Transfer of Care

Detailed Project Report

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Report Summary

A method of electronic communication between secondary care and community pharmacy has been developed and has now been tested by 9 out of the 11 hospital Trusts in the region. Visibility of the work being undertaken in the North East and North Cumbria has resulted in a number of other hospitals in the country adopting the same method of electronic communication.

Further work is required to embed electronic communication into normal working practice but with appropriate strategic leadership this will be possible during 2016.

Early analysis of results indicates better outcomes for patients and a positive impact on readmission rates and bed days but the latter has yet to be confirmed.

Introduction

The North East and North Cumbria (NENC) AHSN Medicines Optimisation Steering Group formed a Transfer of Care Project Team in October 2014 which was tasked to "Develop and embed into normal working practice a regionally accepted framework for electronic communication between secondary care and community pharmacy services" and deliver simple measurable outcomes by October 2015. This report describes how the electronic template was developed, barriers to implementation, lessons learnt, outcome measures and future recommendations.

Background

Evidence suggests that 45% of medicines prescribed at the point of discharge from hospital are new medicines[1] and 60% of patients have three or more medicines changed during their hospital stay[2]. Whilst most hospital pharmacy services try to ensure patients are well informed about new / changed medicines at the point of discharge, the discussion is often rushed, patients are often distracted and evidence is lacking that this improves patient outcomes. In contrast evidence exists that community pharmacist providing follow-up support to patients prescribed a new medicine for a long-term condition increases adherence by 10%[3].

Traditionally links between hospital and community pharmacy has been very limited resulting in missed opportunities to improve medicine adherence, reduce medication errors, reduce early readmissions to hospital and improve outcomes for patients.

In recent years however there has been a national drive to improve the transfer of care between hospital and the community pharmacy setting with a view to improving patient outcomes[4-7]. This project aimed to create a method that hospital and community pharmacy in the North East and North Cumbria could routinely communicate, when required, to help ensure patients received the support they needed with their medicines after leaving hospital.

Discussion

At the first project team meeting in October 2014 it was established that only two potential methods of electronic communication between hospital and community pharmacy existed namely 'Refer to Pharmacy' or 'PharmOutcomes'. Concerns were raised at the meeting that 'Refer to Pharmacy' would incur a license / interface costs for each hospital, would require commitment from hospital IT departments to create the interface and had not yet been implemented anywhere. In contrast it was established that PharmOutcomes was a simple web based application already used by all community pharmacies in the North East and North Cumbria, hospitals would not incur any set-up costs (i.e. licences owned by Local Pharmacy Committees), the provider was willing to adapt the referral templates to the requirements of the project team and Newcastle Hospitals had already successfully started making referrals using this method of electronic communication. The project team therefore decided unanimously to explore the use of PharmOutcomes.

In November 2014 it became apparent that the existing PharmOutcomes licences did not allow data transfer between Local Pharmacy Committee (LPC) geographical areas, which would have limited referrals. This barrier however was overcome in December 2014 at a regional LPC meeting when it was agreed that a North of England 'super licence', which covered the AHSN NENC geographically area, would be purchased.

At the beginning of 2015 the 11 hospital Trusts and 6 LPCs in the region nominated a link person to work with the AHSN project lead to coordinate the roll out of the service across the NENC. The plan had originally been to roll the service out across the region by July 2015, allowing regional data collection and simple analysis by October 2015. However the single biggest factor which prevented these time-scales being achieved was waiting for Trust Information Governance (IG) departments to approve the use PharmOutcomes. This was despite there being clear IG technical specification for PharmOutcomes and its use being previously approved by the IG lead for Newcastle Hospitals. The IG approval delay varied considerably between hospital Trusts. Some hospital IT departments also got involved in the approval process causing further unnecessary delays. Once Trusts had received approval to use PharmOutcomes a launch event was organised by the hospital and LPC leads to help ensure pharmacy staff working in hospital and community pharmacy were aware of the service and the anticipated benefits to patient outcomes. These launch events were, in the majority of cases, well received by pharmacy staff with notable exceptions from one hospital e.g. 'what's in it for us?' and a community pharmacist 'what happens if I receive a referral and I have already completed my 400 MURs?' However given the scale of the roll out and the requirement for different sectors of the profession to routinely work together for the first time, it must be noted that the vast majority of people were very receptive to the new service and appreciated the likely benefits for patients. There was also a great desire for closer links between hospital and community pharmacy.

