%)	4 (40%)	4 (24%)	6 (33%)
No	11 (44%)	5 (50%)	13 (77%)	12 (67%)
Missing	0	1 (10)	0	0

Table A.8: CLECC1 Boost wards IHOS type of work

If yes, what type of work would you seek? Frequency (proportion)	Ward D		Ward E	
	T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Nursing in another hospital	6 (24%)	1 (10%)	2 (12%)	2 (11%)
Nursing, but not in a hospital	3 (12%)	1 (10%)	0	1 (6%)
Non-nursing	5 (20%)	2 (52%)	2 (12%)	2 (11%)
Missing	11 (44%)	6 (60%)	13 (77%)	13 (72%)

Table A.9: CLECC1 Boost wards IHOS recommendation as place of work

Would you recommend your hospital to a nurse colleague as a good place to work? Frequency (proportion)	Ward D		Ward E	
	T1 N = 25	T2 N = 10	T1 N = 17	T2 N = 18
Definitely no	1 (4%)	0	1 (6%)	0
Probably no	7 (28%)	3 (30%)	2 (12%)	1 (6%)
Probably yes	15 (60%)	4 (40%)	9 (53%)	13 (72%)
Definitely yes	2 (8%)	3 (30%)	5 (29%)	4 (22%)

Table A.10: CLECC1 Boost wards quality of staff-patient interactions over time

Frequency (proportion)	Ward D		Ward E		D+E	
	T1	T2	T1	T2	T1	T2
Positive social	43 (19%)	44 (23%)	91 (26%)	47 (23%)	134 (24%)	91 (23%)
Positive care	137 (62%)	106 (55%)	197 (56%)	112 (54%)	334 (58%)	218 (55%)
Neutral	20 (9%)	22 (11%)	29 (8%)	18 (9%)	49 (9%)	40 (10%)
Negative protective	14 (6%)	1 (1%)	29 (8%)	8 (4%)	43 (8%)	9 (2%)
Negative restrictive	8 (4%)	20 (10%)	6 (2%)	21 (10%)	14 (2%)	41 (10%)
Total	222	193	352	206	574	399
Negative protective + negative restrictive	22 (10%)	21 (11%)	35 (10%)	29 (14%)	57 (10%)	50 (13%)

Appendix B: CLECC2 intervention wards – tables of outcomes assessment

T1 and T2 refer to the timing of the assessment periods in this phase of the CLECC research.

T1 = September 2017 to March 2018

T2 = September 2018 to December 2018

Percentages in tables may not total 100% due to rounding.

SD = standard deviation

LQ = lower quartile

UQ = upper quartile

IHOS = International Hospital Outcomes Study

Table B.1: CLECC2 wards staff questionnaire sample characteristics

	Frequency (proportion)	Ward G		Ward H	
		T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Age	25 or under	3 (25%)	2 (67%)	2 (9%)	1 (14%)
	26-35 years	2 (17%)	0	9 (41%)	2 (29%)
	36-45 years	7 (58%)	0	4 (18%)	2 (29%)
	46-55 years	0	1 (33%)	4 (18%)	1 (14%)
	56 or over	0	0	3 (14%)	1 (14%)
Gender	Male	1 (8%)	0	3 (14%)	1 (13%)
	Female	11 (92%)	3 (100%)	19 (86%)	7 (87%)
Ethnic group	Prefer not to say	0	0	0	0
	White British	6 (50%)	1 (33%)	16 (73%)	7 (88%)
	Irish	0	0	0	0
	Any other white	2 (17%)	1 (33%)	2 (9%)	0
	White &black Caribbean	0	0	0	0
	White and Asian	0	0	1 (5%)	0
	Any other mixed	0	0	0	0
	Indian	2 (17%)	0	2 (9%)	0
	Any other Asian	1 (8%)	1 (33%)	0	0
	Missing	1 (8%)	0	1 (4%)	1 (13%)
Job title	Health care assistant	6 (50%)	0	9 (41%)	5 (63%)
	Staff nurse	3 (25%)	2 (67%)	7 (32%)	1 (13%)
	Sister/Charge nurse	3 (25%)	1 (33%)	3 (14%)	1 (13%)
	Other	0	0	3 (14%)	0
	Missing	0	0	0	1 (13%)
Current band	2	6 (50)%	0	9 (41%)	5 (63%)
	3	0	0	1 (5%)	0
	4	0	0	3 (14%)	1 (13%)
	5	3 (25%)	2 (67%)	6 (27%)	1 (13%)
	6	2 (17%)	0	2 (9%)	0
	7	1 (8%)	1 (33%)	1 (4%)	1 (13%)
Full time	Yes	12 (100%)	3 (100%)	16 (73%)	7 (88%)
	No	0	0	5 (23%)	1 (13%)
	Missing	0	0	1 (5%)	0
Years on this ward	N (missing)	6	0	5	1
	Mean (SD)	0.7 (0.7)	2 (2)	1 (0.8)	1 (1)
	Median (LQ,UQ)	0.5 (0.2, 1.5)	2 (1, 0.0)	1 (0.5, 2)	1 (0.5, 2)
	Min to max	0 to 1.5	1 to 4	0 to 2	0.1 to 3

