Improving the safety of medication dispensing in primary care by combining human factors and quality improvement sciences


Correspondence to tony.jamieson@yhahsn.com @PharmSafe

Objective
This paper describes a quality improvement programme in patient safety within community (primary care) pharmacies in England.

Dispensing medicines in community pharmacy is a process which is required to be highly reliable. The pharmacy team must combine clinical, technical and non-technical skills in order to accurately supply medicines which are safe and effective for patients. Research estimates that up to 3.32% of dispensed items include an error (James et al., 2009). Although this level of accuracy could be considered to be very high, errors can have serious consequences for patients and for the responsible pharmacists.

Pharmacy professionals have a recognised role in patient safety (Royal Pharmaceutical Society, 2010). They have developed systems to guard against error; however, there is still a need to reduce errors further. This project made use of structured education on patient safety based on human factors theory and a facilitated quality improvement methodology.

Its’ objectives were to:

- Build an awareness, in the members of the pharmacy teams, of the common causes of error in community pharmacy
- Increase knowledge and skills of how to undertake an improvement project
- Improve systems that minimise the occurrence of dispensing errors
- Increase the accuracy of dispensing in the participating teams

Context and setting
The delivery of healthcare is by its nature complex and error prone. We know that there is an error in the prescribing process of 5 to 7% of prescriptions, dependent on the setting (Avery et al., 2013) (Lewis et al., 2009). Of the medication error reports to the UK’s National Reporting and Learning System between 2005 and 2010 (the majority of which are reported by hospitals), 16% reported actual patient harm, and 0.9% resulted in death or severe harm (Cousins et al., 2012). Unintended discrepancies in patients’ medicines after discharge from hospital frequently occur, affecting 43% of repeat prescriptions in primary care and more
than half of all patients discharged (Garfield et al. 2009). Problems with medicines after hospital discharge are particularly associated with adverse health consequences.

The dispensing error rate in hospitals has been estimated as 0.02 – 2.7% of dispensed medicines and in community pharmacies, the estimate is 0.01 – 3.32% of dispensed medicines (James et al., 2009). In 2007 over 748 million prescriptions were prescribed and dispensed in primary care and this resulted in just 5,223 medication error reports being submitted to the National Reporting and Learning System (NRLS) by community pharmacies (National Patient Safety Agency, 2009), a figure far lower than would be expected from the research in error rates.

Factors such as mental workload, distraction and dispensing with divided attention have been highlighted as conditions which increase the dispensing error rate (Family, 2013) (Harvey, 2015) and these conditions highlight the importance of human factors in community pharmacy practice. Human factors in healthcare is an approach to enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation has on human behaviour and abilities. It has foundations in psychology, sociology, physiology, design and engineering and is the key to understanding why errors are made and how to prevent them. The NHS has been slow to follow the lead of other safety critical industries in the adoption of human factors, particularly so in primary care and so the National Quality Board (2013) published a concordat on human factors in which it describes the commitment of leadership organisations in the NHS to increase the understanding and use of human factors to improve safety.

Community Pharmacies, being the setting for this project, are private organisations that contract with the NHS. They are recognised to be isolated in primary care as a consequence of their contractual obligations. Pharmacists are subject to specific requirements relating to medicines governance that severely restrict the amount of time they can leave the pharmacy premises for which they are responsible whilst it is open to the public.

**Design**

The programme adopted the ‘Training & Action for Patient Safety (TAPS)’ methodology as described by Slater et at. (2012). This methodology had been used successfully on previous local projects led by the core team. The core elements of the TAPS approach, which were considered by the core team to be advantageous, are:

- a 20-week programme of involvement;
- participation of between 7-15 multi-disciplinary teams;
- a requirement on participating teams to attend an orientation session and three workshops (Table 1);
- a requirement on participating teams to complete a case study log and to regularly report measures of their success;
- availability of support to the participating teams – by telephone or face-to-face, as required, from the core team.
The TAPS approach shares similarities with a clinical community of improvement as it offers an organised structure for supporting and securing improvements in health systems across multiple sites (The Health Foundation, 2013). The structure itself is a simple one, comprising:

- a core team to provide high-level leadership, direction, coordination and organisational support
- site teams in participating organisations that make change happen locally.

The core team enables the community to be vertically integrated (focused on shared goals) and the site teams in participating organisations allow horizontal integration (thus activating peer influence and knowledge-sharing).