As the service was being rolled out it became clear a number of changes to the referral templates were required. After discussion it was agreed that the hospital referral template needed to be simplified to ensure it only took 2 minutes to complete, whilst at the same time ensuring data fields recommended by the Royal Pharmaceutical Society were captured. This meant that if pharmacy staff were already speaking to patients about their discharge medicines, the additional time to get patient consent and make a referral did not impact significantly on existing workload. Reference to the MUR and NMS service was also removed from the hospital template as the service was 'rebranded' as a 'clinical handover'

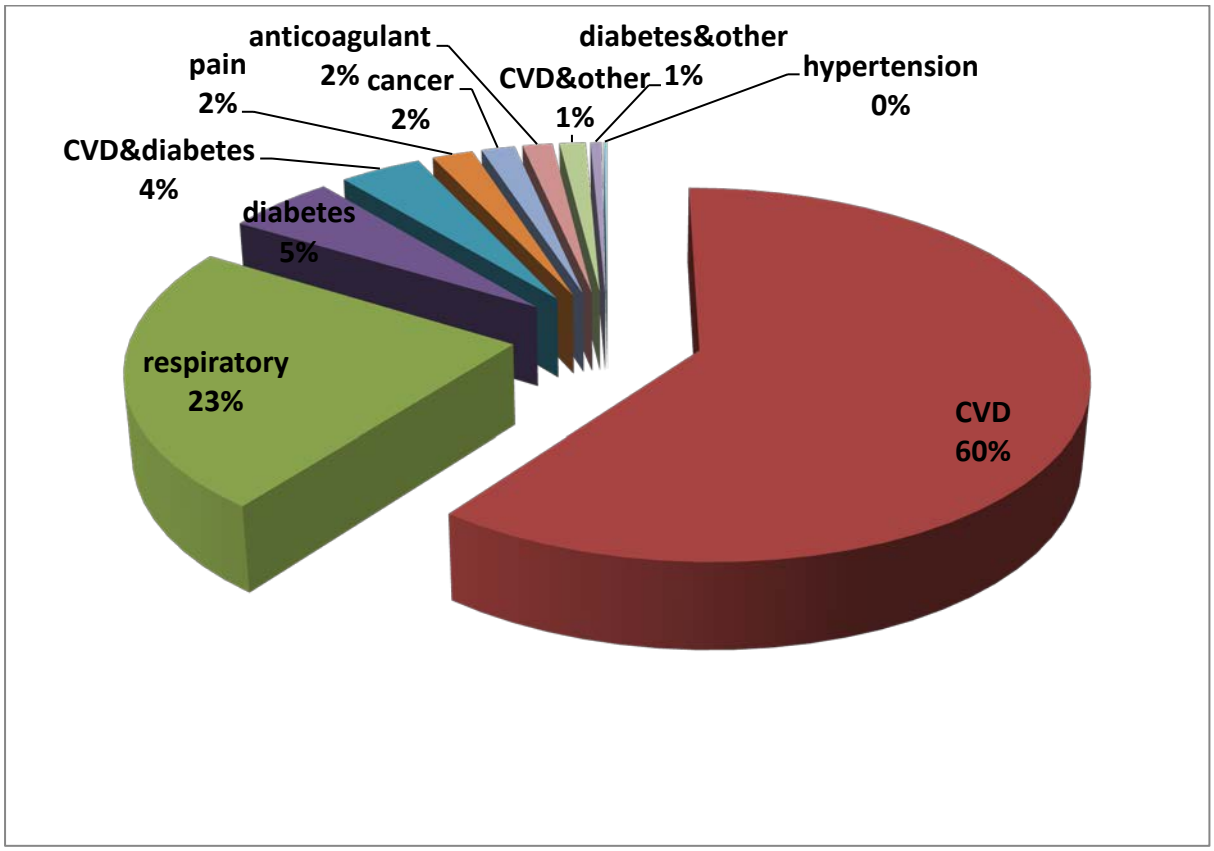
rather than a discharge MUR/NMS. Completion of the template could be further simplified if required data was automatically pulled from hospital databases, however this would require commitment from hospital IT departments and may incur a cost. A recent addition to the hospital referral template allows documents (e.g. discharge summaries) to be attached to referrals. In a future evaluation this could be used to determine if this helped identify medication errors being received by community pharmacies from GPs.

