



South West London  
**Academic, Health and Social Care**  
 System

## Case Studies- Series 2

### Pharmacists' Pre-Surgery Clinic Improves Diabetic Outcomes

People with diabetes admitted to hospital for surgery suffer a higher rate of mortality and increased morbidity. This can often be due to poor perioperative management of their condition. With diabetes on the rise across the UK St George's University Hospitals NHS Foundation Trust set out to tackle this issue by piloting a pharmacist-led pre-surgery diabetic clinic, funded by a small grant from SWLS.

#### Identifying the Opportunity

*"As pharmacists we are usually very reactive and at the end of the patients' journey. We felt this was a way to slot ourselves in beforehand to troubleshoot and benefit the staff and patients."*

**Sara Qureshi**, Lead Pharmacist for Theatres and Anaesthetics, St George's University Hospitals NHS Foundation Trust

After noticing a concerning trend in diabetic patient outcomes the pharmacy team discussed how individualised diabetic plans, provided by a pharmacist led pre-assessment clinic, may be a simple way to improve patient management during the perioperative period. The SWLS Small Grants fund provided an opportunity to put their theory to the test.

Commissioned in late 2014, the aim of the project was to evaluate the effectiveness of this proactive, patient-centred approach in ensuring:

- Tight glycaemic control maintained throughout perioperative period
- Patients were involved in decisions about interruption of diabetic therapy
- Reduction of patient fasting times and need for complex insulin infusions
- Reduction of time patient is unable to self-manage their condition
- Improved recovery times, reduced complications and length of hospital stays
- Reduction of surgery delays and cancellations to surgery



**'Making best practice accepted practice'**

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*“We always thought this was a strong project because of the benefits to the patient, the healthcare professional, and subsequently the service. But when SWLS awarded us the funding, it also gave our project more credibility and lent weight to the message we were trying to convey to everyone – simply due to the recognition.” Sara Qureshi*

### **Putting Diabetic Plans into Action**

One of the challenges at the start of the project was developing a referral pathway, so that for the very first time patients with diabetes were identified by pre-assessment nurses and referred to the pharmacist.

With an effective referral pathway in place the specialist diabetic clinic ran for two days a week over four months. During that time the team were able to develop bespoke plans for an impressive 105 diabetic patients prior to elective surgery.

When drawing up this plan the pharmacist would not only consider the patient’s planned surgery and clinical needs, but also take into account their medicines history, assess their level of diabetes control, and liaise with their GP for further tests or bring in a consultant diabetologist if necessary. This plan would then be used by the patient to optimise their diabetic control ahead of surgery, and as a valuable point of reference by healthcare professionals throughout the perioperative period.

### **Impact of Pre-Surgery Input**

In the past St George’s had grown accustomed to cancelling two or three costly operations per month due to diabetic issues. However, during the project’s four month lifespan there were zero cancellations, or patient complications, due to diabetes. Further analysis of the data revealed the SWLS funded project clearly had a positive impact on patients, and helped the hospital deliver a more efficient, effective service.

*“Just from staff comments, before the results data, we could feel an appreciation of this work. We also had feedback from patients who did receive the service and a (control) group who didn’t. Those who we had worked with were far more positive and felt they had more ownership and understanding of the process.” Sara Qureshi*

### **Raising Awareness and Making Opportunities**

In terms of raising wider awareness the team’s work was recently nominated as a finalist for the Royal Pharmaceutical Society Pharmaceutical Care Awards 2015. And they have also generated considerable interest at various other

events; including the National Diabetes Inpatient Audit (NaDIA) 4<sup>th</sup> Annual Conference and the National Confidential Enquiry into Patient Operative Death (NCEPOD)

*“Speaking to leaders in the field and having our work supported by SWLS gave us credibility with key areas back in our own hospital. The diabetes team are now very*

*interested, and the Chief Executive and the Chief Pharmacist are looking to develop more services and proactive roles in this mould.”*