The core team consisted of:

- An experienced senior pharmacist with professional credibility.
- An experienced Quality improvement programme manager.
- A project manager/improvement facilitator.
- Patient safety and quality improvement educators.

To provide a clinical community of improvement for community pharmacy teams

<table>
<thead>
<tr>
<th>Orientation Event (1/2 day) (week 0)</th>
<th>Description of TAPS approach. 1st Educational intervention on Human Factors. Introduction of the improvement measure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop 2 (1/2 day)(week 12)</td>
<td>3rd Educational intervention on Human Factors. Education on annotating run charts Peer review.</td>
</tr>
<tr>
<td>Workshop 3 (evening session)(week 20)</td>
<td>Presentation of results.</td>
</tr>
</tbody>
</table>

**Programme Measures**

**Primary measure**

In order to ensure consistency of meaning and therefore measurement of outcome, a definition for a dispensing error medication incident in this programme was agreed with the participants:

‘Any unintended or unexpected incident which led to harm or could have led to harm which arose from an act or omission by a member of the pharmacy team.’

This focussed the improvement activity within the participating teams on things that were in the power of the team to change.
Due to the relatively small number of actual errors occurring (and the potential severity of associated consequences), the teams agreed to focus on the measurement of ‘near misses’. The improvement measure of dispensing safety was therefore agreed with the participating teams as:

‘The number of prescription items identified at the ‘final check’ which required referral back into the dispensing process for whatever reason (near misses) as a proportion of the number of items dispensed that day.’

Near misses
Daily item count

In addition the teams completed an anonymous ‘safety culture and teamwork’ survey based upon the work of Sexton, et al. (2006). This was done prior to the commencement of the improvement programme and was repeated at the end of the programme.

Recruitment of site teams
The task of recruiting teams was therefore complex and used a number of routes, including recruitment through local pharmaceutical committees, superintendents of pharmacy chains, Local Professional Networks for Pharmacy, and the Royal Pharmaceutical Society Local Pharmacy Forum.

Nine teams signed up to the programme. Two teams did not complete the 20-week programme due to insurmountable staffing issues.

The participating teams were from a range of pharmacy settings:

- 1 GP practice dispensary (working over 2 sites)
- 3 independent pharmacies (1 of which withdrew from the programme)
- 5 pharmacies from across 3 large multiple pharmacy chains (1 of which withdrew from the programme). These included high-street, GP practice and hospital out-patient based dispensaries

Improvement Methods
The Institute for Healthcare Improvement’s ‘Model for Improvement’ was used by the participating teams throughout the programme (Figure 1) (Langley et al 2009).

The participating teams were supported by the core team to populate and annotate run-charts (Perla et al., 2011) using the improvement measure.

Orientation Event (week 0)
This half day event brought teams together to learn about the TAPS methodology and have an introduction to human factors and improvement science, including a discussion of the proposed programmes measures. Teams also completed the safety culture and teamwork survey and took away multiple copies for completion by their pharmacy colleagues.
First visit
In the fortnight following the Orientation Event, each team was visited by the Project Team. The purpose of the visit included:

- meeting others team members
- collecting the completed safety culture and teamwork surveys
- supporting teams to work out best ways of gathering their measures
- agreeing a day of the week when the daily measures would be submitted
- clarifying any outstanding matters

Workshop 1 (week 4)
This full-day event provided a more in-depth understanding of how to apply the Model for Improvement, including use of run charts, and introduction to a range of patient safety improvement tools. There were:

- Process mapping
- A template for significant event audit derived from the NPSA guidance on Significant Event Audit in general Practice (National Patient Safety Agency, 2008) and the Yorkshire Contributory Factors Framework (Lawton et al., 2012)
- Achieving Behaviour Change for Patient Safety toolkit. (Taylor et al., 2013)
- Safety briefings incorporating elements of the Patient Safety WalkRound (Frankle et al., 2003)
- Guidance from NPSA (2007) on Design for patient safety – design of the dispensing environment
- SBAR structured communication tool. (NHS Institute, 2008)

Workshop 2 (week 12)
This half-day workshop offered detailed input on patient safety and human factors, and gave teams the opportunity to begin to annotate their run charts with details of the various interventions that had effected their measures.

Workshop 3 (week 20)
The final event brought teams together to share stories of their improvement journey and to celebrate their successes.

