

Case study

Optimising medication safety at scale in Shropshire

Local pharmacists successfully supported safer medicines management practices for nearly 100 patients whilst delivering an estimated £100k savings across the system in just 14 weeks during a first-of-kind trial in Telford.



Introduction

In 2024, NHS Shropshire, Telford and Wrekin ICB worked with Dawley Medical Practice in Telford on a trial to improve medication safety and optimisation across its population using Population360®.

Like many parts of the country, resourcing challenges had meant that medicines management practices across the integrated care system were becoming increasingly stretched, with little time available in primary care to proactively identify and support patients at greatest risk of medication-related harm.

In response, the ICB wanted to support one of its GP practices to pioneer a new population health management (PHM) approach using Population360, a safe repeat prescribing system from Optum which analyses clinical data at scale to identify where the greatest potential safety and savings issues exist across a population.

“

Population360 has shown that it is possible to have a complete patient medication review system where the patient medication can be focused to ensure it is appropriate, effective and optimised for the individual.”

– Justin Rutherford, project lead for medicines and transformation, STW ICB

Numbers at a glance

£100k+

in combined savings generated in just 14 weeks.

30 minutes

weekly time commitment by each member of pharmacy team.

164 actions

taken to proactively care for 100 patients using Population360.

Aims and objectives



Rapidly identify and prioritise those patients at greatest risk of medicine-related harm and/or non-adherence.



Reduce pressures on the workforce by providing a more efficient way of managing current processes, using a variety of staff roles for maintaining clinical safety and supporting key medicines optimisation goals.



Achieve immediate cash-releasing savings by putting in place an easy method of proactively switching patients' medications in line with ICB priorities.



Deliver wider savings to the system by preventing hospital admissions and other complications through safer medicines management practices.

The scope was to work within existing resource available at ICB level and within the practice, utilising the practice-based pharmacists without duplicating effort or tasks. The ICB supported the project with a lead pharmacist for medicines value and transformation and a lead pharmacy technician. Within the practice the project was supported by a lead 'champion' pharmacist, a practice manager and two GPs. The main users were four PCN pharmacists and one PCN pharmacy technician.



Population360: how it works

Population360 is designed to enable a PHM-driven, safer approach to medicines management. It does so by analysing clinical records at scale to identify opportunities to **improve clinical outcomes** (e.g. by addressing cases of non-adherence, hazardous prescribing, gaps in care or other potential drug-related complications) and **reduce spend** (e.g. by changing a patient's medication to more cost-effective alternatives) across a population.

These **'opportunities for action'** provide pharmacists and other primary care professionals with a consolidated list of patients who could benefit from structured medication reviews (SMR), changes to their medication or other interventions that support safe and effective prescribing.

