

Case Study Summary Scotland (UK)

Summary

Scotland currently has a well-developed polypharmacy review programme, which is now in its fourth year. National Polypharmacy Guidance (2012, 2nd edition 2015) was developed by a multidisciplinary group and has been adopted by all 14 health boards (100%) across Scotland, with each board having developed plans to identify priority patients with potentially inappropriate elements to their polypharmacy and to implement reviews for those patients at highest risk of harm. These reviews are now embedded in standard working practices across primary care supported by direct funding to General Practitioners (GP) to enable this work to be undertaken in a sustainable fashion. Employment of pharmacists working in primary care in collaboration with GPs and as independent prescribers to undertake polypharmacy reviews in line with the national strategy 'Prescription for Excellence' (Scottish Government, 2013) also supports sustainability, with ministerial funding for 140 pharmacists initially in 2015 to be expanded to a pharmacist for all GP practices in Scotland. Most recently the introduction of mobile app (ref) has sustained acceleration of implementation.

This case study, conducted as a desk review of available documents plus multiple interviews with key players in policy development followed by stakeholder focus group discussions, served to detail the development of what is considered to be a sustainable programme, focused on identifying the key factors which enabled the programme to be rolled out at national scale.

Characteristics of the case study

Name of the programme

NHS Scotland Polypharmacy Programme: Sustainable integrated multidisciplinary solutions @ scale

Locality/Region and country

The case study was conducted at national level covering the whole of Scotland. Scotland is divided geographically into 14 National Health Service (NHS) boards that serve the Scottish public (population 5.5 million).

Health care system overview

The health system in Scotland is funded centrally by Government through general taxation. NHS health boards in Scotland are allocated funding based on a formula that takes into account the relative deprivation of the population (ref SIMD) and demographics (including the proportion of elderly patients) within individual health board areas. The total budget of £10.1 billion includes a medicines budget of £1.4 billion of which over £1.1 billion is spent on drugs in primary care. The provision of healthcare in the NHS is free at the point of access. In the United Kingdom as a whole Total Health Expenditure is 8.5% of Gross Domestic Product (2013) with 12.3% of this pharmaceutical expenditure. NHS Health Boards work to deliver services in line with national strategy and policy through local delivery plans to meet performance targets. Pharmacists are employed by health boards to work collaboratively with GPs to deliver the national polypharmacy programme.

Programme aims and objectives

The aim of the programme was to address inappropriate polypharmacy and improve medicines adherence in Scotland by developing and providing guidance to all health boards on how to review treatments for patients with multiple long-term conditions, whilst minimising any harm and optimising benefits from the medication. Reduction in admissions to hospital was a key outcome measure and to reduce waste due to poor adherence in patients with multiple morbidities, not just the elderly. It was felt that by doing this adherence would also improve, particularly if issues relating to the prescribing of medications were addressed prior to tackling adherence. The expectation was that by addressing and improving the quality of prescribing there would be a reduction in overall health expenditure, not only on medicines, but also on related effects due to adverse reactions. The programme included economic analysis as a core feature to help build the financial case for implementing and sustaining the programme.

In summary, the programme had the following objectives:

- Close collaborative working between doctors (General Practitioners and Care of the Elderly Consultants) and pharmacists, both in development and delivery of the polypharmacy programme
- Ground-up approach to building a consensus on the need for, and the content of, the programme
- Early buy-in of primary care practitioners in terms of recognition of the usefulness of the project and willingness to deliver
- Early identification and engagement of opinion leaders to build urgency, support and enthusiasm
- Rapid recognition of the value of the programme by local health boards and Scottish Government leading to funding of the reviews by means of enhanced service and quality payments to primary care organisations

Early analysis of positive outcomes of the programme was fed back to policy makers.

Institutions included in the case study

In addition to Scottish Government, which represents NHS Scotland, the health boards that took part were:

- NHS Highland
- NHS Lothian
- NHS Glasgow & Clyde
- NHS Lanarkshire
- NHS Tayside

The rationale for inclusion for each of these boards was that NHS Highland, Tayside and Lothian were the innovators who influenced development of the national programme for which Glasgow & Clyde was an early adopter. NHS Glasgow & Clyde and Lothian are the largest boards in Scotland serving a population of 1.15 million and 870,000 respectively. NHS Lanarkshire followed in adopting and implementing the programme.

Managerial and policy highlights of the programme

Moving from importance to urgency

Since 2004, Scotland had experienced a 3% increase in medicines volume per 1,000 people registered with a general practice. Over recent years a series of reports had highlighted the mismatch between current advice on prescribing (largely based on research for single-disease conditions in younger adults) and the demographic shift in the population to an increasingly multimorbid and elderly population (ref Guthrie). In particular, the GP contract (Quality Outcomes Framework) had driven prescribing for single-disease states with the use of incentivised targets. This was a driver in the two years leading up to the development of the national polypharmacy resulting in a solid plan for urgent action. A series of meetings were held by opinion leaders in the field across a broad range of professional groups. It was seen as essential that the pioneering work done by NHS Highland and NHS Tayside was linked with pilot work in NHS Lothian where the polypharmacy reviews were incorporated into anticipatory care plans. This created the sense of urgency needed to encourage ground level buy in from prescribers at the same time as making the case for supporting change with key clinical policy makers securing funding from the Scottish Government. A guiding coalition was formed at these meetings and in the discussions that followed. Crucial to the move from theory to practice was the early engagement of clinicians and operational leaders given the need to ensure that the strategy was felt to be 'owned' by the country as a whole rather than imposed from one area to another.

