

# EVALUATION OF PHARMACY TEAMS IN GP PRACTICE



## Executive Summary November 2018

**Prof Derek Stewart**

**Dr Katie MacLure**

**Dr Scott Cunningham**

**Dr Kathrine Gibson Smith**

**Mr Andrew MacLure**

**Prof Marion Bennie**

**Dr Rosemary Newham**

**Dr Rachel Bruce**

**Mrs Sarah Fry**

**Mr James MacKerrow**

The cover infographic was created using icons made by Kokota, ProSymbols, Creative Stall, Vectors Market from the Noun Project; Vignesh Oviyan from [www.flaticon.com](http://www.flaticon.com) creativecommons.org/licenses; and [www.freepik.com](http://www.freepik.com) from [www.flaticon.com](http://www.flaticon.com) creativecommons.org/licenses and <https://www.kisspng.com/png-pharmacy-technician-pharmacist-symbol-clip-art-pha-558038/>

## Executive Summary

### Background

In Scotland, and globally, public health systems are coming under increasing pressures due to several complex and inter-related factors, including the lack of capacity within the primary care workforce and an expanding population of older people. Older people often have multiple conditions and the associated increase in medicines use and healthcare appointments has led to an overwhelming medicines and healthcare service burden; adversely impacting patients' quality of life and access to primary care services. A key element of the Scottish response is the better integration and transformation of our health and social care services, and a shift in the balance of care from hospital to the community setting.<sup>1</sup> This direction of travel has brought focus to primary care, the challenges and pressures facing frontline practitioners and the need to transform services through building broader multidisciplinary teams (MDTs). The clinical leadership community has shaped and endorsed the *2020 Vision* for our public services with clear policy direction and supporting policy documents: *Achieving Excellence in Pharmaceutical Care – a Strategy for Scotland* (2017) commits to “Integrating pharmacists with advanced clinical skills and pharmacy technicians in GP Practices to improve pharmaceutical care and contribute to the multidisciplinary team<sup>2</sup>, and, *Practising Realistic Medicine* (2018), states that “by 2025, everyone who provides healthcare in Scotland will demonstrate their professionalism through the approaches, behaviours and attitudes of Realistic Medicine”.<sup>3</sup>

Nationally, and internationally, the contribution which pharmacists make to improving care when integrated into MDT in primary care has been recognised.<sup>4</sup> In Scotland, a major step change has been the announcement in 2015 of a three-year funding package through The Primary Care Fund (£16.2m) to recruit up to 140 whole time equivalent pharmacists to work directly with GP Practices. This was augmented by a further £4.2m in 2017/18 to work towards the Scottish Government commitment that all GP Practices have access to a

---

<sup>1</sup> Scottish Government (2013) 'Route Map' to the 2020 Vision for Health and Social Care in Scotland. Available at <http://www.gov.scot/Topics/Health/Policy/Quality-Strategy/routemap2020vision>

<sup>2</sup> Scottish Government (2017) *Achieving Excellence in Pharmaceutical Care: A Strategy for Scotland*. Available at <http://www.gov.scot/Publications/2017/08/4589>

<sup>3</sup> Scottish Government (2018) Chief Medical Officer for Scotland Annual Report 2016/17: *Practising Realistic Medicine*. Available at <http://www.gov.scot/ISBN/9781788514279>

<sup>4</sup> Weeks G, George J, MacLure K, Stewart D. (2016) Non-medical prescribing versus medical prescribing for acute and chronic disease management in primary and secondary care. *Cochrane Database Systematic Review*, 11: CD011227.

pharmacist with advanced clinical skills and supported the recruitment of pharmacy technicians.<sup>5 6</sup>

## Evaluation Approach

In July 2017, the Scottish Government Pharmacy and Medicines Division commissioned an evaluation of the current pharmacy team involvement in GP Practices across Scotland. This commission, undertaken jointly by the University of Strathclyde and Robert Gordon University, focused on three broad areas of deliverables: *workforce development; service activity; and, service and patient outcomes.*

The evaluation took a mixed methods approach comprising:

- A national workforce survey to characterise the pharmacy teams and activities undertaken;
- Workforce mapping across the GP Practice setting and undertaking some early workforce modelling;
- In-depth case studies in selected GP Practices to understand integration within the wider MDT and the views of patients who had a consultation with the case study pharmacist.