Interim supports
The participating teams were contacted or visited by the Project Team at least every 2 weeks. Teams were offered encouragement and a range of advice on improvement methods including the PDSA cycles and measures. They also facilitated transfer of intelligence (shared learning) between the participating teams.
Findings of initial measurement

Culture Survey
Baseline Safety Culture and Teamwork surveys were received from five of the teams. The results showed high scores across the determinants when compared to teams in other settings (for example acute trust wards. [Local data on file]) with some variation across team members (Appendix 1). Notably it could be seen that the most senior person in each team (being the main pharmacist or GP lead for dispensing), scored lower confidence in the safety of their organisations than the rest of the teams.

Primary Measure
Six out of the eight sites were able to establish a baseline for the improvement measure. One pharmacy had a much lower denominator (daily number of dispensed items) than the other participating pharmacies and this impacted on the numerator (near misses). This necessitated a different improvement measure of,

Days between a “near miss”.

A baseline was established for this pharmacy on this basis.

One pharmacy (Pharmacy D) did not record, on a daily basis, the number of items it dispensed. As a result the run chart displayed the number of near misses per 100 items based upon an average of 400 items per day.

Seven participating teams (eight sites) produced annotated run-charts, with support form the core team, by the end of the programme. All the teams undertook PDSA cycles as part of the programme and utilised a range of the tools provided. The participating teams also
tested interventions they had designed themselves that were directed at addressing human factors.

Interventions included:

- Management of distractions
- Debriefing
- Enhanced Significant Event Audit
- Changes to process. (e.g. crosschecking documentation)
- Changes to task allocation (e.g. who answers the telephone)
- Environmental management (e.g. dispensary lay-out, arrangement of shelves)
- Changes to responsibility (e.g. improved self-checking)
- Encouraging a culture of incident reporting
- Use of the SBAR tool

Case studies of the interventions can be found in Appendix 2

One pharmacy (Pharmacy D) implemented an intervention which was not associated with the management of human factors. The intervention was to take staff members off dispensing duties if they made 3 errors identified at the final check.

Findings of successive measurement

Primary Measure

Pharmacy A (Figure 2) achieved a reduction in the mean number of near misses per 100 items identified by 8 consecutive data points below the baseline.

![Figure 2 Pharmacy A](image-url)
Pharmacy B (Figure 3) saw an increase in the mean number of near misses per 100 items which then decreased back to baseline. The run-chart was not annotated with the interventions made by the team.

Figure 3 Pharmacy B

Pharmacy C (Figure 4) did not achieve a change in the baseline during the programme. The pharmacy did identify a recurring spike in the data which was used to identify ‘special cause’ type variation.

Figure 4 Pharmacy C
Pharmacy D (Figure 5) generated a run chart based upon an average number of prescriptions rather than the actual number dispensed. No changes in baseline were achieved.

Pharmacy E (Figure 6) achieved a reduction in the baseline median number of near misses per 100 items following a clearly annotated intervention. The revised median was sustained for the rest of the programme.
Pharmacy F (Figure 7). The run chart showed an early reduction in the baseline. However this was attributed to a period when near misses were not recorded by the pharmacy. Towards the end of the programme an annotated intervention was followed by a reduction in the mean number of near misses per 100 items (as demonstrated by 8 consecutive data points below the previous average).

Figure 7 Pharmacy F

Pharmacy G (Figure 8) achieved 2 reductions in the mean number of near misses per 100 items. The run chart was not annotated with the interventions.

Figure 8 Pharmacy G
Pharmacy H generated a run chart based upon the number of days between near misses. No change in the baseline was identified.

**Figure 9 Pharmacy H**

**Safety Culture and Teamwork survey**

Three pharmacy teams repeated the Safety Culture and Teamwork Survey at the end of the programme. The response rate was lower than the baseline, preventing direct comparison.

Three of the participating teams also provided feedback on their experience of being involved in the programme in the form of video testimonials. The interview questions were based on value creation stories described by (Wenger et al., 2011). The testimonials from the teams ([www.youtube.com/watch?v=9U28ZR2fsRI&feature=youtu.be](http://www.youtube.com/watch?v=9U28ZR2fsRI&feature=youtu.be)) suggest that participation in the programme was informative, practical and rewarding.

**Analysis**

Recruitment of teams was successful despite the necessity to accommodate the contractual and legal requirements for pharmacists to remain on the pharmacy premises for which they are responsible. This was achieved by providing the workshop sessions on a Sunday when most of the participating team’s premises were closed to the public and by the core team visiting the teams at their place of work.