Creating teams and strategic vision

The strategic vision for the programme came through refinement and expansion of work done by innovators and early adopters across the country. Policy leadership was essential at this stage to make the case to funding bodies to ensure the programme was practically deliverable. Throughout this stage, on-going work was done (largely through face-to-face meetings with key groups across the country) to ensure that, prior to the launch, as many opinion leaders in clinical and management roles felt they had on-going involvement and personal investment in the programme. This recruited the programme champions who were essential to driving change in local areas when the programme was launched nationally.

Creating practice models

The main and essential aid to successful implementation was the addition of a contractual requirement for GPs and recognising the potential role of pharmacist non-medical prescribers. This enabled the programme to be integrated into existing patient pathways while at the same time providing extra personnel and expertise to deliver it. That these aids were delivered was down to persistent work from senior policy makers interacting with Scottish Government to make the case for the economic and clinical necessity of the work. This in turn led to clear guidance to all the health boards that this work needed to be prioritised. The revised Polypharmacy Guidance (2015) built on the 2012 guidance and provided practitioners with a standardised structure for the medicines review process. Doctors and pharmacists in individual health boards agreed procedures for application of this process in daily practice.

Building sustainability

The need to make a case for sustainability was recognised from the outset of the programme. Reviews and any associated medication changes were documented. This was fed back to the

government and health boards as evidence of short term gains of the programme with the expectation that more would follow. There are approximately 12,000 polypharmacy reviews conducted every year in Scotland. On average one or two medicines are stopped at each polypharmacy review with commensurate cost savings on medicines. Of those patients identified to be at high risk of hospital admission, pilot work suggested a 40% reduction in hospital admissions following a polypharmacy review; reduction in high risk medication related issues is expected from roll out. Further research has supported this expectation with prescribing patterns in Scotland showing some national level change when compared with other UK home nations (fig. 1, 2; table 1, 2).

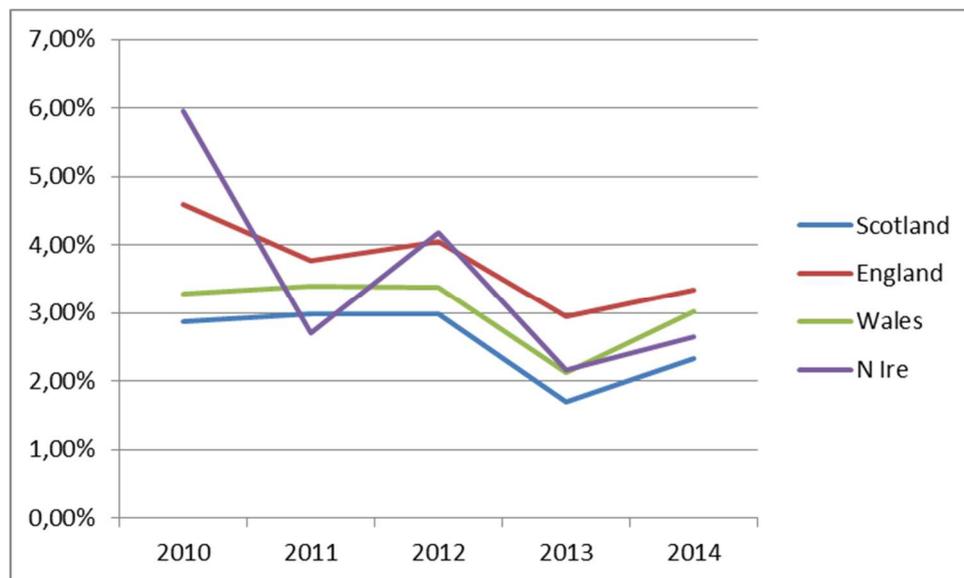


Figure 1 Growth in prescribing in %terms

Table 1 Items dispensed

	Scotland	England	Wales	N Ireland
2009	88,115,445	885,999,300	67,607,034	33,379,217
2010	90,641,133	926,657,600	69,825,718	35,366,062
2011	93,342,820	961,528,600	72,202,467	36,322,851
2012	96,137,339	1,000,502,400	74,639,489	37,841,141
2013	97,775,035	1,030,079,389	76,227,899	38,661,481
2014	100,051,574	1,064,573,755	78,538,624	39,685,577

Table 2 Growth from previous year

	Scotland	England	Wales	N Ireland
2010	2.87%	4.59%	3.28%	5.95%
2011	2.98%	3.76%	3.40%	2.71%
2012	2.99%	4.05%	3.38%	4.18%
2013	1.70%	2.96%	2.13%	2.17%
2014	2.33%	3.35%	3.03%	2.65%
2010-2014	13.55%	20.16%	16.17%	18.89%

Annual volume increase has fallen in 2015 in Scotland to around 1%. Comparative data from the other UK nations is not yet available.