## Evaluation Results

### Deliverable 1 – Workforce Development (GP Pharmacy Team)

The national workforce survey, distributed as an online questionnaire in November 2017, to all 14 NHS Health Boards, was completed by most pharmacists (n=393/471, 83.4%) and pharmacy technicians (n=101/112, 91.8%) working in GP Practices across Scotland. Table 1 presents a summary of the demographics, postgraduate education and training and employment characteristics of the workforce.

---

<sup>5</sup> Scottish Government (2015) Primary Care Funding Allocation for Pharmacists in GP Practices and Additional Prescription for Excellence Funding. Available from: [http://www.sehd.scot.nhs.uk/pca/PCA2015\(P\)16.pdf](http://www.sehd.scot.nhs.uk/pca/PCA2015(P)16.pdf)

<sup>6</sup> Scottish Government (2017) Primary Care Funding - Allocation for Pharmacists in GP Practices 2017-18. Available from: [http://www.sehd.scot.nhs.uk/pca/PCA2017\(P\)04.pdf](http://www.sehd.scot.nhs.uk/pca/PCA2017(P)04.pdf)

Table 1 – NHS Scotland GP Pharmacy Team Workforce Profile, November 2017

	Pharmacist (n= 393/471, 83.4%)	Pharmacy Technician (n=101/112, 91.8%)
<b>Gender</b>	83% female	90% female
<b>Age</b>	34% aged 30-39	35% aged 30-39
<b>Time qualified</b>	42% qualified over 20 years	35% qualified over 20 years
<b>Experience in GP Practices</b>	57% have up to 4 years' experience in GP Practices	66% have up to 4 years' experience in GP Practices
<b>Funding source</b>	92% funded by health board	87% funded by health board
<b>Contract type</b>	50% permanent full-time	46% permanent full-time
<b>Agenda for Change (AfC) band</b>	47% AfC Band 7	82% AfC Band 5
<b>Postgraduate qualifications</b>	65% have up to four PG qualifications (32.6% do not have a PG qualification)	83% have at least one qualification
<b>Prescribing status</b>	68% prescribers (of which 72.3% actively using)	NA

The broad results indicate that pharmacy teams represent a diverse, well-educated and experienced group of people, with pharmacist and pharmacy technicians most commonly reporting being qualified for 20 or more years. However, over fifty percent of pharmacists and sixty percent of pharmacy technicians had worked in GP Practice for four or less years. Most pharmacists and pharmacy technicians had experience in community pharmacy and/or hospital pharmacy. The pharmacists were predominantly practicing independent prescribers. Over sixty percent of pharmacists reported having postgraduate qualifications and eighty percent of technicians had completed at least one additional qualification.

Pharmacists and pharmacy technicians were both primarily funded by an NHS Health Board on a permanent contract. Pharmacists were most commonly part-time whereas pharmacy technicians were generally full-time. Pharmacy teams are working across multiple general practices, more so for technicians undertaking a wide range of activities, roles and clinics. Just under half on the pharmacists are employed at Band 7 (47%) and most pharmacy technicians, Band 5 (82%).

## Deliverable 2 – Service Activity (GP Pharmacy Team)

A national map profiling GP Practices which have pharmacy teams was created. The data in the GP Profiling Map included practice information, demographics, workforce (number of

GPs, pharmacists, technicians), prescribing features, prescribing indicators, and pharmacy team members' hours worked per week.

Of those who completed the workforce survey (pharmacists n=393, 83.4%; pharmacy technicians n=101, 91.8%), the workforce equated to approximately 202.3 whole time equivalent (wte) pharmacists and 57.3 wte technicians. The pharmacy workforce clearly identified with being part of the MDT and self-reported confidence and competence in working within the wider team and dealing with patients. Over three-quarters of the pharmacists were currently undertaking medication/polypharmacy reviews (78%), and over half medicines reconciliation (56%), hospital discharge letters (54%) and monitoring/reviewing high risk medicines (52%). Activities for pharmacy technicians included medicine safety reviews/recalls (41%), medication/polypharmacy reviews (40%) and medicines reconciliation (31%) with the majority undertaking prescribing efficiency work (79%). Figure 1 presents a summary of the main clinical activities of the GP Pharmacy Team.

