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Report to West Midlands Patient Safety Collaborative at AHSN- *evaluation of a programme to support the implementation of Human Factors and Ergonomics in General Practice- the TeamSTEPPS model.*

TeamSTEPPS: Enhanced Communication for Safety Improvement?

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Introduction

The West Midlands Patient Safety Collaborative, hosted by the Academic Health Sciences Network is investing in an innovative programme of support for General Practices to improve their approach to patient safety. One element of the programme takes Human Factors as its organising principle in improving patient safety with an established and evidence-based intervention that focuses on team communication: TeamSTEPPS. This approach, which originated in the United States, seeks to optimise the use of information, people and resources in clinical teams. It does this by identifying a range of tools and techniques which help clarify roles and responsibilities, resolve conflicts, improve information sharing and eliminate barriers to improving quality and safety by enabling the development of a common language and common communication processes. TeamSTEPPS is based on 25 years of research related to teamwork, team training, and culture change (King et al 2008).

This evaluation focused on the effectiveness of the TeamSTEPPS approach adopted by two practices within the Modality Partnership in the West Midlands. The Modality Partnership is a single GP organisation that operates across 20 different locations in Sandwell and Birmingham. The chosen case study sites were practices that had undergone the TeamSTEPPS training, and had begun to implement the approach. This evaluation is a discrete activity, separate to the evaluation of the Connecting Care Vanguard Programme, of which Modality is a key partner.

This evaluation was conducted between April and September 2017. It is hoped it will enable subsequent practices to gain from the experiences of the early adopters of TeamSTEPPS.

TeamSTEPPS

TeamSTEPPS is a model for enhancing team performance through improved communications. This process is based on 5 principles (see Box 1), a set of competencies, a framework and a number of tools and techniques which underpin these competencies. [1] The end goal is increased safety for patients.

Practices within the Modality Partnership agreed to implement TeamSTEPPS as part of moving to a team based way of working. The training was delivered by an individual who has had specific training in TeamSTEPPS, with teams then being free to develop their own approaches to change, utilising the tools and techniques which had been introduced to them in their training. It is a highly structured process, with a growing evidence base for success, though it has not been used widely in UK General Practice to date. It is therefore anticipated that the implementation of the approach in this setting may pose different challenges and opportunities.

[1] https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/education/curriculum-tools/teamstepps/instructor/essentials/pocketguide.pdf accessed 5.10.17

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Box 1

The 5 principles of TeamSTEPPS.

Source- Pocket Guide to TeamSTEPPS [2]

Team Structure

Identification of the components of a multi-team system that must work together effectively to ensure patient safety

Communication

Structured process by which information is clearly and accurately exchanged among team members

Leadership

Ability to maximize the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources

Situation Monitoring

Process of actively scanning and assessing situational elements to gain information or understanding, or to maintain awareness to support team functioning

Mutual Support

Ability to anticipate and support team members' needs through accurate knowledge about their responsibilities and workload

Within this project, out of the range of tools available, the 2 most frequently cited in this study was SBAR and Huddles. Boxes 2 and 3 provide further information about these tools.

Box 2

Source- TeamSTEPPS pocket guide [3]

A technique for communicating critical information that requires immediate attention and action concerning a patient's condition (SBAR)

Situation—What is going on with the patient?

"I am calling about Mrs. Joseph in room 251. Chief complaint is shortness of breath of new onset."

Background—What is the clinical background or context?

"Patient is a 62 year old female post-op day one from abdominal surgery. No prior history of cardiac or lung disease."

[2] https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/education/curriculum-tools/teamstepps/instructor/essentials/pocketguide.pdf accessed 5.10.17

[3] https://www.ahrq.gov/teamstepps/instructor/essentials/pocketguide.html

Assessment—What do I think the problem is?

"Breath sounds are decreased on the right side with acknowledgement of pain. Would like to rule-out pneumothorax."

Recommendation and Request—What would I do to correct it?

"I feel strongly the patient should be assessed now. Can you come to room 251 now?"

Huddles were one of the other tools adopted by both practices, and these are described as an "*Ad hoc meeting to re-establish situational awareness, reinforce plans already in place, and assess the need to adjust the plan*" (TeamSTEPPS pocket guide). They are intended to be short (10-15 minutes- conducted standing up to aid this and structured (see Box 3). They help everyone in the team be aware of service issues, gaps and priorities so that team solutions can be found.

Box 3

Huddles:

Brief Checklist

Source- TeamSTEPPS Pocket Guide

During the brief, the team should address the following questions:

Who is on the team?

Do all members understand and agree upon goals?

Are roles and responsibilities understood?

What is our plan of care?

What is staff and provider's availability throughout the shift?

How is workload shared among team members?

What resources are available?

The training in, adaptation, and implementation of these tools have been explored through this evaluation, and the findings are documented in the relevant sections.

Evaluation Scope

This evaluation sought to determine the effectiveness of the TeamSTEPPS approach adopted by the practices in terms of the process of change. It was NOT designed to test improvements in patient safety and/or experience as this would require a more in depth analysis. However, where interviewees' comments reflected their perception of these kinds of changes, these comments have been included.

Ethics and Research Governance Considerations

Whilst there were no prominent ethical issues in relation to this work, the University of Birmingham requires all studies involving human subjects to undergo ethical review. The evaluation incorporated the following features to ensure that the work was carried out to the highest standards of ethics and research governance:

- Potential participants were given information about the aims of the evaluation and how any information they provide would be used. (Appendix 1)
- All information provided by people during interviews and focus groups has been treated anonymously.
- Participants will be given the option to receive a summary of the study findings or the full report.
- All data will be securely stored in accordance with the University of Birmingham's policy on data protection.

With regard to the requirements of the NHS Research Governance Framework, our assessment was that this study would be classified as 'service evaluation'. Service evaluation is defined as work that is "Designed and conducted solely to define or judge current care" (National Research Ethics Service 2010). Service evaluation falls outside of the remit of the NHS Research Governance Framework, and therefore does not formally require NHS ethical approval or local NHS R&D approval. Each practice would be required to follow their research governance process, and communicate their involvement with the appropriate lead.

Evaluation Design

The original proposal developed over time, and given the fluidity of the context (outlined below), evolved into a smaller and more focused project. Whilst the intention was to compare case study sites both within and outside of the Modality Partnership, though still within the Multispeciality Community Provider (MSP) Vanguard (Connecting Care), the practices that responded to the invitations to participate were those who had already implemented TeamSTEPPS, and these were in Modality at the time of the data collection. This clearly has relevance when discussing the generalisability of the findings.