The community pharmacist referral template was also modified, as whilst it allowed simple data to be collected on completed referrals (table 1 and 2) it was not clear what intervention had actually been made.

TABLE 1 - Completed referrals from Newcastle July 2014 - September 2015

Question	Yes (%)	No (%)
Better understanding of medication	90	10
Dose check	88	12
side effect check	84	16
Advice given on condition	74	26
ADR	13	87

TABLE 2 – Long-term conditions referred from Newcastle June 2014-September 2015



For example recording that a patient had a better understanding of their medication hid some significant interventions (e.g. a patient thought their seretide accuhaler was the same as their tiotropium inhaler so was using it once a day rather than twice a day and was not using their tiotropium inhaler at all, a patient continued to take the warfarin they had at home which had been discontinued while they were in hospital together with their newly prescribed dabigatran, a patient was made aware that the symptoms they were experiencing related to hypoglycaemic episodes as a consequence of their newly prescribed insulin and was given appropriate advice). The change to the community pharmacy template allowed such interventions to be recorded which, amongst other things, has been useful in providing motivational feedback to hospital staff. The change also allowed RiO scoring to be recorded to score the likelihood that an intervention prevented a readmission to hospital. Whilst it is accepted that RiO scoring has yet to be formally validated and therefore may not be a reliable predictor, its introduction was partly intended to encourage community pharmacists to consider the clinical impact of their intervention. Guidance and 'frequently asked questions' were also added to the community pharmacy template to provide additional support and to help ensure the correct processing of PharmOutcomes referrals.

PharmOutcomes excel reports were also modified to allow easier data analysis and tracking of the outcomes of referrals being made. This change highlighted the fact that a significant proportion of referrals were being rejected but it was unclear why. As a consequence of this a 'drop down' menu was created in the community pharmacy template so they could choose the most appropriate reason for rejection.

Subsequent data analysis seemed to indicate that a large proportion of rejected referrals were due to patients being housebound. After discussion at a project team meeting, the NHS England representative provided assurance that community pharmacists would be funded to perform a telephone or domiciliary MURs for housebound patients provided appropriate

