

BEST PRACTICE IN PHARMACY MANAGEMENT

A Collaborative Working Initiative To Improve The Physical Health Monitoring Of Long Stay Learning Disabled Patients In A Mental Health Hospital

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Summary

This paper summarises

- the development of a multidisciplinary team to promote and improve the physical health monitoring for all long stay inpatients at Northgate Hospital
- the interventions made as a result of carrying out annual reviews with patients and an assessment of their impact
- recommendations to build on and improve the service.

Introduction

Northgate Hospital provides treatment for patients with mental health problems who have been assessed as learning disabled (Figure 1). This is split between forensic and autism services. The site has several units varying between 3 and 24 beds with an inpatient population of approximately 160. Many of the patients have an admission in excess of 12 months, defined as long stay, with many remaining in the hospital for several years. All patients have a confirmed mental health diagnosis as well as a degree of learning disability (LD) and receive a range of standard psychotropic treatments, including anti-psychotic and mood stabilising medications which have the potential to impact negatively on the patient's physical health. Many of these drugs are associated with a burden of side effects and careful monitoring of

these adverse effects is included in each review. The mental health of all inpatients is treated by the hospital psychiatric team and physical health is monitored by a local GP practice providing an on-site clinic supported by two dedicated triage nurses.

Recent reports, including 'Healthy Lives, Healthy Living' issued by the Department of Health in 2010, have highlighted the poor physical health associated with mental health patients.² This had led to the National Institute for Health and Care Excellence (NICE) issuing more robust guidance to ensure that these statistics are improved.³

People with LD have significantly more health problems than the rest of the population:

- 25% have active epilepsy.
- 33% have sensory impairment.
- About 40% have associated major physical disabilities.
- Communication difficulties, which are seen in 50-90% of LD patients, may hamper their efforts to express their

health needs, potentially reducing subsequent medical help.

Prior to the development of the service described below, the clinical pharmacy model focused on medicine reconciliation on admission as well as targeted discharge planning with a medication supply service in between. It was identified that a more robust pharmacy input during admission could help with the physical health monitoring of these long stay patients as well as providing support to the wider multidisciplinary team (MDT).

How the clinic was established

The pharmacist and the triage nurses met to discuss the clinic model required to ensure all patients received a full medication review and physical health check on an annual basis. It was important to create a unique setting that was both relaxed and non-threatening to a potentially vulnerable patient group. The site already had clinic space dedicated

Learning disability diagnosis requires the presence of the following 3 criteria:

- A significant developmental intellectual impairment and
- Concurrent deficits in social functioning or adaptive behaviour and
- The condition is manifest before the age of 18 years¹

Figure 1: Learning disability diagnosis criteria

to the visiting GP and suitable office space was found within this building to give the patients a chance to meet the team away from the ward setting. It also promoted the role of the pharmacist as part of the wider MDT. A poster was developed along the theme of 'Follow the yellow brick road' to advertise and promote the clinic

across the site. This gave it an eye-catching logo to capture patients' attention. The patient journey on the yellow brick road is shown in Figure 2.

Patients were then prioritised to ensure that more high risk candidates attended the clinic first (Figure 3).

How the clinic operated

Preparation

The nursing staff invited the patients to attend the clinic with a dedicated appointment together with an explanation of what the clinic process entailed. Patients requiring an ECG were identified, thus allowing time to set up the equipment.

The pharmacist researched each patient's medication regime together with treatment plans and historical blood test data. This was populated onto a report form in advance of the review.

The form used is available with this article on the Pharmacy Management website at www.pharman.co.uk.

Attending the Clinic

Patients were invited to attend the clinic and have blood tests performed together with an ECG, if indicated, before visiting the pharmacist to have a full medication review carried out including counselling, side effect monitoring, individual drug review and time for the patient's questions. Nursing staff also attended the review to support the patient in an unusual setting and to provide relevant information to aid the review. This was done with the patient's full consent. The pharmacist undertook specialist training to improve their communication skills with a challenging patient group. All information was captured onto the report form including:

- side effect rating score using the Glasgow Antipsychotic Side Effect Scale (GASS)⁶
- the patient's opinion and understanding of each medication
- assessment of suitability/how well medication was working