The evaluation included data collection from two case study sites through a series of interviews and focus groups and a literature review to explore the learning about implementing TeamSTEPPS.

Case study sites

The introduction of TeamSTEPPS coincided with significant changes across Modality practices, and this project is nested within a Programme of Change catalysed by the status of Modality as a key partner within a MSP Vanguard (Connecting Care).

The context is complex and in a state of transition due to the following:

- Potentially significant structural changes and the development of new smaller 'core' teams caring for 3,500 patients and new roles and responsibilities within these primary care teams i.e. Health Navigators
- Risk stratification of patients using a Multi-Disciplinary Team (MDT) approach with an 'extended' team to manage more complex patients
- Changing patient journeys to enable a more proactive approach to care delivery.

One of the elements of TeamSTEPPS is intended to help teams identify areas for change. In this project however, TeamSTEPPS was introduced to support the implementation of the specific changes outlined above. The intention therefore is to roll the approach out to all 25-30 core teams across all practices within the Vanguard in due course, in support of this specific change management programme.

The practices

Practice (A) provides primary medical services to approximately 3,600 patients - two male and two female GPs work part time at the practice. Practice B has 7,448 patients, and three female and three male GPs work at the practice (mixture of full-time and part-time).

Each practice had identified a Change Team of three to five staff who had undertaken the training (four modules; three on line, and then face to face workshops). This Change Team then determined how TeamSTEPPS could best support their change initiative, and was responsible for implementing this in their practices. In line with the model, a trained TeamSTEPPS facilitator provided initial training and offered ongoing support to these Change Teams.

Methodology

The evaluation included the following elements:

1. Literature search

A Rapid Evidence Assessment (REA) was the method of choice for this element of the evaluation as a pragmatic and effective process for this project. The aim was to identify any literature which has evaluated the process of implementing Team STEPPS. This in turn highlighted key factors which informed the construction of the key interview themes. Expert librarians based at the Health Services Management Centre, University of Birmingham provided the technical expertise necessary to undertake this phase of the project. A total of 201 articles were returned by the search. After scanning abstracts for relevance, only 12 articles provided valuable insights.

2. Interviews

Semi-structured interviews and focus groups were undertaken with a purposive sample of members of the Change Team in each of the two teams forming the Case Study site. Members of change teams were contacted by email, which provided a brief introduction to the research, and attached a participant information sheet (Appendix 1). In excess of 30 individuals were contacted across five practices, and follow up emails were sent. However, only eight people subsequently participated – four by focus group and four by interview. These eight represented the broad staff groups involved with the core teams (GPs, practice nurses (qualified and unqualified), reception staff and practice managers)

Whilst a number of consistent themes emerged, congruent with the literature, the small numbers may impact on the transferability of the findings.

The interview guide is attached as Appendix 2. Though they were initially planned to be conducted by telephone, the majority of contact with participants was face to face in both sites.

The interview/focus group questions were developed using the learning from the REA and conducted by researchers skilled in qualitative data collection and analysis. They were also transcribed in order to maximise the effectiveness of the thematic analysis stage.

In addition, a number of informal interviews were held with the TeamSTEPPS trainer to provide background and context, and an interview was undertaken with a GP member of the change team in a third practice, who had begun the training but not yet implemented the model. The findings from these are interwoven throughout this report.

Findings:

1. Literature search

A number of themes emerged which included the team culture, context and environment. Broader issues relating to change management were also uncovered. These are presented briefly below:

1. Team culture

Open, trusting communication and mutual respect in change teams is essential to effect change and all change team members have to feel that the group is striving toward a common goal (Gupta et al, 2015; Plonian and Williams, 2015; Haynes and Strickler, 2014).

2. Training

The body of literature noted unsurprisingly that allocating appropriate time to undertake the training is crucial. If minimizing staff time away from clinical work is necessary and staff cannot commit to the Programme time commitment, then this is likely to require a creative redesign of the training approach and informal on-the-job reinforcement may also need to be provided (Mayer et al, 2011).

The literature suggests that training needs to be offered to all team members. One article (Turner, 2012) described how TeamSTEPPS was introduced to new recruits as part of their induction programme.

The literature (Mayer et al, 2011) also commented on the need to align the TeamSTEPPS approach with established principles of team training such as:

- Aligning team training objectives and safety aims with organizational goals;
- Providing organizational support for the team training initiative;
- Getting frontline care leaders on board;
- Preparing the environment and trainees for team training;
- Determining required resources and time commitment;
- Facilitating the application of trained teamwork skills on the job;
- Measuring the effectiveness of the team training program.

The skills of the trainer also emerged as important from the literature (Ward et al, 2015). Experienced trainers with prior experience were considered to be more flexible and have more impact, especially if presenting to senior staff. By contrast, inexperienced trainers may over rely on TeamSTEPPS materials/modules and slide packs and not adapt to meet the needs of the trainees. As the use of simulations alongside a didactic approach appeared to work best, according to the literature, (Ward et al, 2015) this emphasises the point that a confident and knowledgeable trainer is required.

3. Leadership

The need for strong clinical leadership emerged clearly from the literature (Gupta et al, 2015).

4. Implementation

Weaver et al.'s (2010) extensive research on teams provides a useful checklist of 11 questions for considering the implementation of training in practice, as follows:

1: Are diagnostic training needs analyses being conducted to guide training development and implementation? Are training participants given an opportunity to provide input into the training?
2: Who is participating in team training?
3: Where is team training being held?
4: What size teams are being trained and how familiar are team members with one another?
5: Are learning objectives explicitly stated?
6: On what content are team training programs in healthcare focusing?
7: What instructional methods are team training programs in healthcare using?
8: Who is delivering team training in healthcare?
9: Are trainees receiving diagnostic feedback during training to enhance learning?
10: How is training impact being evaluated?
11: When is the training's impact being evaluated?

5. Sustainability

The literature asserts the need for constant reinforcement and the instilling of the TeamSTEPPS tools as new habits, otherwise the old habits are likely return (Budin, et al., 2014; Weaver et al., 2015). An example from the literature was given of a "Play and Learn" session held every month in the staff

canteen of a US hospital – Butler County Healthcare Centre - https://www.bchccnet.org/.) These sessions feature a tool or strategy that is part of the TeamSTEPPS approach and an opportunity to practice using it. Along with the featured tool, simple team-building exercises are also conducted.