Six of the seven participating teams engaged with the TAPS approach and adopted the IHI methodology readily. Common traits of these participating teams, noted by the core team, were:
High motivation for improving safety
Camaraderie within the team;
Participative leadership and
A past history of making changes for improvement

Participating teams had not previously received training in the avoidance of error or human factors, however all except one of the interventions that the teams put into place demonstrated that they had understood the human factors theory and were able to translate it into practice.

The TAPS approach requires the participating teams to come out of their work environment for the training and peer support elements of the programme. Attendance at the workshops was variable across the teams with some teams were unable to attend all four events with some bringing a larger number of delegates than others. The provision of interim supports by the core team was therefore important in maintaining momentum throughout the programme.

The application of improvement methodology using PDSA cycles was incorporated into the participating teams’ daily activities. However, not all interventions tried by the teams were tested using PDSA cycles and in most cases it was difficult to attribute causality to a particular intervention, when a change in the average on the run charts was achieved.

The ease with which the teams were able to update their run charts and the visual impact the charts had in the participating teams allowed for continuous monitoring of improvements. Unfortunately, annotation was less consistent and this may have led to some interventions being poorly evaluated for their effectiveness.

The results of the safety culture and teamwork survey which was done at the start of the programme reflected well on the participating teams relative to findings from teams in other service areas. Indeed, the results fostered open dialogue within the teams and provided insight into what behaviours are manifest in a strong safety culture. It is arguable that the close quarters working (restricted work space) in pharmacy dispensaries necessitates a greater level of co-operation than other environments where interaction between the team is less frequent. It is not possible from the returns of the repeat survey to draw any definitive conclusions.

Pharmacy D did not share all the traits of the other participating teams. This pharmacy did not engage as strongly with the core team and it did not record its daily number of items dispensed which was necessary for the calculation of the primary improvement measure. It was slow to start its first PDSA cycle and chose an intervention which appeared to be a punishment for human failure without consideration of the human factors involved.

**Conclusion**

The programme has shown that statistically significant reductions in dispensing errors can be achieved in community pharmacies though a combination of training and action in
human factors and quality improvement. The participating teams demonstrated that quality improvement methodologies can be accommodated into the busy dispensary routine and that measuring for patient safety in a dispensary is effective in monitoring the effects of change. The TAPS approach was also effective at embedding human factors and quality improvement into community dispensaries.

It could be argued that the participating teams, being volunteers for a novel approach to safety improvement, were not representative of pharmacy in the UK. It is possible that, to be successful in using this quality improvement methodology to improve patient safety, pharmacy teams may need to share some of the characteristics that the core team observed in the participating teams; motivation for improving safety, camaraderie within the team, participative leadership, adequate staffing (being that the teams did not consider staffing levels to require increasing) and a past history of making changes for improvement.

It may be possible to use the Safety Culture & Teamwork Survey to identify pharmacies that are likely to succeed in completing a quality improvement programme such as this one. However this would need to be tested on a larger cohort of pharmacies than were involved in this programme.

The success of the approach taken in this programme suggests that there are significant opportunities to improve patient safety through training in human factors and quality improvement methodologies. Inclusion of these elements into undergraduate and post graduate education programmes for pharmacists and pharmacy technicians may prove beneficial in particular in embedding continuous quality improvement into every-day practice.

References


Acknowledgements.
The Improvement Academy would like to acknowledge the following people and organisations for their invaluable contributions to the development and delivery of this programme.

The participating team members.
The programme delivery team.
David Allred – Leeds University
Jaspal Bagral – Improvement Academy
Louise Barber – Improvement Academy
Alison Blenkinsopp – Bradford University
John Evans - ASDA Pharmacy
Hannah Family – Bath University
Rebecca Lawton – Leeds University & Bradford Institute of Heath Research
Graham Prestwich – Lay adviser to Improvement Academy
Michael Rooney – Improvement Academy
Kirstie Samuel – Lay adviser to Improvement Academy
Beverly Slater – Improvement Academy
Rachel Urban – Community Pharmacy West Yorkshire.
Appendix 1 – Safety Culture & Teamwork Survey – Baseline results

This company is doing more for patient safety now, than it did one year ago.

Management does not knowingly compromise the safety of patients.