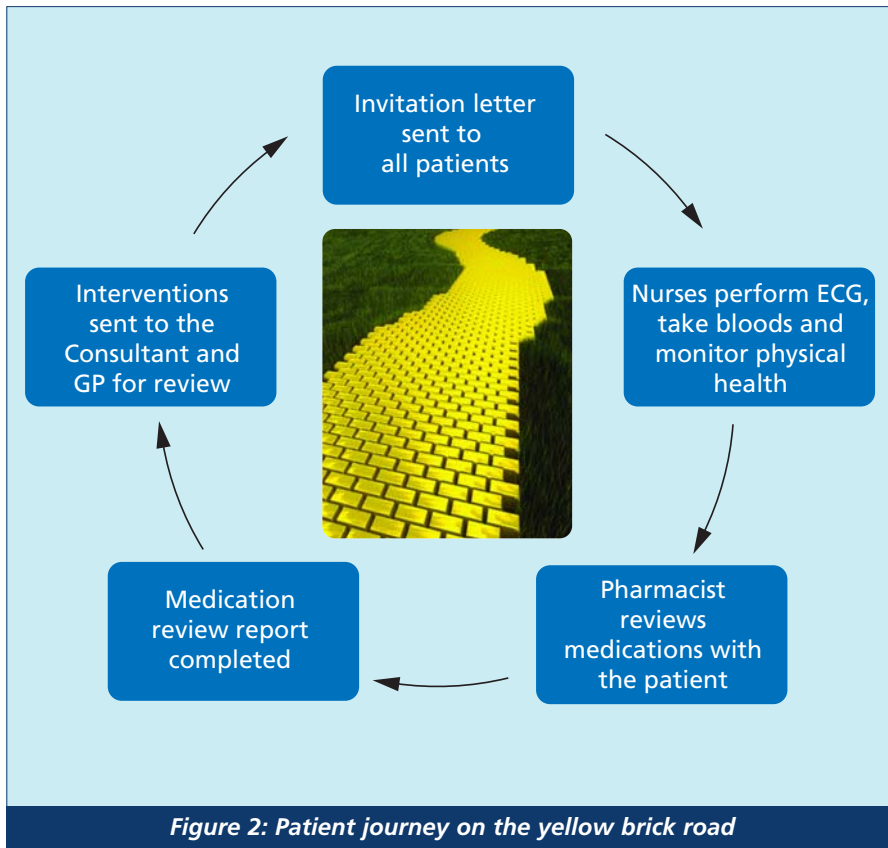


Figure 2: Patient journey on the yellow brick road

1. Patients taking high dose antipsychotics*
2. Patients taking lithium
3. Patients with a large physical health burden e.g. diabetes, CHD
4. Patients with complicated polypharmacy
5. All other patients at their annual well man/woman health check

* defined as monotherapy with a dose in excess of the British National Formulary (BNF)⁵ maximum or a combination of drugs where each individual dose versus BNF maximum when totalled exceeded 100%.

Figure 3: Prioritisation of patients

“The pharmacist undertook specialist training to improve their communication skills with a challenging patient group.”

- ECG information including QTc interval
- BP and weight as recorded by the triage nurses
- calculation of CVD risk using online calculators – Q risk calculator
- advice for smoking cessation and diet
- blood results.

Patients at Northgate do not administer their own medications hence concordance was assumed to be 100% and issues related to administration were not discussed.

Post clinic reporting

The pharmacist checked for the blood results, which are usually available within 24 hours of the clinic, and populated these on to the report form with any significant variation being highlight with an amber/red warning system.

All information was analysed and recommendations/interventions highlighted. This was sent to the patient’s responsible clinician (RC) for any actions to be implemented, with a copy posted into the patient’s clinical notes and a separate copy sent to the named nurse. More

urgent interventions were reported to the appropriate medic for review straight after the clinic.

Each intervention was then graded according to severity and a check was kept on how many recommendations were actioned with a record of time taken to implement.

The time for each step above was recorded and averaged as planning 21 minutes, interview 18 minutes and review 18 minutes to give a total of 57 minutes. The time split in percentage terms is shown in Figure 5.

On average, each review took about an hour of pharmacist time to plan, carry out and write up with each element taking roughly a third of the overall time.

Types of intervention made

Interventions from all reviews (n=40) were categorised and themes were analysed (Figure 6).

The bulk of the interventions fell into three categories:

- Items stopped/changed
 - The majority of items stopped (n=9) were painkillers and laxatives that were no longer indicated.
 - Three patients were receiving PPIs without a clear indication and these were reduced in dose before considering discontinuation.
- Abnormal blood results
 - Five patients had abnormal lipid profiles linked to the use of second generation (atypical) antipsychotics. Four had significantly raised triglyceride levels for which corrective medication was initiated.