The literature notes that participants have to feel that the changes they have made to their processes are going to make their days simpler and safer for all involved, in order for them to find the energy and enthusiasm to both begin and sustain the new practices (Gupta et al, 2015).

2. Semi-structured interviews and focus groups

Overall, interviewees and focus group participants described how important and engaging the training had been, and how they had subsequently decided to adopt a limited number of Team STEPPS approaches- mainly SBAR and Huddles (outlined previously). Other tools (such as CUS[4] and Checkback) [5]were mentioned, though they were not being actively used.

1. Team culture

Overall, when describing the project, adjectives which consistently emerged were "confidence"; "support"; "valued"; "included" "improved". One powerful point about the project was that it seemed to help the whole team of practice staff "*reconnect to their purpose"*- of providing a good, safe service to patients.

One interviewee talked about the development of an open culture during the training sessions in which all staff were "*given permission"* to speak up. It is not clear if this culture pre-existed, though it would appear likely from the Team perception surveys completed by TeamSTEPPs participants prior to the training programme (Appendix 3). Nonetheless, the suggestion is that this has had been enhanced. One participant described an incident when a patient with asthma presented for their booked appointment, and because they looked unwell, they interrupted a GP consultation by telephone, and using the SBAR tool, communicated this with them. The patient was seen immediately, and treated accordingly. The interviewee said that previously, they would have been concerned but unsure as to whether to act or not. The individual was therefore confident TeamSTEPPS did have the potential to improve patient safety.

Other participants reported how they felt more able to contribute in meetings:

"So that if you'd got, you know, opinions, or ideas that you know, they would be listened to".

Huddles were also reported as having favourably improved team communication and helped to share the workload:

"So I think one of the kind of the risks of primary care of GP, you know, is that you can literally just sit in your room from 8 o'clock in the morning, till 6 o'clock in the evening, and plug away. And have no idea what's happening, you know, with anyone else elsewhere. Whereas I think with the team, what the huddle has done, is to help share communication. And it helps to move around the workload. So if

[4] *CUS- an escalation of assertive statements; I am Concerned; I am Uncomfortable; this is a Safety issue- results in "stopping the line".*

[5] *Checkback includes the following:1.Sender initiates the message 2.Receiver accepts the message and provides feedback 3. Sender double-checks to ensure that the message was received*

there's one member of the team that's kind of completely inundated with clinical work, then other members of the team will say OK, we'll do some of the admin".

2. Training

The training consisted of three online modules undertaken generally during the participants' own time and followed each time by a face to face workshop delivered by a specially trained facilitator. The face to face training was reported as being particularly impactful. Despite the gap between these sessions and our conversations, all participants could recall an aspect of training from the sessions. They all reported how enjoyable they were, with one interviewee stating: ''*Oh that was fun, that was fun. I found personally every STEPPS meeting that we had and session entertaining and knowledgeable and I did because it's something new".*

Finding time for the training however was a ubiquitous challenge.

"*I think the training was tricky, because we were trying to fit it amongst, you know, kind of clinical days and I think that the problem – one of the issues with primary care is that days get so busy. Just, they're absorbed by all the clinical work. And trying to find time when everyone's available is very hard. "*

"I think as we got towards the middle or towards the end of it, it became more difficult to release the staff."

"We *were given time just for the meetings. That was it."*

''*Well, we weren't given the time. Let's put it that way. And we did find it overwhelming"*

Even where interviewees reported being given the time to do the online training at work, given the pressures on their day, it was difficult to do this in practice "*and I remember one day I'd put it on (THE VIDEO) and the whole day had gone and I still hadn't even had the chance to look at it properly because I was that busy just doing everything else, I just didn't stop*.''

Whilst many staff were committed enough to do this at home when they couldn't find time at work, this wasn't without its difficulties as one staff member reported ''*And I don't have a laptop or nothing at home so I only have my phone to go by so I don't have anything technical like that at home."*

Given that time constraints were pressing, having a dedicated slot for this training was seen as an important step - for example one TeamSTEPPS session was held the first Friday of every month in the staff canteen. However others found this more problematic, and would have preferred a more flexible approach: "*Not like a weekly thing, where we try to get people in together, and time constraints – somebody's off, somebody's here. All that.''*

Possibly related to time constraints, the uptake of the on-line training programme itself was variable. One interviewee stated how important it was to watch the videos before the session to orientate themselves to the issues and concepts and do some prior thinking. However others didn't manage to watch every video, and yet still felt engaged and understood the processes they were using.

A number of participants reported that the "Americanised" videos made it harder to engage with the topic initially;

"*You know, it's very much American, and you kind of think well it would be nice to have like one that is very focused to British practice, because I think we do generally, the practice of medicine very differently to the Americans"*

"The other thing which is something that's pertinent to me with modules, is they're very Americanised. You know? The, the voice over is highly kind of, you know, with a very strong American accent. And – although you know, I should be a bit grown up and kind of say well, you know, it's just the way – you know, my attention was going.."

Some interviewees also remarked that the scenarios were just unrealistic, and bore no relation to the chaotic, complex environment of UK General Practice. However, most thought that the scenarios in the videos were relevant and could relate to them but that there were too many of them.

Other comments related to the amount of on-line training there was. Most felt the content could be reduced, as it was repetitive; "*Could have reduced time from 6 hours to half a day training for everyone with some role play, would all be done and dusted then."*

"I think maybe, just reduce it to a little bit, maybe. I mean I know it's good to know the whole works of it, but all those videos to be watched."

And others also noted that the on-line programme took little account of individual preferences for learning: "*For me, my personal learning style – I could have got just as much value I suppose, of reading something as well. I suppose the additional of the online modules was the videos, you know, where they kind of showed you little kinds of snippets of you know*"

The face to face training was unanimously praised however. The trainer was consistently cited as knowledgeable, and creative, using tools and techniques to engage and relate to the varied team members. Many also enjoyed the shared experience rather than the singular activity of watching a video alone.

As the whole process does rely on a consistent training programme, it is important to get this aspect right. In reality all teams managed by and large to find the time to make this happen, and attended the workshops in order to consolidate their learning and motivate them to make the necessary changes.

3. Leadership

Whilst the literature identified the need for strong physician leadership, this was not explicitly surfaced through conversations with participants, though some commented on the fact that it happened more readily because the GP had signed up, and nominated the staff.

