

Reducing Medication Harm Through Local Innovation

A Polypharmacy Quality Improvement Initiative

Clinician-led projects delivering real-world change in Buckinghamshire, Oxfordshire and Berkshire West (BOB), Frimley and Bedford, Luton and Milton Keynes (BLMK) Integrated Care Boards (ICBs)

Background

In April 2022, the Health Innovation Network launched Polypharmacy: Getting the Balance Right, a programme. The core principle was to support local systems address problematic polypharmacy through setting up local learning systems and adoption of a ‘three pillar’ approach. The three programme pillars were:

- **Pillar 1: Population Health Management.** Using data (NHS BSA Polypharmacy Comparators) to understand risks and identify patients.
- **Pillar 2: Education and Training.** Running Action Learning Sets and local polypharmacy training to upskill the workforce.
- **Pillar 3: Public Behaviour Change.** Introduction of public-facing resources to change public perceptions and encourage patients to open up about medicines

These were underpinned by Integrated Care board level Communities of Practice.

In July 2024, to understand the impact of programme, particularly Pillar 2 and 3, at patient level a Quality Improvement initiatives Expression of Interest was launched nationally and across the Health Innovation Network Oxford and Thames Valley geography. This offered funding to Primary Care Networks (PCN) or GP Practices to support a QI initiative implemented following completion of the Action Learning Sets, attendance at local training or demonstrating use of programme resources.

Sites Selected

In total, eight PCNs across BOB, Frimley and BLMK ICBs were awarded up to £1,500 each to develop and test their interventions (table 1).
Table 1. Sites. Themes & Initiatives

PCN/ICB	Theme	Initiative
NORA, BOB	Education and Training	Supporting patients prescribed a first line antidepressant for 24 months or longer to reduce or stop their medication.
NORA, BOB	Public behaviour change	Reviewing patients that are 15 medicines or more with SMRs using the HIN resources.
Reading Holybrook, BOB	Public behaviour change	Improving access to SMRs in seldom heard communities, using HIN patient materials and focusing on risk of acute kidney injury.
Hatters Health, BLMK	Education and Training	Training staff and carrying out Structured Medication Reviews (SMR) in care home patients with an anticholinergic burden of >3.
East Bedford, BLMK	Education and Training	Identifying and reviewing patients on 20+ medications to reduce harm related to anticholinergic burden and DAMN medications.
Caritas Medical, BLMK	Public behaviour change	Addressing inequalities by improving access to Structured Medication Reviews and use of HIN patient materials.
Ascot PCN, Frimley	Education and Training	Training the team and carrying out structured medication reviews to minimising the use of anticholinergic medication.
Bracknell and District, Frimley	Public behaviour change	Reviewing the quality of the SMRs in over 75-year-olds and how they can be improved through the use of HIN patient resources.

Key Results

The impact of the initiatives on patients and staff is shown below:

- Patients identified and reviewed:**
- **2,257 patients were identified for a SMR across all eight projects**
 - **431 patients were reviewed in total**, including 23 from seldom-heard groups (Reading Holybrook) and 9 whose first language was not English (Caritas)
- Clinical interventions:**
-  **156 Medications Stopped/Reduced in total** (26 Caritas; 18 Hatters; 75 East Bedford; 37 NORA). This include:
-  **Antidepressants** (NORA): 14 patients stopped (11.3%), 81 patients reduced dose (65.3%)
 -  **Anticholinergic Burden (ACB):**
 - 33% reduction across 36 patients (East Bedford)
 - 25% patients ACB score reduced (Caritas)
 - ACB reduced from 6 → 3 (5 patients) (Hatters)
 - ACB score from 3.7 → 2.3; less ACB drugs initiated (Ascot)
 -  **High-Risk Meds stopped:**
 - NSAIDs, anticoagulants, anti-platelets for 8 patients (Hatters)
 - Opioids, nephrotoxic drugs (East Bedford)
 -  **Optimised Treatment Schedule:**
 - 3 patients has their statins switched to atorvastatin (Caritas)
 - 10 patients on enalapril has their medication regimens streamlined (Hatters)
 - 14.5% reduction on statins, aspirin, DHC M/R in CKD for 5 patients (East Bedford)
 -  **Meds stopped/switched:** Amitriptyline, Solifenacin, Paroxetine → Sertraline, Proton pump inhibitors (PPIs) and others
 -  **Other actions:** repeat synchronising, out of date spacers reissues, referrals
 -  **60% increase in ACB Documentation Post-Training** (Ascot)

Staff training:

-  Six projects implemented staff development initiatives, including training programmes and work shadowing opportunities (Ascot, Bracknell & District, Hatters, East Bedford, NORA, NORA ADR)
-  12 pharmacy professionals trained at the ACB Masterclasses (Ascot)

Safeguarding:

-  3 safeguarding concerns were identified (East Bedford)

Intervention Tools

Several tools and resources were used by the sites. These are collated in table 2.
Table 2. Tools and resources used across sites.

Patient Identification:	Emis, Eclipse, Ardens, ePACT2 Polypharmacy Dashboard, Connected Care Patient Segmentation Data, Polypharmacy searches created by CQC and PMOS
Medication Review:	Structured Medication Reviews (SMRs), SMRs for seldom-heard groups, SMRs for patients where English has been documented as a second language, SMRs using tools like GP Evidence and STOPP-START toolkit and Anticholinergic Burden (ACB) scores, and Follow-up reviews
Staff Training:	In-house ACB Masterclasses and Structured Education
Patient Resources:	HIN Patient Resources, In-house developed ACB leaflet, Stopping Medication Guide, to support deprescribing decisions.

Quotes from Patients

"He was wonderful and explained everything in simple language, empowering me to make decisions.", East Bedford

"I found this medication review very useful, and I am reassured that my medications are necessary and at the correct level now.", NORA

"Respectfully listened to, and the pharmacist valued my thoughts and beliefs around medication.", Bracknell & Districts

"This was mum's first review, and the leaflet was straight forward, it helped us think about her medicines before the consultation.", Caritas Medical

Quotes from Clinicians

"After attending the ACB masterclass, I felt confident deprescribing solifenacin and discussing risks with my patients.", Clinical Pharmacist, Ascot

"These are patients we hadn't seen in years, now regularly attending SMRs thanks to translated letters and carer support.", Pharmacist, Reading Holybrook

Lessons Learned

- Patient resources sent prior to SMR consultations improved the quality of SMRs and enhanced patient readiness
- Targeted, inclusive outreach enhanced engagement and reduced Did Not Attend appointments (DNAs)
- Anticholinergic Burden Training enhanced clinical confidence and supported safer, more effective deprescribing
- Integrating ACB awareness and assessment into SMRs enhanced clinical decision-making and improved overall care quality
- Team-based planning and multidisciplinary input, including collaboration with mental health pharmacists, care home staff and other healthcare professionals, were vital for success
- Patients' identification and risk stratification tools improved consistency in patient identification, prioritisation and the delivery of targeted SMRs

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