The culture in this pharmacy makes it easy to learn from the errors of others.
The levels of staffing in this pharmacy are sufficient to handle the number of prescriptions and services.
The culture in this pharmacy makes it easy to learn from the errors of others.

In this pharmacy, it is difficult to discuss errors.

My suggestions about safety would be acted upon if I expressed them to management.

I know the proper channels to direct questions regarding patient safety in this pharmacy.

I have the support I need from other personnel to care for patients.

In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.

Errors are handled appropriately here.

I receive appropriate feedback about my performance.

I am satisfied with the quality of collaboration that I experience with staff/team members in this pharmacy.

I am satisfied with the quality of collaboration that I experience with the pharmacist in this pharmacy.

Briefings are common in this pharmacy.

Important issues are well communicated to the team working on the next day/shift.

I know the first and last names of all the personnel I worked with during the last day I worked.

It is easy for personnel here to ask questions when there is something that they do not understand.

Disagreements in this pharmacy are resolved appropriately (i.e., not who is right, but what is best for the...

The pharmacist and staff/team members here work together as a well-coordinated team.

Staff/team member input is well-received in this pharmacy.

Briefings are common in this pharmacy.

The levels of staffing in this pharmacy are sufficient to handle the number of prescriptions and services.

I am frequently asked to express disagreement with the pharmacist here.

I receive appropriate feedback about my performance.

The culture in this pharmacy makes it easy to learn from the errors of others.

In this pharmacy, it is difficult to discuss errors.

My suggestions about safety would be acted upon if I expressed them to management.

I know the proper channels to direct questions regarding patient safety in this pharmacy.

I have the support I need from other personnel to care for patients.

In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.

Errors are handled appropriately here.

I receive appropriate feedback about my performance.

I am satisfied with the quality of collaboration that I experience with staff/team members in this pharmacy.

I am satisfied with the quality of collaboration that I experience with the pharmacist in this pharmacy.

Briefings are common in this pharmacy.

Important issues are well communicated to the team working on the next day/shift.

I know the first and last names of all the personnel I worked with during the last day I worked.

It is easy for personnel here to ask questions when there is something that they do not understand.

Disagreements in this pharmacy are resolved appropriately (i.e., not who is right, but what is best for the...

The pharmacist and staff/team members here work together as a well-coordinated team.

Staff/team member input is well-received in this pharmacy.
Management does not knowingly compromise the safety of patients.

This company is singularly focused on patient safety. It was the same 10 years ago.

Decision making in this pharmacy still lacks input from relevant personnel.

My suggestion about safety would be acted upon if I expressed them to management.

Leadership insists on being a safety-focused company.

I have the support I need from the leadership to care for patients.

I am satisfied with the quality of collaboration that I experience with the pharmacy.

I know the first and last name of all the personnel I worked with during the last day I worked.

I envision frequently disregard risks, guidelines, or SOPs.

The levels of staffing in this pharmacy are sufficient to handle the number of prescriptions and services.

I am satisfied with the quality of collaboration that I experience with staff/team members in this pharmacy.

Staffing issues common in this pharmacy.

Briefing personnel before the start of a day/shift (i.e., to plan for possible contingencies) is important...

Importantly, I was able to communicate to the teams working on the next day/shift.

In this pharmacy, it is difficult to discuss errors.

It is easy for personnel here to ask questions when there is something that they do not understand.

In this pharmacy, it is difficult to speak up if I perceive a problem with patient care.

I know the proper channels to direct questions regarding patient safety in this pharmacy.

Errors are handled appropriately here.

I received appropriate feedback about my performance.

The culture in this pharmacy makes it easy to learn from the errors of others.

I am encouraged by my colleagues to report any patient safety concerns I may have.

I would feel safe being treated here as a patient.

Disagreements in this pharmacy are resolved appropriately (i.e., not who is right, but what is best for the...)

The pharmacy and staff/team members work together as a well-coordinated team.

Staff/team member input is well received in this pharmacy.

I am frequently unable to express disagreement with the pharmacy here.
Appendix 2 – Case Studies.

Pharmacy C
“The team wanted to reduce the number of near misses occurring daily in the dispensing process of their dispensary. They identified that as a team, they work well together, however there was a desperate need to streamline the dispensing process and collect measures to identify any pitfalls during the first Learning Workshop, the team completed a process map of their dispensing process. The team identified some necessary changes that they felt would improve the dispensing process.