However without leadership of the process, it was clear that implementation would have been impossible "*You need a strong leader, somebody who needs to make sure that the meetings happen, that they're arranged on a regular basis, that you have an agenda."*

Indeed, where there was an absence of a clear leader, the implementation became more difficult: "*I found it difficult to get answers to questions because nobody would make a decision, for example we used to have an on-call doctor every day, one on-call doctor, split into two teams we couldn't afford to have a doctor for that to be on-call, so a decision had to be made what's going to happen to the patients that the on-call doctor would always deal with on a day to day basis."*

Whilst the change management team ostensibly have responsibility for this project, an absence of a clear and consistent leader may be behind some of the difficulties practices are experiencing. For example one practice has not continued to meet as a change team, and the huddle is not always well attended; and one practice had not yet rolled out the training to all staff, which made embedding the changes more difficult.

4. Implementation

The most tangible aspect of the TeamSTEPPS programme in practice is the regular use of two of the tools: SBAR and Huddles. However different interviewees reported different levels of implementation;

One stated: "*SBAR and Huddles in good use in the practice – clinicians are used to the concept of this anyway from medical training and work in hospitals but it's good to use them in a framework and good for people who aren't familiar with the concepts to have a framework to follow. Been interesting to see how they work in general practice"*

Another reported "*We have a daily huddle at 12.20 every day for 10-15 mins – everyone stands up in one of the consulting rooms"*

However one interviewee remarked "*I mean I think, for instance, one of the tools SBAR – I think we don't use it as much as we could do. I still kind of get kind of communications with other members of the team – you don't get SBAR kind of handovers, so I think it would be helpful to have regular catch ups about team STEPPS."*

The process for running a huddle is well described in the TeamSTEPPS programme (see Box 3, p (6) and there was evidence that this was being followed in practice: " *We use a template but the first question is an open one – how is the day going for people? Any particular issues? Then go through – unmet needs list, call back appoints, home visits, who has got what booked for that afternoon and do people need to provide help/cross cover etc. Clinical admin – lab reports, prescriptions etc."*

And the purpose of everyone knowing issues of concern was seen as positive.

"I *just let the team know about a 60 year old patient who I'm a bit concerned about. So it's trying to maintain that kind of group memory, you know. That, they're kind of OK, this person's on our radar, and there's been a problem recently because they've been unwell, or something unusual has happened with them. So usually things like that."*

Both practices had used visual clues- particularly about SBAR as a means of reminding everyone "*we then had them all done up on little cards and stuck on every computer screen" (*Group interview) and other techniques to aid implementation included listening in, reminding people and role modelling "*And we used to go through them quite regular to say -, and what we'd do is bounce back people if they came with a situation and say 'OK so you said they've got chest pains, is it a 999?"*

"Yeah, it was making sure everyone would really ask all them (sic) questions first in order to know who to direct it to and we'd have something to present to the doctor so they could say 'right OK that is definitely a 999' or 'no it's blood pressure first dah dah dah' and so forth and because otherwise it would be like 'well have they got that and how long have they had that and where are they bleeding from and dah dah dah' and 'I don't know, I don't know'".

One interviewee described how care homes would ring up, and the receptionists would use the information and apply it to the SBAR model themselves in order to pass the same information on to the GP. They felt this had increased their ability to respond appropriately to the patient.

It was clear from the interviews that both practices had implemented changes to practice, and were following a TeamSTEPPS approach to their communications.

Selecting the change team is an important first step for the project, and practices mirrored the literature in terms of using selection and volunteers; *"I was volunteered for the role as they needed a nurse"*

With selection there is a danger of members feeling excluded, and one interviewee mentioned that not being chosen for the change team had got one person's "*back up*" and they had asked "*why have I not been involved in that*?" another stated : "*If every – that's what they were promised – that everybody was gonna have it. But, it doesn't seem like everybody – so therefore, they're not going to be on board with it are they*?

One interviewee also described being selected at a later stage, and they felt this put them at a disadvantage: "*If you come in halfway through, it's really difficult to catch up*".

There were mixed messages however about whether the changes had culminated in a more effective service, with some participants stating that it seemed to be freeing up capacity but another feeling that it was not a panacea for crippling workloads.

''*I think that the problem with TeamSTEPPS is that it doesn't get past the elephant in the room. The elephant in the room is the crippling clinical workload. So, you know, it does help, there are good concepts, but*…"

Time constraints emerged as a consistent theme in terms of both initial training and in being able to implement the new approaches. Time was also a factor in terms of involving everyone in the team - for example one practice felt unable to close the front desk, and so not all staff members were able to attend the huddles. Despite other mechanisms for communicating with non-attenders "*I will email reception team or speak to reception team and we have communication sheets in reception – where we discuss it with them and we get them all to sign to say we've spoke to you about this, this is what you should be doing.*'' this didn't always seem to be effective and had led to some frustration "*So it's like where is our involvement as receptionists then because we're trying to implement it and we try to do it every day to the patients but how do we know what's going on, on our feedback, we don't know nothing what's happening in the huddles.*"

There was also a theme emerging about how much adherence to the model was required if the benefits were to be achieved. For example, the huddles format wasn't strictly followed in all cases, and they became a general meeting at times. Also the templates/checklist varied: "*Yeah, we've got a little sheet that we all devised ourselves didn't we because you did a quick one for us because the one that came back was just too complicated.*''

5. Sustainability

Any change management process can lose traction, and sustainability is often ill addressed - energy to start a new project is rarely matched by the energy required to sustain it. This was apparent in the conversations with participants. Keeping the momentum going and consistently reviewing progress was not seen to be given the same attention as the initial roll out *"We haven't gone through as a team to say how are you all and how's it going"*

"*What I would suggest is, if for TeamSTEPPS, you need to try and revisit it and try and see if you're using it. I think that's one thing that we haven't managed to do. It's kind of been introduced, and we*

haven't – there's no kind of – you know, there's kind of iteration of trying going back and making it better, and almost kind of like an audit type, type cycle."

Keeping up the discipline of using the tools in everyday practice was also challenging for some "*But the SPAR does make you think about, you know, assessing patients, the outcomes. But when you're in a busy clinic, it's very hard to think SPAR all the time, you know?"*

This was also apparent in terms of the huddles. Whilst they were reported to be continuing, adhering to the original structure was less obvious for some: "You're *supposed to stand up, nobody's supposed to sit down, supposed to stand up for ten minutes. I've been in one it's lasted 45 minutes."*

Some participants felt that more work was needed to help embed and sustain the approach, and one interviewee suggested a refresher every six months would be helpful. It was also suggested that this refresher should include every staff member, and not just the change team.