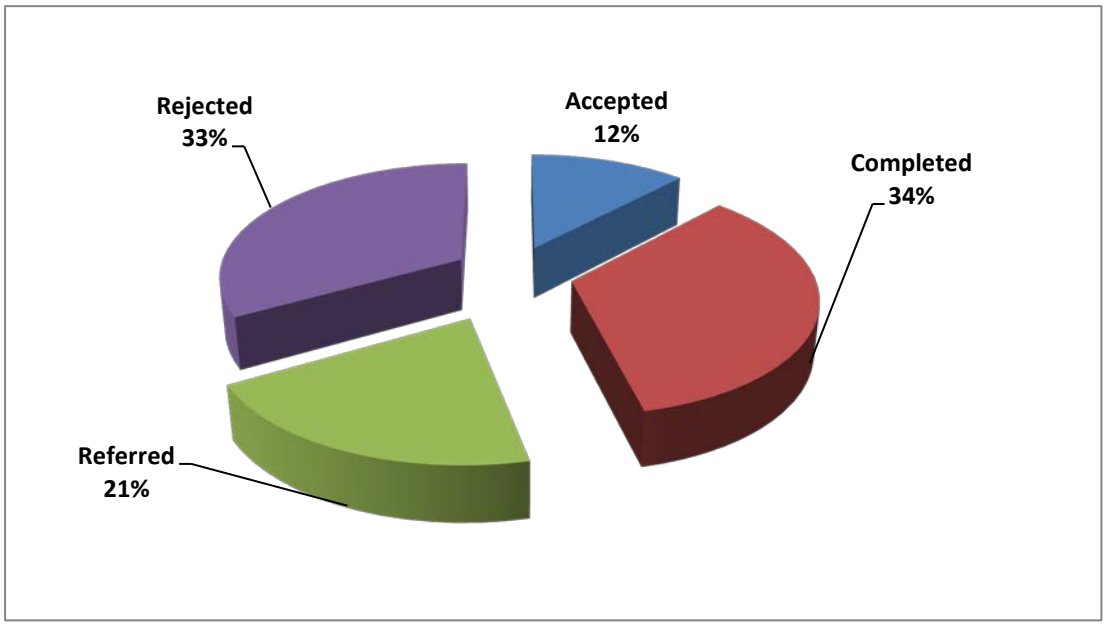
forms were completed. The link to these PERM2 forms is now available on the community pharmacy referral form. It later transpired however that 'Housebound' was the default reason for rejection on the drop down menu and this accounted for the majority of the 'housebound' rejections. When this was discovered, the drop down menu was changed to ensure there was no default reason for rejection (see table 4 for the impact of this change).

The project team also discussed creating hospital referral criteria however given that all patients being referred were on 4 or more medicines and had a change to their medicines during their hospital stay, no definitive criteria was set. Allowing hospital staff to use their clinical judgement provides greater flexibility and allows them to prioritise their referrals and balance referrals with other competing work pressures. It has also become clear that the way the service is introduced to patients has an impact on the uptake of the service. At a project team meeting it was agreed that hospital staff should say 'As part of your care package we now intend to refer you to your community pharmacy. Who would you like me to refer you to?' Likewise community pharmacists should explain to patients that the service is part of their follow-up care.

In terms of data collection it would be useful to establish the impact of referrals on medicine adherence, early readmission to hospital and medication errors picked up by community pharmacists; however that was not in the scope of this project.

Simple data analysis did however show that a smaller proportion of referrals than originally expected were being completed (see table 3).

TABLE 3 – Status of referrals from Newcastle made June to November 2015 (N=901)