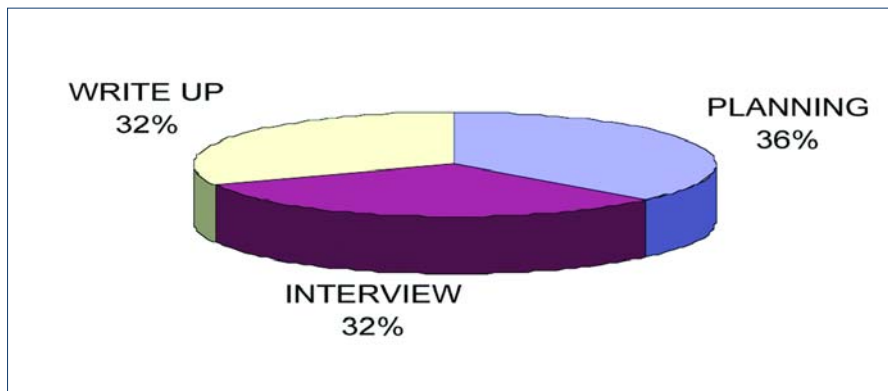


Figure 5: Percentage split of time

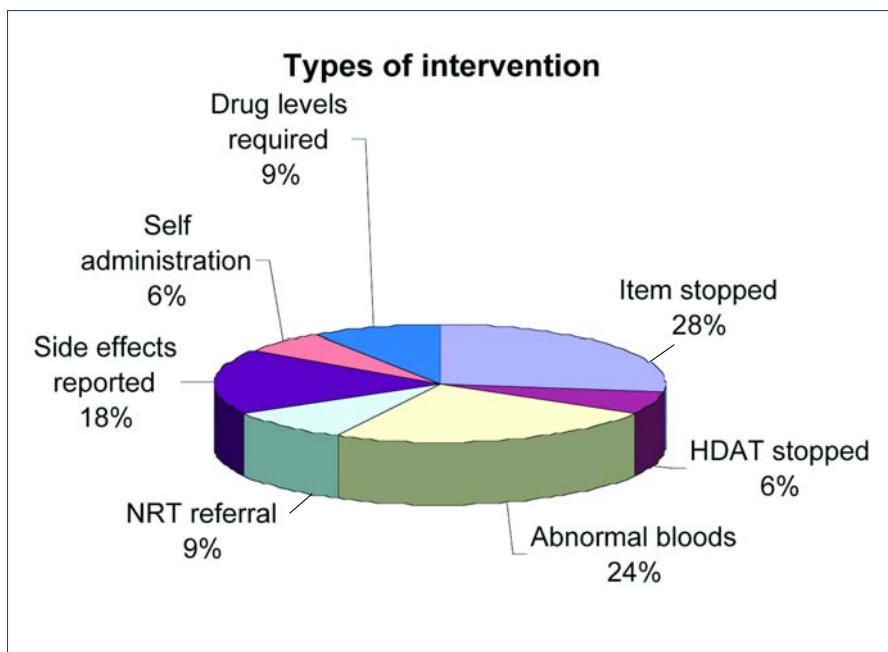


Figure 6: Types of intervention

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- Three new cases of vitamin D deficiency were highlighted for which corrective treatment was prescribed. The clinic is particularly proactive with vitamin D testing due to the high level of deficiency associated with patients in long term care setting.
- Side effects reported
 - Hypersalivation (n=3) and extra-pyramidal side effects (EPSE) (n=3) were the main reported side effects again linked to the use of typical and atypical antipsychotics. These were graded using the GASS. In all cases corrective treatment was either initiated or the dosage maximised.

What were the severity of the interventions made?

Each intervention was graded with reference to a risk management tool which uses a box scoring system ranging from 1 (low risk) to 25 (high risk).⁷ This gave an overall score for the risk associated with all interventions and this was then averaged to give an overall impact per intervention. This risk table is widely accepted within the NHS and is used to grade all medication related incidents that occur within the Trust. Allocating a score for risk is, of course, open to individual interpretation. However, the culture of reporting and allocating risk in the Trust has helped to standardise much of the process.

The overall intervention score is shown in Table 1. The number of interventions is shown first multiplied by the allocated score for that box (range 1-25). Scores of 15 and above (red in the matrix) are automatically reported to the Trust Governance Committee.