When asked about advice to other practices who would be implementing TeamSTEPPS in the future, participants had a number of ideas. One suggestion was to have champions from other practices to talk to those beginning the journey to show that it can work and that it does have benefits, despite the extra work at the start. This was most powerfully stated by reception staff, who had been sceptical initially, but would not now return to being without the change in practice.

It also seems clear that having champions within the practice is key - as one interviewee explained, who was dubious at the start and put off by the Americanised videos etc - but then really 'got it' and thought "*wow-this is amazing! if we get this right and all the team are using then this is primary care*" feels it will be great for "*not allowing pts to slip through the net, and people taking responsibility appropriately.*" They are now keen to get started and lead the process within their own team.

It was sometimes difficult to separate out TeamSTEPPS processes from the overall change of creating teams in practices, however it did appear that the improved communication skills learnt via Team STEPPS meant the change programme into 'core teams' was easier (though not easy!) to implement.

Summary

Overall TeamSTEPPS was seen as valuable across both practices, and across the range of staff who participated. Whilst some varied in their enthusiasm, all staff felt the tools were valuable contributors to increased communication and improved the ability to raise issues of safety for patients. The key findings are as follows:

- TeamSTEPPS had an impact on culture by helping people reconnect to their purpose, feel part of the team, and feel more confident about raising concerns in the interest of patients.
- Communication mechanisms had improved and the huddles appeared to be helping teams connect and share the workload more equitably, reducing isolation for individual practitioners.
- Both the trainer, in terms of delivery style, and the training were flexible enough to meet the varying needs of teams. Adapting the programme to reduce the amount of work on

individuals (on-line training) and using the face to face training time as an opportunity to build the team, were seen as important elements for success.

- Any change project needs an investment of time, and sometimes this was underestimated by teams. Ongoing sustainability in particular needs ongoing time commitment. There are plans to address this as the programme rolls out.
- The role of the leader is key and in General Practice it is likely to be a GP who needs to be the champion in order for the project to progress.
- Initial enthusiasm can wane if attention isn't given to sustainability and embedding the change. However there was evidence that huddles and SBAR were now embedded in practice in some teams.

Future considerations

The study sample is small, and partly due to this there remain some unanswered questions – for example, whether or not the size of the practice makes significant difference to the implementation and sustainability of the change. Another question relates to the transferability of an American tool into English General Practice - how much can this tool be adapted without losing the integrity of the model and risk affecting its effectiveness?

Sustaining and embedding any change in practice is notoriously difficult. Given the major change in rolling out the new structure of enhanced primary care teams; increasing demand for services; capacity and workforce challenges, and the resulting pressures on time in general practice, meeting this need will require creative solutions and energy. However as King et al (2008) attest, "The key objective is to ensure that there are opportunities to implement the tools and strategies taught, practice and receive feedback on the trained skills, and continually reinforce the TeamSTEPPS principles in the unit or within the department". Therefore, it is clear that some reinforcement is required in order for the changes to be embedded. Some obvious steps such as regrouping as a change team to review progress and consider next steps will need a concerted effort and leadership at a time of many competing priorities.

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APPENDIX 1.

West Midlands Academic Health Science Network Patient Safety Collaborative: *evaluation of a programme to support the implementation of Human Factors and Ergonomics in General Practice- the Team STEPPS model.*

Participant information sheet

About the study

The Patient Safety Collaborative hosted by the Academic Health Science Network (AHSN) supports local collaborative learning. They have commissioned the University of Birmingham Health Services Management centre (see below for more details) to undertake this study, and has funded this evaluation of the Team STEPPS model in General Practice settings. The study aims to identify what helps and hinders the introduction of Team STEPPS, and what might help it become normal practice in GP teams. The recommendations will be used to help roll out this model into other practices.

The study is taking place between March and August 2017. It will involve clinicians and practice staff in three practices.

Method

We will undertake a review of the literature about the process of introducing Team STEPPS, and also interview a number of people who work in the three practices who have started using this model. We will also hold some focus groups of practice staff, to gather as wide a view as possible.

Your participation

You have been selected as an individual who can help us identify what currently works and what needs more attention, and we would like to interview you to discuss this further. The interview will take no longer than an hour. Your participation in the study is entirely voluntary, and you can stop taking part at any point before the final report is produced. If you consent to be interviewed and then later wish to withdraw from the study please contact Yvonne Sawbridge (see contact details below) by 30th July 2017. If this happens, we will destroy any notes or recordings we have made.

What we will do with the information you provide

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We will make notes of the interviews, to help us collate and analyse the data. With your permission, we will record and transcribe the interviews, to help us collect the information more comprehensively. The findings of the study will then be presented in a written report to AHSN. We may want to include comments or thoughts that you share during the interview in the study report, but we will not mention you by name.

Any notes from this study will be stored securely at the University. All electronic data will be password protected, and papers will be stored in a locked cabinet. Only the evaluation team will have access to the data. All data is stored securely and kept by the University for ten years, in line with its Code of Practice for Research http://www.birmingham.ac.uk/Documents/university/legal/research.pdf).

Other information

This study has been designed by researchers from the University of Birmingham. We will produce a written report and include recommendations for future practice. We plan to circulate a draft report of the findings and will invite you to make comments before this is finalised.

If you would like a copy of the report once published, or have any questions or views about this study, please contact:

Yvonne Sawbridge, 0121 414 3205 or y.sawbridge@bham.ac.uk

Address for written correspondence:

Health Services Management Centre

Park House

University of Birmingham

40 Edgbaston Park Road

Birmingham B15 2RT

Thank you for your help with this important work!

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Appendix 2

West Midlands Academic Health Science Network Patient Safety Collaborative: *evaluation of a programme to support the implementation of Human Factors and Ergonomics in General Practice- the Team STEPPS model.*

Interview Themes

Information about participant and their practice- role, background, involvement in Team STEPPS model. Size of practice.

Their views / experiences about the introduction of Team STEPPS: How was it introduced to them? Did they have any prior knowledge of it?
What do they think its purpose is in general?
Did they think it might help them in their practice?

The role of the Change Team: what made you interested in applying? How did the training help? Have you been given time for additional role? Has it impacted upon the wider team in terms of extra work?