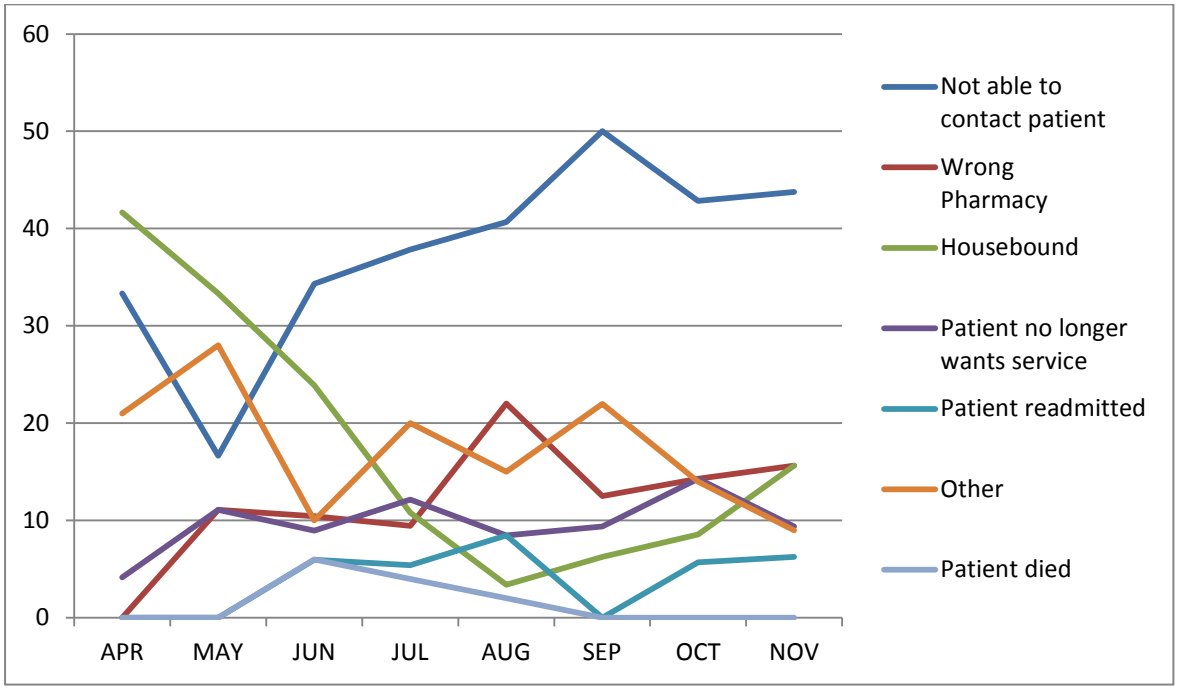
Firstly it was a concern that around 20% of referrals were remaining 'Referred' which may indicate that community pharmacists were not seeing the referrals. On discussion at a project team meeting it became apparent that to see a referral community pharmacists had to log on to PharmOutcomes and this was not routine practice for some pharmacies. As consequence an e-mail notification was set up on the system to ensure community

pharmacists are notified each time a referral is received. A planned future development is to send reminder e-mails to pharmacies that have not actioned a referral within 7 days of it being sent. It has also become apparent that regional managers of multiples were not able to monitor the uptake of hospital referrals by their pharmacists. A monthly report is now sent to regional managers which will help them remind their pharmacists of the importance of completing referrals and the likely impact it will have on patient care. Given that there are over 700 community pharmacies in the region and the relatively small number of hospital referrals being made (see Table 5) it is perhaps not surprising that completion of referrals is not yet fully embedded into practice. Once hospital referrals become routine practice, community pharmacists are more likely to understand the correct process including the need to log back in to PharmOutcomes to 'Complete' a referral (i.e. some of the referrals showing as 'Referred' may have actually been 'Completed'). Once all the hospitals in the region start making referrals routinely it will also be possible to advertise the service to patients via television, radio and leaflets distributed by hospital and community pharmacists, which would help embed the service further.

Analysis also showed that over 10% of referrals remained 'Accepted' which indicates the community pharmacist intended to complete the referral or actually did complete the referral but forgot to go back in to Pharmoutcomes to click on the 'Complete' box.

Further work is still required to reduce the number of referrals showing as 'Rejected' (see table 4). There seems to be a misunderstanding that if a referral does not meet MUR/NMS

TABLE 4 – Percentage breakdown of rejections: April to November 2015



criteria it should be rejected. This accounts for the majority of 'Rejected' referrals shown as 'other' (second most common) in table 4. Guidance has recently been updated in the

community pharmacy template highlighting that if the community pharmacist has any form of interaction with the patient it should be considered as a completed referral.

The most common reason a referral is rejected is due to the patient not being contactable. Hospital pharmacy staff making referrals must find out from patients the best telephone number for the community pharmacist to contact within the first few days of them leaving hospital (which may not be the same as their home number) and ensure they record the number accurately on the referral form. It may also be prudent to obtain a second number from the patient (e.g. mobile, carer/child). Patients may not answer the call if it is from an unrecognised number and therefore hospital pharmacy staff making the referral should pre-warn patients that they may receive such a call. Community pharmacists should also be encouraged to leave telephone messages for patients whilst ensuring patient confidentiality is not breached. One other possible future development is for hospital staff to arrange a follow-up appointment with the community pharmacist so the patient can be informed of the date and time of their appointment prior to leaving hospital. This however would be time-consuming and would need to be piloted on a small scale initially.