### **Sara Qureshi**

The pharmacy team have been quick to recognise the support, financial and otherwise, they’ve received from SWLS; offering them a voice and platform to tackle an issue many took for granted:

*“The fact that SWLS backed us was a very big deal. If that didn’t occur we would not have been led to the subsequent opportunities –it’s led to a snowball effect of opportunities. All the ideas of what we can now do with this work have all come from that.”*

### **Sara Qureshi**

### **Small Grants, Lasting Impact**

**Small Grants is a programme that supports collaborative projects across academic, health and social care sectors. This is a unique programme in south west London, helping to promote innovation that could potentially be of great benefit for the population of the area and even beyond.**

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## Pharmacists' Pre-Surgery Clinic Improves Diabetic Outcomes Appendix

Table 1: Patient Demographics

Demographic	Category	Patient number (n=105)	Percentage
Gender	Male	74	70%
	Female	31	30%
Age	>75 year	26	25%
	60-74 years	64	61%
	<60 years	15	14%
Polypharmacy	No of patients on > 4 medicines	95	91%
	No of patients < 4 medicines	10	9%
Diabetes type	Type 1	4	4%
	Type 2	101	96%
Glycaemic control	Patients with an HbA1c > 69 mmol/mol	46	44%
	Patients with an HbA1c < 69 mmol/mol	59	56%
Diabetes treatment	Diet control	8	7%
	Insulin +/- oral	47	45%
	Oral medication	50	48%

Table 2: Main Service Results

Service Action	n = 105	Percentage	National Standard: NHS Diabetes
Number of surgeries cancelled on the day due to diabetes	0	0%	-
Night before admission related to diabetes	0	0%	90% should be admitted on day. An exclusion for this is where other significant Co-morbidity needs pre-operative optimisation.
Number of patient placed on first third of the operating list (to minimise fasting period)	102	98%	95%
Number of patients who received an individualised diabetes medicines and meal plan to reduce period of fasting and requirement for intravenous insulin	32	30.5%	Minimise use of inappropriate intravenous insulin



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Table 3: Cost Savings

Action	Local priority	Outcome
Reduce length of hospital stay	Make the surgical patient pathway more efficient Employ strategies to enhance the recovery of surgical patients	A reduction of 105 days stay
Reduce cancellations to surgery	No surgery cancelled on the day	An estimated 10 cancellations were avoided as a result of pre-operative optimisation
Improve cost efficiencies	Reduce length of hospital stay: Average cost of £206/per night's stay 105 hospital bed days reduced Average cost of surgery: £1500 10 cancellations avoided	Cost-savings made: £21,630 through reduced hospital stay £15,000 through prevention of cancellation

Table 4: Staff satisfaction

<i>"Your diabetic management plans are working very nicely and they have been very helpful."</i> – Then Clinical Director of Theatres and Anaesthetics Directorate and Chief Urology Anaesthetist
<i>"I support your clinical input here as my practice maybe outdated and am supportive of any services that benefits patients."</i> – Lead Urology Consultant and Care Group Lead

Table 5: Patient satisfaction

Feedback from service users	Patients seen in specialist clinic	Patients not seen in specialist clinic
The number of patients who were <i>very satisfied</i> or <i>satisfied</i> with their surgical experience	20/20 (100%)	3/20 (15%)
<i>"The lady in pre-op took the time to carefully explain the ways to take my medication in the build-up to the surgery. Normally I get confused but this time I did not."</i>		
<i>"My concerns during pre-op where that I did not know what medications to stop before surgery but this was explained very well in pre-op."</i>		
<i>"This is the first time that someone has taken the time to explain to me how my diabetes was going to be managed during my surgery."</i>		
<i>"I was very happy that everybody knew how to manage my diabetes and I did not need to keep repeating myself."</i>		
<i>"This was the first time I felt involved in the process."</i>		



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