TEAM STEPPS in practice. How have you gone about putting it into practice ? What were/are you hoping to achieve as a change? Are there any elements of TS you haven't introduced? Do some aspects fit better with your practice than others and ifso, why?

What progress is being made? Have you been able to deliver your chosen change? What has helped/hindered?

Their views about the continued use of the model: do they think it will be used regularly by everyone in the practice? What would help/hinder this? Would it be helpful to have refresher sessions?

Do they think it will improve patient safety? Have they any examples from practice?

Anything else you would like to say that we haven't asked you about?

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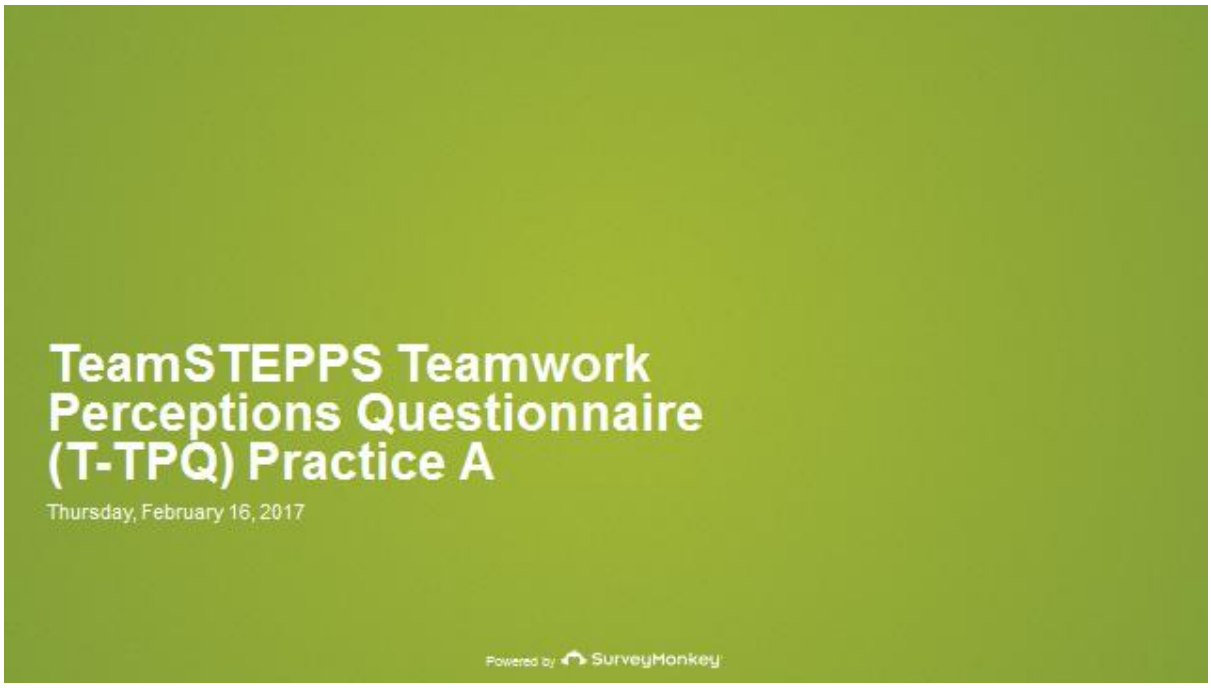
Appendix 3a



7 - Total Responses

Date Created: Tuesday, December 20, 2016
Date Closed: February 16, 2017

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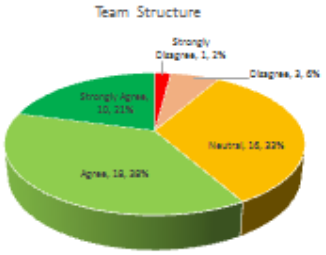
Team Structure – survey findings

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Team Structure						
1	The skills of staff overlap sufficiently so that work can be shared when necessary.	14%	0%	43%	29%	14%
2	Staff are held accountable for their actions.	0%	14%	43%	43%	0%
3	Staff within my office share information that enables timely decision making by the direct patient care team.	0%	0%	14%	71%	14%
4	My team makes efficient use of resources (e.g., staff supplies, equipment, information).	0%	0%	29%	43%	29%
5	Staff understand their roles and responsibilities.	0%	0%	29%	43%	29%
6	My team has clearly articulated goals.	0%	14%	29%	14%	29%
7	My team operates at a high level of efficiency.	0%	14%	43%	14%	29%
OVERALL		2%	6%	33%	37%	20%



What was good

- Staff within the office share information that enables timely decision making by the direct patient care team.
- Staff understand their roles and responsibilities.
- My team makes efficient use of resources (e.g., staff supplies, equipment, information).

What could be better

- Skills of staff overlap sufficiently so that work can be shared when necessary.
- Staff are held accountable for their actions
- Team to operate at a high level of efficiency.

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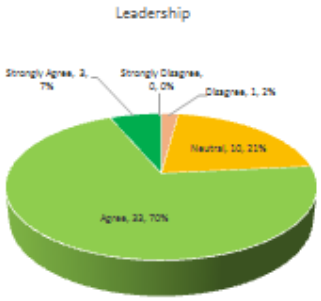
Leadership – survey findings

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Leadership						
8	My supervisor/manager considers staff input when making decisions about patient care.	0%	0%	57%	29%	14%
9	My supervisor/manager provides opportunities to discuss the team's performance after an event.	0%	0%	14%	57%	0%
10	My supervisor/manager takes time to meet with staff to develop a plan for patient care.	0%	14%	29%	43%	14%
11	My supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available.	0%	0%	14%	71%	14%
12	My supervisor/manager resolves conflicts successfully.	0%	0%	14%	86%	0%
13	My supervisor/manager models appropriate team behaviour.	0%	0%	0%	100%	0%
14	My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.	0%	0%	14%	86%	0%
OVERALL		0%	2%	20%	67%	6%

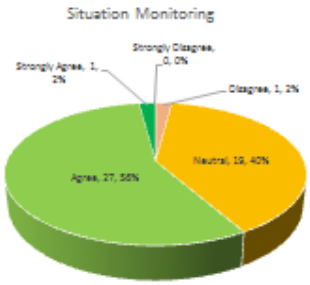


What was good

- My supervisor/manager models appropriate team behaviour.
- My supervisor/manager resolves conflicts successfully.
- My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.
- Supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available.