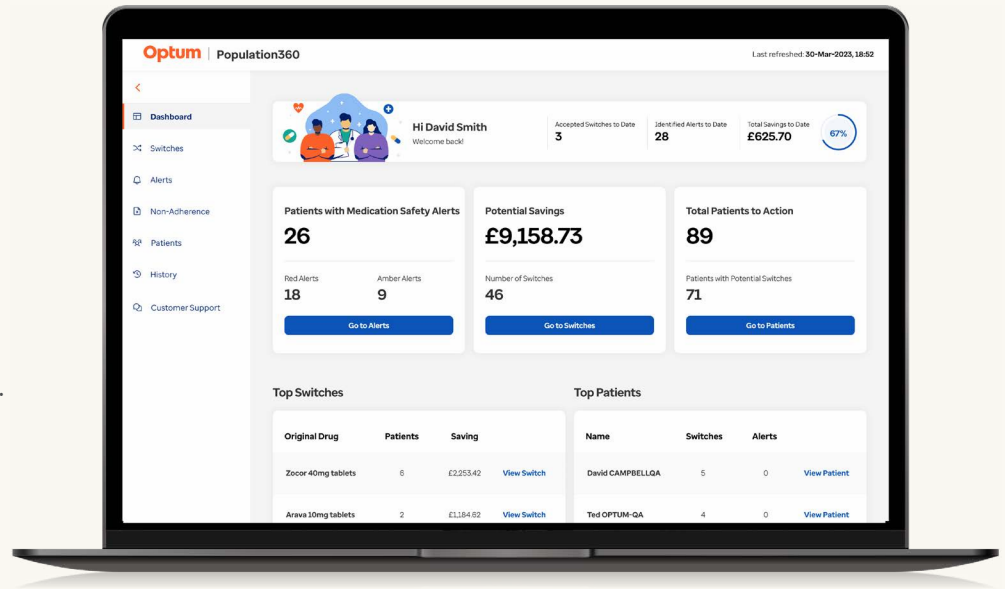


Figure 1. Population360 dashboard, configured with synthetic data

Opportunities identified in Telford

Initial analysis of practice data for the Dawley Medical Practice (10,000 patient list size) revealed the following:

- **54 patients** potentially at risk of an adverse health outcome who might require action
- **A further 1,100+ patients** had an average rate of 58% medication adherence – almost half of which fall into just 10 products
- **A potential £75k in cash-releasing savings**, linked to just 13 medications making routine switches to more cost-effective medicines
- **An additional £148k in potential savings** could be generated by preventing hospital admissions or other drug-related harm through proactive interventions

“

All of Population360 aligns with my priorities, it helps me direct their work (pharmacists and technicians) and tells me what my team should be focusing on.”

– Lead clinical pharmacist at Dawley Medical Practice

What benefits were achieved?

During the 14-week trial, the four pharmacists and pharmacy technician within the practice began acting on these opportunities using Population360.

70%

of **all activity** was completed in just **five days**.

33%

of **all safety** alerts were actioned in **one day**.

78%

of **all switches** were accepted in **two days**.

Each user spent on average 10 minutes, three times a week making switches, addressing relevant safety alerts, prioritising SMRs with patients, and actioning new work on non-adherence as required. Though not every opportunity was taken forward during the trial period, the project has achieved the following:

- **51 safety alerts** were proactively reviewed and actioned, without waiting for the patient to present at the surgery
- **16 patients were proactively managed** actioning ‘monitoring safety alerts’ in just 30-minutes by a pharmacy technician – most users also found Population360 quicker to use than other tools
- **10 non-adherence alerts** were actioned, which involved scheduling a consultation, starting a new drug and/or de-prescribing
- **A total of £18k cash-releasing savings** were achieved from accepting 49 of the medication switches identified by Population360 and prioritising switches agreed by GP partners – taking just 4-minutes on average to accept a switch
- **An additional estimated £84k in cost-avoidance savings** were achieved by proactively addressing the safety and adherence issues surfaced by the tool



5 patients taking sodium valproate met the MHRA* criteria for ‘risk of birth defects’ and **were flagged and actioned in Population360**.

*Source: [Update on MHRA review into safe use of valproate - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/update-on-mhra-review-into-safe-use-of-valproate)

“ During the trial period in STW we have seen a marked rise in quality medication reviews at Dawley Medical Practice. Incorporating the alerting mechanism, non-adherence review, with cost effective opportunities to switch medication has led to a multi-pronged approach to the review process. Positive feedback from the practice has also indicated its usability for practice staff.”

– Justin Rutherford, project lead for medicines and transformation, STW ICB

Conclusion

Population360 has demonstrated many benefits in a single GP practice, easily finding patients to conduct proactive work in short bursts of time. Its seamless integration with EMIS Web, and refreshed daily data gives a live feed of patients to improve clinical outcomes – all in one place.



To find out more about Population360, become a development partner, or trial the software in your PCN, practice or ICB, contact Optum today: askoptum@optum.com

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MD



Population360 – Clinical Decision Support
is a Class I Medical Device (EU MDD 93/42/EEC)
(UK MDR 2002)

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