The third most common reason for a referral being rejected is due to the referral being sent to the wrong community pharmacy. It can be difficult for hospital staff to select the correct community pharmacy if the patient's description does not match the description on PharmOutcomes. At present if a community pharmacy receives a referral for a patient that is not theirs, the only option they have is to reject the referral. In a future development they will be able to refer the patient on the correct community pharmacy.

Other reasons for rejection include the patient no longer wanting the service and the patient being housebound. Ensuring patients receive a leaflet about the service before they are seen by pharmacy staff should make them better informed and more comfortable to say they do not think the service is suitable for them. As the service is rolled out across the region at scale it may become apparent what the best way is to ensure patients giving consent to be part of the service in hospital do actually attend their community pharmacy for follow-up. As discussed previously it also important that community pharmacies introduce the service to patients correctly as a follow-up service. The number of rejections due to patients being housebound indicates that not all community pharmacists realise they can receive payment for a telephone or domiciliary MUR (or NMS). It appears that further education is required.

A summary of the lessons learnt during testing / implementation across the region can be found in appendix 1.

With the exception of Newcastle all trusts planned to implement electronic referrals on a small scale initially prior to larger scale implementation. This combined with a number of barriers to implementation discussed earlier (e.g. IG issues) resulted in a smaller than hoped number of referrals being made (see table 5).

TABLE 5 – Hospital referrals made from June to November 2015

	June	July	Aug	Sep	Oct	Nov	Total
Newcastle	148	188	154	114	134	159	897
Northumbria	0	0	5	0	7	7	19
Gateshead	0	2	5	3	3	2	15
South Tees	0	3	1	2	3	0	9
North Tees & Hartlepool	1	0	0	3	0	2	6
South Tyneside	0	0	0	3	0	0	3
North Cumbria	1	0	0	0	0	0	1*
Darlington & Durham	1	0	0	0	0	0	1*
Sunderland	0	0	0	0	1	0	1*

*=Test referrals

Northumberland, Tyne and Wear NHS FT and Tees, Esk & Wear Valley FT have yet to make a referral as still awaiting approval from their Information Governance departments.

To be able to implement and sustain hospital referrals, leadership and continuous monitoring and feedback to hospital staff is initially required. To this end hospital administrators can now receive e-mail notification of the outcome of each completed referral to allow this feedback to be given to staff. Nine acute Trusts in the region are now in a position to be able to make referrals (see table 5). From March 2016 all of these Trusts plan to be making electronic referrals routinely and on a larger scale than to date.

The Mental Health Trusts have had additional complexities which have prevented implementation thus far however Northumberland, Tyne and Wear NHS FT hope to be able to start making referrals by March 2016 focussing on referrals to smoking cessation services. However Tees, Esk & Wear Valley FT are not sure at this stage when they will be able to start making referrals.

The electronic referral service in the region is also being evaluated by Durham University with the intention of focusing on qualitative analysis, including hospital, community pharmacy and patient perception of the service. However their early quantitative analysis indicates a positive impact on readmission rates and bed days but this has yet to be confirmed by a statistician.

Conclusion

Fully embedding a change to working practice in 11 hospital Trusts and 700 community pharmacies (some of which are run by locum pharmacists) is going to take time. Also the

separation between hospital and community pharmacy is still evident (i.e. 'what's in it for us') and a sustained effort is required to bridge this gap. Continued support from the AHSN NENC would help to conclusively demonstrate the benefits to patient outcomes of a closer working relationship between hospital and community pharmacists and ensure continued national leadership of this work.