Table B.2: Empathy scores for CLECC2 wards over time

	Ward G		Ward H	
	T1	T2	T1	T2
N (missing)	12 (0)	3 (0)	22 (0)	8 (0)
Empathy mean score (SD)	113 (16)	121 (10)	112 (11)	116 (4)
Median	118	121	112	116
(LQ, UQ)	110, 122	N/A	107, 118	113, 120
Range	81 to 133	111 to 131	88 to 134	109 to 122

Table B.3: Maslach reference categorisation[27]

Frequency	Low	Moderate	High
Emotional exhaustion	0-16	17-26	27 or over
Depersonalization	0-6	7-12	13 or over
Personal accomplishment*	39 or over	32-38	0-31

Interpreted in opposite direction to emotional exhaustion and depersonalisation

Table B.4: Burnout scores for CLECC2 wards over time

	Ward G		Ward H	
	T1	T2	T1	T2
Emotional Exhaustion (0-54)				
N (missing)	12(0)	2(1)	21(1)	8(0)
Mean (SD)	19(10)	21(10)	20(9)	22(9)
Category	Mod	Mod	Mod	Mod
Min to max	2 to 31	14 to 28	11 to 42	10 to 36
Depersonalization (0-30)				
N (missing)	10(2)	3(0)	20(2)	7(1)
Mean (SD)	6(3)	5(4)	5(3)	6(5)
Category	Low	Low	Low	Low
Min to max	1 to 10	1 to 9	0 to 10	0 to 15
Personal Accomplishment (0-48)				
N (missing)	10(2)	3(0)	19(3)	7(1)
Mean (SD)	37(5)	28(2)	38(7)	32(7)
Category	Mod	High	Mod	Mod
Min to max	25 to 44	26 to 29	26 to 48	23 to 41

Table B.5: CLECC2 wards International Hospital Outcomes Study (IHOS) job satisfaction

How satisfied are you with your current job in this hospital? Frequency (proportion)	Ward G		Ward H	
	T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Very dissatisfied	1 (8%)	0	0	1 (13%)
A little dissatisfied	2 (17%)	1 (33%)	1 (5%)	1 (13%)
Moderately satisfied	5 (42%)	2 (67%)	8 (36%)	6 (75%)
Very satisfied	4 (33%)	0	13 (59%)	0

Table B.6: CLECC2 wards IHOS work environment

How would you rate the work environment at your job in this hospital? Frequency (proportion)	Ward G		Ward H	
	T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Poor	1 (8%)	1 (33%)	0	0
Fair	5 (42%)	1 (33%)	3 (14%)	3 (38%)
Good	6 (50%)	1 (33%)	15 (68%)	3 (38%)
Excellent	0	0	4 (18%)	2 (25%)

Table B.7: CLECC2 wards IHOS intention to leave

If possible, would you leave your current hospital within the next year as a result of job dissatisfaction? Frequency (proportion)	Ward G		Ward H	
	T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Yes	2 (17%)	1 (33%)	1 (5%)	2 (25%)
No	10 (83%)	2 (67%)	21 (95%)	6 (75%)

Table B.8: CLECC2 wards IHOS type of work

If yes, what type of work would you seek? Frequency (proportion)	Ward G		Ward H	
	T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Nursing in another hospital	3 (25%)	0	1 (5%)	0
Nursing, but not in a hospital	0	1 (33%)	1 (5%)	1 (13%)
Non-nursing	0	0	0	1 (13%)
Missing	9 (75%)	2 (67%)	20 (91%)	6 (75%)