Situation Monitoring – survey findings

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Situation Monitoring						
15	Staff effectively anticipate each other's needs.	0%	0%	43%	43%	0%
16	Staff monitor each other's performance.	0%	0%	43%	57%	0%
17	Staff exchange relevant information as it becomes available.	0%	0%	14%	86%	0%
18	Staff continuously scan the environment for important information.	0%	0%	57%	43%	0%
19	Staff share information regarding potential complications (e.g., patient changes, bed availability).	0%	14%	57%	29%	0%
20	Staff meet to reevaluate patient care goals when aspects of the situation have changed.	0%	0%	43%	57%	0%
21	Staff correct each other's mistakes to ensure that procedures are followed properly.	0%	0%	14%	71%	14%
OVERALL		0%	2%	39%	55%	2%



What was good

- Staff exchange relevant information as it becomes available.
- Staff correct each other's mistakes to ensure that procedures are followed properly.

What could be better

- Staff share information regarding potential complications (e.g., patient changes, bed availability).

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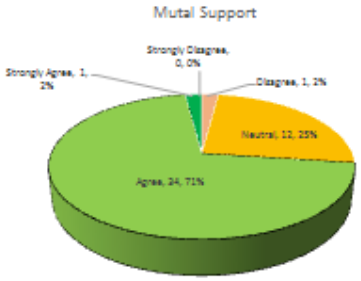
Mutual Support – survey findings

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Mutual Support						
22	Staff assist fellow staff during high workload.	0%	14%	14%	57%	14%
23	Staff request assistance from fellow staff when they feel overwhelmed.	0%	0%	29%	71%	0%
24	Staff caution each other about potentially dangerous situations.	0%	0%	0%	86%	0%
25	Feedback between staff is delivered in a way that promotes positive interactions and future change.	0%	0%	43%	57%	0%
26	Staff advocate for patients even when their opinion conflicts with that of a senior member of the office.	0%	0%	29%	71%	0%
27	When staff have a concern about patient safety, they challenge others until they are sure the concern has been heard.	0%	0%	14%	86%	0%
28	Staff resolve their conflicts, even when the conflicts have become personal.	0%	0%	43%	57%	0%
OVERALL		0%	2%	24%	69%	2%



What was good:
- Staff caution each other about potentially dangerous situations.
- When staff have a concern about patient safety, they challenge others until they are sure the concern has been heard.
- Staff request assistance from fellow staff when they feel overwhelmed.

What could be better
- Staff to assist fellow staff during high workload.

Communication – survey findings

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Communication						
29	Information regarding patient care is explained to patients and their families in lay terms.	0%	0%	0%	100%	0%
30	Staff relay relevant information in a timely manner.	0%	0%	14%	86%	0%
31	When communicating with patients, staff allow enough time for questions.	0%	0%	0%	100%	0%
32	Staff use common terminology when communicating with each other.	0%	14%	0%	86%	0%
33	Staff verbally verify information that they receive from one another.	0%	0%	43%	57%	0%
34	Staff follow a standardized method of sharing information when handing off patients.	0%	0%	29%	71%	0%
35	Staff seek information from all available sources.	0%	0%	29%	71%	0%
OVERALL		0%	2%	16%	82%	0%

What was good
- Information regarding patient care is explained to patients and their families in lay terms.
- Staff relay relevant information in a timely manner.
- Staff verbally verify information that they receive from one another.
- Staff seek information from all available sources.
- When communicating with patients, staff allow enough time for questions.
- Staff use common terminology when communicating with each other.

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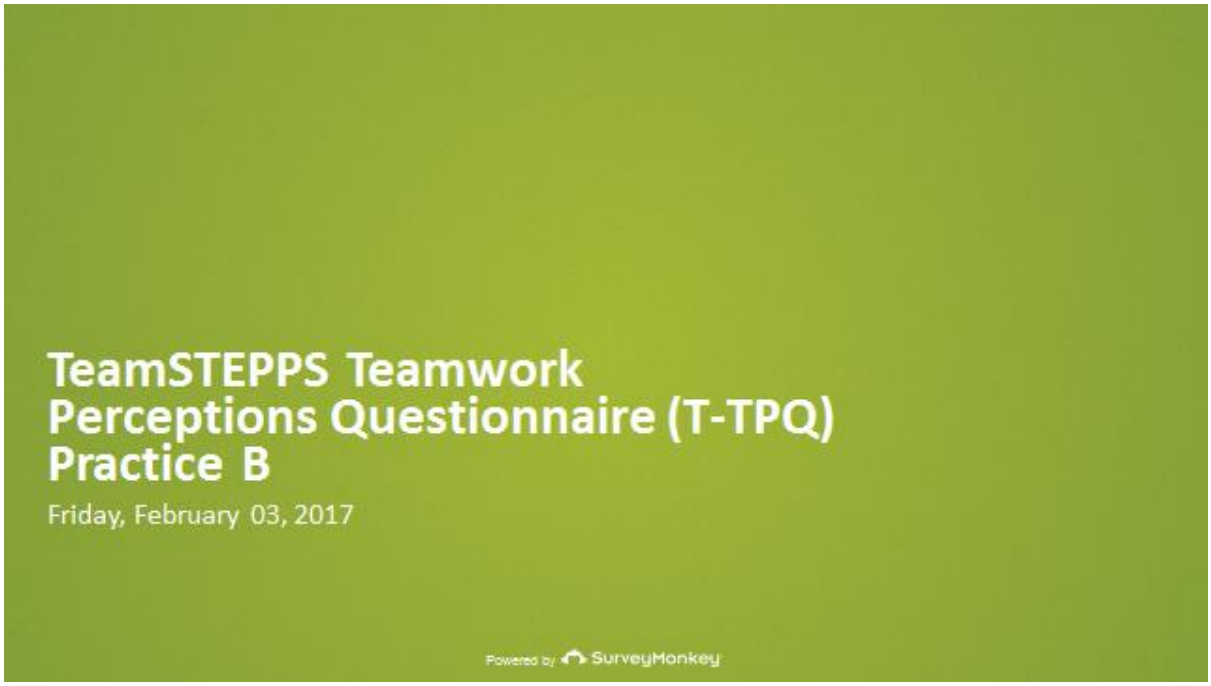
Appendix 3b