The data is also indicating a reduction in the number of people over the age of 75 with potentially inappropriate polypharmacy.

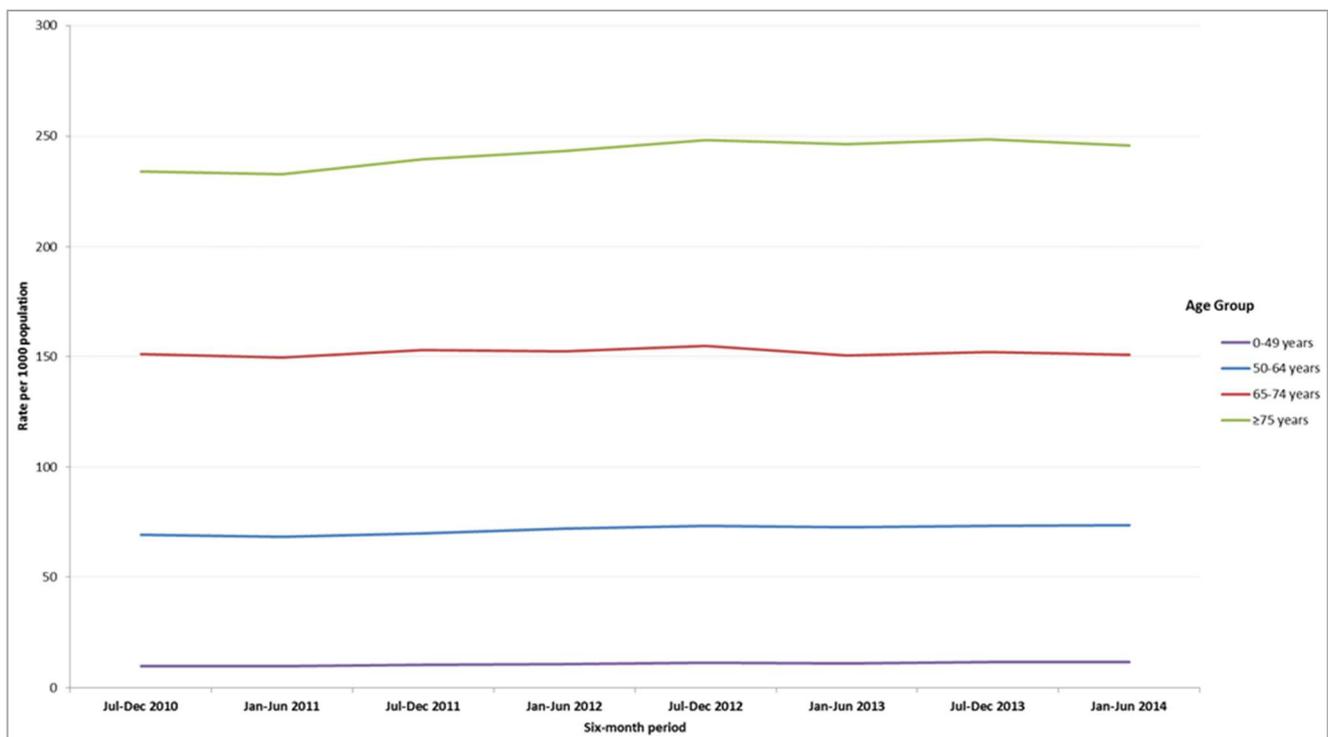


Figure 2 Trends in proportion of population dispensed 10+ high risk drug in a six month period by age group (Jul – Dec 2010 to Jan – Jun 2014)

Conclusions

Scotland continues on a journey towards improving care of multimorbid, frail adults. Clinical and management consensus has made it possible to implement a programme that better fits, and shows tangible benefits for, the target population.

The key steps that initiated and drove this change were:

- Building a clinical consensus that change was needed and what that change would look like.
- Consensus that this was a multidisciplinary effort but that patient involvement in the review was essential.
- Agreement of clinicians working across different disciplines and sectors on the principles of a review with evidence that would support the reviews.
- Risk stratification tools that would support clinicians to target the reviews on those patients identified as most at risk.
- Designing the programme such that economic and clinical impact was assessed from the outset, demonstrating long-term impact as well as immediate benefits to patients.
- Prescribing authority for non-medical prescribers, especially pharmacists, so that the design process enabled reviews to be actioned without creating additional workload for medical prescribers.
- Leadership from management and policy makers plus clinicians from the earliest stage and through out.
- On-going work to keep both clinical and management opinion leaders involved and 'bought in' to the overall vision, with openness to review and refinement.
- On-going public involvement to evaluate the programme and development of tools for patients to feel empowered in making decisions regarding high risk medicines.
- Management of polypharmacy embedded into educational programmes of healthcare professionals at undergraduate and postgraduate levels.

It is important to note that the steps that helped initiate the change are continually revised and that the process is iterative and adaptive. This is considered to be essential to ensure sustainability and engagement from all stakeholders.