Recommendations

1. NENC AHSN to continue to support transfer of care work
2. Create a separate funding stream for 'Discharge MURs' for patients fitting set criteria that is not capped in a same way as the MUR service
3. In summer 2016 collect and analyse more data on the impact of the transfer of care service across the region
   - Readmission rates
   - Medication errors from GPs picked up by community pharmacists (if discharge medication lists attached to referrals)
   - Medication adherence using the Morisky tool
   - Qualitative analysis
4. Validate RiO scoring
5. Once the service is available at scale throughout the region, advertise the service to patients via television, radio and leaflets distributed by hospital and community pharmacists

References:

1. What happens to long-term medication when general practice patients are referred to hospital? Eur J Clin Pharmacol 1996; 50: 253-7
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3. Elliott R, Boyd M, Waring J et al. Department of Health Policy Research Programme Project 'Understanding and Appraising the New Medicines Service in the NHS in England (029/0124).
4. RPS. Keeping patients safe when they transfer between care providers-getting the medicines right. Individual reports from the Early Adopter Sites. 2012. http://www.rpharms.com/current-campaigns-pdfs/eas-finalreports.pdf
5. RPS. Hospital referral to community pharmacy: An innovators' toolkit to support the NHS in England. 2014. http://www.rpharms.com/support-pdfs/3649---rps---hospital-toolkit-brochure-web.pdf
6. Professional Standards for Hospital services, Optimising Patient Outcomes from Medicines. http://www.rpharms.com/support-pdfs/rps---professional-standards-for-hospital-pharmacy.pdf
7. Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. https://www.nice.org.uk/guidance/ng5
8. Morisky et al. J Clin Hypertens. 2008; 10(5):348-354.
9. Croydon explanatory document - NHS Evidence

APPENDIX 1

Hospital referrals

- Simple web-based application, no IT requirements but effort required to get IG approval has varied between Trusts
- Requirement to manually input patient demographics and the reason for the referral therefore the hospital referral template was simplified and now makes no reference to MUR/NMS
- Documents (e.g. discharge summaries) can now be attached to hospital referrals
- Hospital staff now confirm with the patient their best contact phone number (i.e. don't solely rely on electronic records or notes) and let the patient know their community pharmacist will contact them within 3 days of discharge
- The referral rates of hospital staff is routinely monitored and they receive feedback on the actions taken by the community pharmacist in response to their referrals
- Auto population of fields in the hospital referral template is possible but does need Trust IT input (and costs) and it is likely that the solution will be different for each Trust

Community pharmacists

- An e-mail alert is now sent to community pharmacies each time a referral is made
- Regional managers of multiples now receive monthly reports of actions taken by their stores in response to hospital referrals
- LPC leads follow-up community pharmacies not responding to referrals
- Community pharmacy template now reminds community pharmacists to ask the patient to bring in their discharge summary if one has not been attached to the referral
- In the near future community pharmacists are going to be able to forward on referrals if the wrong pharmacy has been nominated (by the patient or by hospital staff)
- Community pharmacies now attempt to contact patient's on three separate occasions before deciding the patient is 'non-contactable'
- Easier access to funding has been achieved for domiciliary and telephone MURs
- FAQs for community pharmacists is now accessible via the referral template (e.g. to help them understand the type of interventions that are claimable)
- Guidance text has been added next to 'reject' button to help ensure 'reject' is only selected if it has not been possible to have an interaction with the patient

Improved data collection

- A mandatory 'Pharmacy Actions' field has been added to the community pharmacy template which has helped clarify the intervention made by the community pharmacist
- Mandatory RiO scoring has been added to the community pharmacy template, to make community pharmacists consider the likelihood their intervention has had on preventing a hospital readmission
- To help better understand why hospital referrals were being rejected a drop menu was created, however as 'housebound' was set as the default, initial results showed

an incorrectly high number of rejections being due to the patient being housebound, the default is now blank and cannot be selected

- Automatic monthly reports from Pinnacle (PharmOutcomes) have been simplified