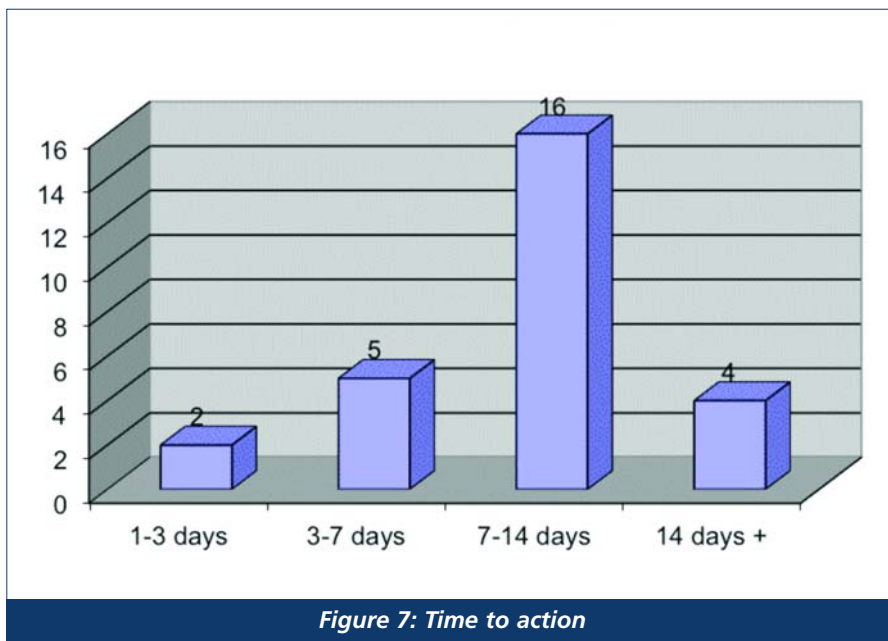
The total score for the interventions was 289, the total number of interventions was 33 and the average intervention score was 8.75 (maximum score 25).

It is important to note that all clinic patients are currently resident on inpatient units for more than 12 months. It would have been unusual to highlight severe or dangerous interventions as they should have been picked up during regular clinical checks when the pharmacy team visited the units (usually on a weekly basis). The average intervention score of 8.75 (max 25) highlights this fact.

Only one intervention was graded as major in significance (3% of the total interventions) with the majority being of moderate consequence (70%).

How did the medical staff respond?

It was encouraging to note that 75% of all interventions were reviewed by the medical team with 88% of those reviewed being actioned as per the intervention.



Consequence	Likelihood				
	1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain
5 Catastrophic					
4 Major					1x20
3 Moderate			14x9	8x12	1x15
2 Minimum	2x2	7x4			
1 Negligible					

Table 1: Overall intervention score

This is an encouraging indicator that the report, post review, was taken seriously by the medical team and actioned in the vast majority of cases.

Interventions that were not actioned included two items, highlighted to be stopped, that were left as a current medication and two requests for self-administration being declined as not appropriate.

Most actions were initiated between 7 and 14 days post the intervention being made (Figure 7). This was a disappointing timescale but again reflects the low risk associated with each intervention and the communication process between the RC and GP. This is an area that could benefit from improved links between prescribers and ward staff.

All interventions made were accepted and approved by the patient involved. It is particularly pleasing that three quarters of the patients undergoing review had the highlighted changes to their regime implemented, thus boosting their confidence in the process and the role of pharmacy within it.

What did the patients think?

As a fledgling service it was important to monitor the patient’s opinion of the review process and how they felt they benefited. A simple questionnaire, aimed at the LD population, was sent to all patients after the review in which they were asked to grade how beneficial the review was and how comfortable they were with the setting. Nursing staff also assisted patients to complete the form fully. Table 2 shows the range of questions asked. Each question could be scored 1 to 5.

Patient responses are shown in Table 3. All responses were totalled for each question and averaged to produce the overall service rating. The overall satisfaction rating was 91% with 80% stating the review process was beneficial.

This was the first time many of the patients had spent time with the pharmacist to discuss all aspects of their medication and many were initially nervous of the process. The results are

encouraging and show that the clinic is a beneficial process to improve patient education as well as to more closely monitor the physical health of a very vulnerable patient group.

The benefit was also felt by the pharmacist who developed a better understanding of learning disability as well as creating the opportunity, through collaborative working, to become a more robust member of the MDT.