Table B.9: CLECC2 wards IHOS recommendation as place of work

Would you recommend your hospital to a nurse colleague as a good place to work? Frequency (proportion)	Ward G		Ward H	
	T1 N = 12	T2 N = 3	T1 N = 22	T2 N = 8
Definitely no	0	0	0	0
Probably no	1 (8%)	0	1 (5%)	1 (13%)
Probably yes	8 (67%)	3 (100%)	11 (50%)	5 (63%)
Definitely yes	3 (25%)	0	10 (45%)	2 (25%)

Table B.10: Quality of staff-patient interactions on CLECC2 wards over time

Frequency (proportion)	Ward G		Ward H		Total (G+H)	
	T1	T2	T1	T2	T1	T2
Positive social	31 (17%)	42 (31%)	30 (19%)	29 (19%)	61 (18%)	71 (24%)
Positive care	102 (57%)	72 (52%)	90 (58%)	100 (65%)	192 (57%)	172 (59%)
Neutral	19 (11%)	11 (8%)	23 (15%)	10 (7%)	42 (13%)	21 (7%)
Negative protective	15 (8%)	2 (2%)	7 (5%)	8 (5%)	22 (7%)	10 (3%)
Negative restrictive	11 (6%)	10 (7%)	6 (4%)	7 (5%)	17 (5%)	17 (6%)
Total	178	137	156	154	334	291
Negative protective + negative restrictive	26 (15%)	12 (9%)	13 (8%)	15 (10%)	39 (12%)	27 (9%)

Appendix C: An analysis of the relationship between week-days and the quality of staff-patient interaction

To inform our ongoing use of the Quality of Interactions schedule in our research,[22] we also used the QuIS data we collected to test if the day of the week makes a difference to patients' chances of a negative interaction. This appendix outlines further details and results.

Hospital activity ebbs and flows across the week in broadly predictable ways. In addition, levels and types of staff available in a hospital can differ between the weekend and other days of the week. However, there are no published studies that have examined the relationship between the quality of interaction between hospital staff and in-patients, and weekend versus weekday. We used data gathered using the Quality of Interactions Schedule (QuIS)[22] on four wards (D, E, G, H) during both time-points of this Burdett funded study during 2017/18. Data were gathered on all seven days of the week from 08:00 to 20:00 hours. The number of 2-hour observations sessions carried out on each day of the week is shown below. Each scheduled 10-day observation period began on a Friday and so the larger number of sessions on Fridays, Saturdays and Sundays is expected.

Monday = 8 observation sessions

Tuesday = 8

Wednesday = 9

Thursday = 8

Friday = 14

Saturday = 16

Sunday = 16

More detail on the conduct of the observations and data collection in our research can be found earlier in this report.

QuIS allows for each staff-patient interaction observed to be given one of five ratings: positive social, positive care, neutral, negative protective or negative restrictive. For the purposes of analysis, we combined interactions rated either positive social, positive care or neutral into a category labelled "non-negative". We combined negative restrictive and negative protective categories into a total "negative" category. We calculated frequency and proportion of negative versus non-negative interactions for each day of the week. Differences between days of the week were tested using a chi-squared test with p value of <0.05 used to indicate significance.

Table C.1 Quality of interaction by day of the week

Quality of interaction Frequency (proportion)	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	All
Negative	14 (8%)	15 (10%)	17 (10%)	24 (10%)	60 (18%)	21 (8%)	22 (8%)	173 (11%)
Non-negative	168 (92%)	129 (90%)	154 (90%)	208 (90%)	278 (82%)	228 (92%)	260 (92%)	1425 (89%)
All	182	144	171	232	338	249	282	1598

Overall 11% (173 out of 1598) of staff-patient interactions were rated negative. The proportion of negative interactions was lowest at 8% on Saturdays (21 out of 249), Sundays (22 out of 282) and Mondays (14 out of 182). The proportion was 10% on Tuesdays (15 out of 144), Wednesdays (17 out of 171) and Thursdays (24 out of 232). The proportion was markedly higher at 18% on Fridays (60 out of 338). The results of the chi-squared test (Table C.2) indicated that there was a statistically significant difference between days of the week but the descriptive results do not indicate that there is a difference between week-days and weekends. The most apparent difference is between Fridays and other days of the week, suggesting that negative interactions are more prevalent on Fridays. However, the analysis does not control for other variables that may be at play and does not adjust for clustering by, for instance, individual ward, and so these results are indicative only.

Table C.2 Chi-Square Test

	Chi-Square	DF	P-Value
Pearson	23.011	6	0.001
Likelihood Ratio	21.165	6	0.002

Conclusion

There is no evidence of a difference in the quality of staff-patient interaction in acute hospital settings between weekdays and weekends.

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