The team had many big plans in place to streamline the whole dispensing process. They decided to improve the near misses recording sheet and collect measures from both sites. They also decided to re-arrange the reception and dispensary workspace so that dispensers had more space to work and concentrate in.”

Pharmacy D
“The team wanted to reduce the number of near misses occurring daily in the dispensing process of their pharmacy. They identified that as a team, they work well together, however there were some small changes that they could make to allow for a smoother run of the pharmacy. One issue regarding auto-repeat system they had in place caused confusion to staff and patients alike. The confusion was linked to where in the dispensary prescriptions and completed medication bags were placed. The team felt that organising this area well will reduce stress levels within staff members and increase their confidence.

During the first Learning Workshop, the team completed a process map of their dispensing process. The team identified some necessary changes that they felt would increase patient satisfaction and reduce stress on work colleagues. They identified that if they explained the auto-repeat process accurately and created laminate cards to give to patients regarding their auto-repeats, both staff and patients would have more clarity and control in their monthly medicines supply.

The main priority for the team was a need to reduce the number of calls and unnecessary visits they were getting from patients expecting medicines to be ready. This was very time consuming for staff to explain to patients the day their medicines will be ready for collection, and frustrating for patients alike.

The team identified that the way they collected their near misses was not effective and not a true reflection of the actual number of near misses occurring daily. As the near miss log was electronic, and the team only had two computers between them, the computer was hardly available to input near miss data at the time of the event. This led to forgetting to update the log, and as a result not having reliable measures to work from.

On a visit, we suggested having a paper log of near miss entries which would be available all the time and can be accessed to update near misses as they occur. This was successfully implemented and the team realised that this allowed them to record near miss data easily, providing reliable measures to work with.”

Pharmacy F
“The team wanted to reduce the number of near misses occurring daily in the dispensing process of their pharmacy. They identified that as a team, they work well together, however the dispensing layout caused many distractions and thus increased the level of near misses occurring. They felt that
due to close working within colleagues, and an open-view layout of the dispensary, the distraction level was the main cause of lack of concentration. Repetitive tasks also increased the error rate.

During the first Learning Workshop, the team completed a process map of their dispensing process. The team identified some necessary changes that they felt would increase patient satisfaction and reduce stress on work colleagues.

The main priority for the team was a need to change the dispensary layout. As dispensers were working next to each other, paperwork was getting mixed and sometimes labels were put on wrong medications. To avoid this from occurring, the two computers used for dispensing were moved further away from each other and dispensing assistants managing the paperwork were stood further away from each other using the computer as a useful obstacle.

Furthermore as the team worked closely together and identified that communication between them was a major distraction to work, they decided to change this by informing other colleagues that they were concentrating so not to talk. As they were very friendly with each other and wanting the signal to be quiet, to be subtle, they decided to put their index finger on their lip, to signal ‘no talking please, I am concentrating’. The team found this worked extremely well and did not hinder their working relationship too.

Other changes included minimal multi-tasking. If a dispenser is busy dispensing medication, they should not leave their work for other reasons e.g. answer the telephone, handle the reception desk. Rather, they should leave dispensing if the reception desk needs cover or if they have to answer the phone, they need to go back to dispensing and start from the beginning with the prescription sheet. The team found that this reduced work pressure and allowed them time to concentrate on dispensing fully.”

Pharmacy H

“The team wanted to reduce the number of near misses occurring daily in the dispensing process of their pharmacy. They identified that as a team, they work well together, however effective communication regarding Prescription Collection Service (PCS) was an issue. They felt that patients would arrive to collect a prescription and often prescriptions had not been ordered or were not ready. This led to low patient satisfaction and an increase in stress on the team.

During the first Learning Workshop, the team completed a process map of their dispensing process. The team identified some necessary changes that they felt would increase patient satisfaction and reduce stress on work colleagues.

The main priority for the team was a need to streamline the PCS. They introduced a clearly labelled basket for any prescription that required faxing to the relevant GP Practice. Any prescriptions in the basket were the responsibility of the individual who placed it there and an agreement was in place that no-one should finish their shift with incomplete tasks relation to the PCS.

The document used to pick up any repeat prescriptions from neighbouring GP practices was amended. Rather than having a list of patients with GP Practices on a table (in no particular order), the table was split into the different GP Practices. This ensured that no patient was missed out when dispensing assistants went to collect repeat prescriptions on their behalf.”

See also http://www.improvementacademy.org/our-impact/impact-case-studies/