UNIVERSITY OF BIRMINGHAM

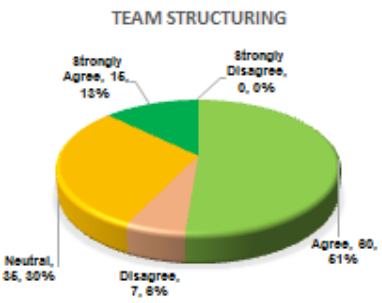
17 - Total Responses

Date Created: Tuesday, December 20, 2016

Date Closed: February 3rd, 2017

Team Structure – survey findings

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Team Structure						
1	The skills of staff overlap sufficiently so that work can be shared when necessary.	12%	53%	35%	0%	0%
2	Staff are held accountable for their actions.	18%	41%	41%	0%	0%
3	Staff within my office share information that enables timely decision making by the direct patient care team.	6%	71%	24%	0%	0%
4	My team makes efficient use of resources (e.g., staff supplies, equipment, information).	18%	41%	29%	12%	0%
5	Staff understand their roles and responsibilities.	6%	65%	24%	6%	0%
6	My team has clearly articulated goals.	6%	47%	35%	12%	0%
7	My team operates at a high level of efficiency.	24%	35%	29%	12%	0%
OVERALL		13%	51%	30%	6%	0%



What was good

- Staff in the office share information to enable timely decision.
- Staff under their roles and responsibility
- Skills of staff overlap sufficiently so work can be shared

What could be better

- Team to have articulated goals
- Team to operate at a high level of efficiency

ENKI PRACTICE

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Leadership – survey findings

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Leadership						
8	My supervisor/manager considers staff input when making decisions about patient care.	24%	41%	35%	0%	0%
9	My supervisor/manager provides opportunities to discuss the team's performance after an event.	24%	47%	24%	6%	0%
10	My supervisor/manager takes time to meet with staff to develop a plan for patient care.	12%	53%	35%	0%	0%
11	My supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available.	24%	53%	24%	0%	0%
12	My supervisor/manager resolves conflicts successfully.	24%	53%	24%	0%	0%
13	My supervisor/manager models appropriate team behaviour.	18%	47%	29%	6%	0%
14	My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.	24%	59%	18%	0%	0%
OVERALL		21%	51%	26%	2%	0%

What was good

- Supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.
- Supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available.
- Supervisor/manager resolves conflicts successfully.

What could be better

- Supervisor/manager to provide more opportunities to staff to discuss the team's performance after an event.

Situation Monitoring – survey findings

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Situation Monitoring						
15	Staff effectively anticipate each other's needs.	18%	35%	29%	12%	0%
16	Staff monitor each other's performance.	6%	47%	41%	6%	0%
17	Staff exchange relevant information as it becomes available.	12%	59%	24%	0%	0%
18	Staff continuously scan the environment for important information.	6%	35%	53%	6%	0%
19	Staff share information regarding potential complications (e.g., patient changes, bed availability).	12%	47%	35%	6%	0%
20	Staff meet to re-evaluate patient care goals when aspects of the situation have changed.	6%	71%	24%	0%	0%
21	Staff correct each other's mistakes to ensure that procedures are followed properly.	6%	65%	24%	6%	0%
OVERALL		10%	49%	35%	6%	0%

What was good

- Staff meet to re-evaluate patient care goals when aspects of the situation have changed.
- Staff correct each other's mistakes to ensure that procedures are followed properly
- Staff monitor each other's performance

What could be better

- Staff to monitor each other's performance.
- Staff to effectively anticipate each other's needs.

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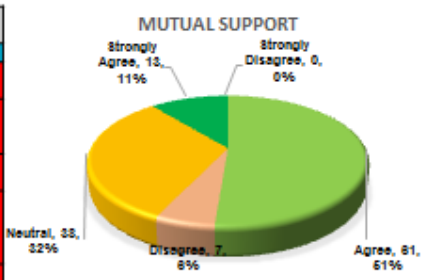
Mutual Support – survey findings

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mutual Support						
22	Staff assist fellow staff during high workload.	18%	35%	41%	6%	0%
23	Staff request assistance from fellow staff when they feel overwhelmed.	12%	29%	47%	12%	0%
24	Staff caution each other about potentially dangerous situations.	29%	65%	6%	0%	0%
25	Feedback between staff is delivered in a way that promotes positive interactions and future change.	6%	65%	24%	6%	0%
26	Staff advocate for patients even when their opinion conflicts with that of a senior member of the office.	6%	59%	29%	6%	0%
27	When staff have a concern about patient safety, they challenge others until they are sure the concern has been heard.	12%	41%	41%	6%	0%
28	Staff resolve their conflicts, even when the conflicts have become personal.	6%	35%	53%	6%	0%
OVERALL		11%	51%	32%	6%	0%



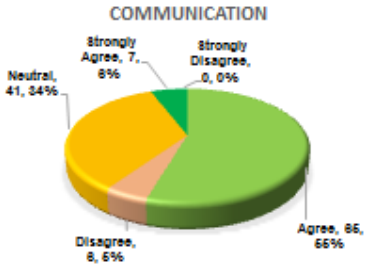
What was good:
- Staff caution each other about potentially dangerous situations.
- Staff advocate for patients even when their opinion conflicts with that of a senior member of the office.
- Feedback between staff is delivered in a way that promotes positive interactions and future change.

What could better:
- Staff to resolve their conflicts, even when the conflicts have become personal.
- Staff to request assistance from fellow staff when they feel overwhelmed.

ENKI PRACTICE 6

Communication – survey findings

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Communication						
29	Information regarding patient care is explained to patients and their families in lay terms.	6%	65%	29%	0%	0%
30	Staff relay relevant information in a timely manner.	6%	59%	35%	0%	0%
31	When communicating with patients, staff allow enough time for questions.	6%	59%	35%	0%	0%
32	Staff use common terminology when communicating with each other.	12%	47%	35%	6%	0%
33	Staff verbally verify information that they receive from one another.	0%	71%	29%	0%	0%
34	Staff follow a standardized method of sharing information when handing off patients.	0%	53%	29%	18%	0%
35	Staff seek information from all available sources.	12%	53%	29%	6%	0%
OVERALL		7%	55%	34%	5%	0%



What was good
- Staff verbally verify information that they receive from one another.
- Information regarding patient care is explained to patients and their families in lay terms.

What could be better
- Staff to follow a standardized method of sharing information when handing off patients.
- Staff to use common terminology when communicating with each other.

ENKI PRACTICE 7