QUESTION	GRADING (1 – 5)
How well were you greeted?	Not at all well to very well
How well did the pharmacist explain the process?	Not at all well to very well
How comfortable were you with the setting	Very uncomfortable to very comfortable
How well did the pharmacist answer your questions?	Not at all well to very well
How polite were the clinic staff?	Not at all polite to very polite
How useful was the medication review?	Not at all useful to very useful

Table 2: Questions that patients were asked

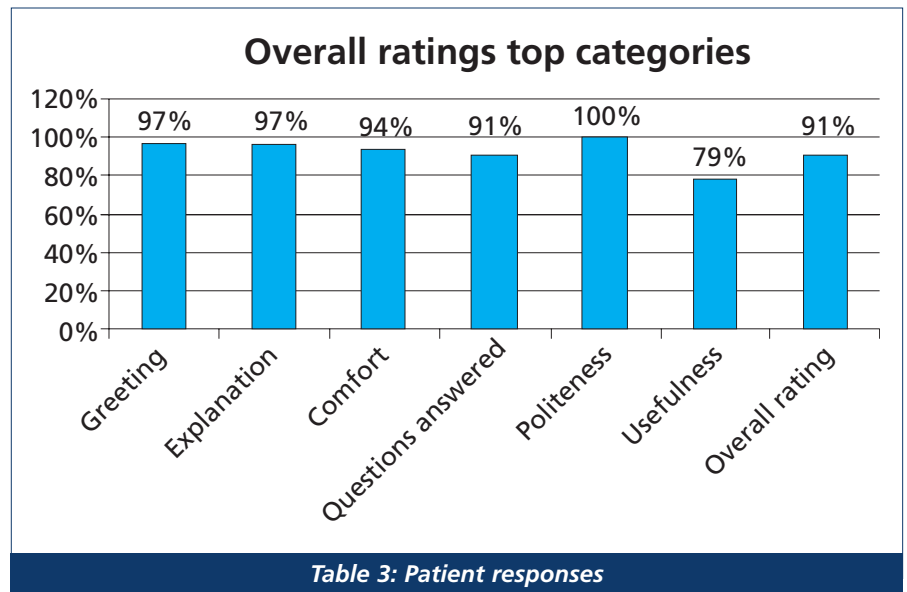


Table 3: Patient responses

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Recommendations for the future

A review of the first year of the clinic has led to several recommendations to be implemented or considered for year 2:

- Target high risk individuals with complicated medication regimes or burden of physical health requirements for a pharmacist review.
- Extend the role of the pharmacy technician to hold reviews with low risk patients.
- Train nursing staff to carry out side effect profiling in advance of reviews.
- Train nursing staff to populate blood test results in advance of the reviews.
- Invite a dietician to form part of the clinic to discuss practical advice re weight loss and lipid management through dietary measures.

All these points will reduce the

pharmacist time spent on the review but will enable more impactful use of their time. It will also share responsibility for the reviews across the wider multi-disciplinary team.

The time taken to respond to each intervention has been improved by implementing the following:

- A meeting with GP services to clarify their contracted responsibilities.
- Production of a more robust communication process to capture interventions for both RC and GP.
- Greater pharmacist presence at patient review meetings to report clinic findings directly to the MDT.

A further development to be scoped in year 2 is the role of a pharmacist prescriber within the clinic.

Declaration of interests

- None

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REFERENCES

1. Bhaumik S, Branford D. The Frith Prescribing Guidelines for Adults with Learning Disability. London: Taylor & Francis, 2005.
2. Department of Health. White Paper: Healthy Lives, Healthy People: our strategy for public health in England (file replaced June 2011). Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf. [Accessed 080514].
3. National Institute for Health and Care Excellence (NICE). Schizophrenia: core interventions in the treatment and management of schizophrenia in adults in primary and secondary care (NICE guidelines [CG82]. March 2009. Available at: <https://www.nice.org.uk/guidance/cg82>. [Accessed 080514].
4. Tosh G, Clifton A, Mala S et al. Physical healthcare monitoring for people with serious mental illness. Cochrane Database of Systematic Reviews 2010(3)CD008298.
5. British National Formulary. 67th Edition. London: British Medical Association and Royal Pharmaceutical Society of Great Britain.
6. Waddell L. and Taylor M. A new self-rating scale for detecting atypical or second-generation antipsychotic side effects. Journal of Psychopharmacology 2008; 22(3):238-243.
7. National Patient Safety Agency. A risk matrix for risk managers. January 2008. Available at: www.npsa.nhs.uk/.../risk-matrix-for-risk-managers.