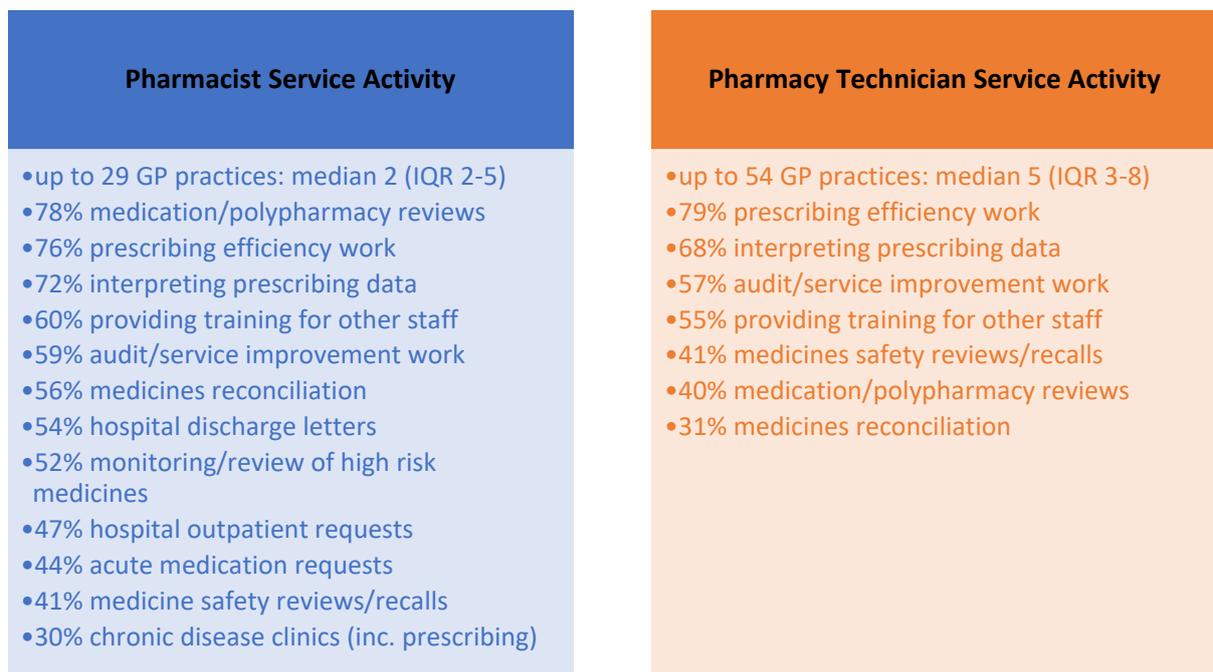


Figure 1 – NHS Scotland GP Pharmacy Team Service Activity Profile, November 2017.

Initial workforce modelling, building on the national survey and limited localised more granular data, examined the time pharmacists spent on undertaking polypharmacy clinics and acute medication requests in two NHS Health Boards. The work enabled some Scottish resource estimates for undertaking polypharmacy clinics, stratified for different patient

population scenarios while using different estimates of time taken to undertake a review (Table 2). The estimation of resource necessary for managing acute medication requests was very limited, utilising electronic data from only 15 GPs in NHS GG&C to derive an estimate of annual acute scripts per patient processed by pharmacists, and thus needs caution in interpretation. This highlights the need for improved data capture.

Table 2 - The number of whole time equivalent (WTE) pharmacists to deliver polypharmacy reviews over a 12 month period for NHS Scotland

			NHS GG&C (32 mins/ review)	NHS LOTHIAN (30 mins/ review)	POLYPHARMACY GUIDANCE 2018	
					Minimum (40 mins)	Maximum (120 mins) <sup>1</sup>
	Age (years)	Number of Patients	WTE	WTE	WTE	WTE
<b>Scenario 1:</b> NHS Scotland patients dispensed medicines from 10 or more BNF section, including at least one high risk medicine, within a six month period <sup>2</sup>	50+	272,442	84.2	79.0	105.3	315.9
	65+	189,789	58.7	55.0	73.3	220.0
	75+	108,683	33.6	31.5	42.0	126.0
<b>Scenario 2:</b> SPARRA <sup>3</sup> patients aged 50 years and older, residing in a care home <sup>4</sup> . These patients have any risk score (1%-99%).	50+	30,483	9.4	8.8	11.8	35.3
<b>Scenario 3:</b> SPARRA patients with a risk score of 40-60% who were dispensed items from 10 or more BNF sections	65+	54,190	16.8	15.7	20.9	62.8
	75+	42,882	13.3	12.4	16.6	49.7

<sup>1</sup> Assumed to take into account follow-up, MDT meetings, practice meetings and/or other activities;

<sup>2</sup> Data from NHS Scotland Prescription Information System dataset. Figure reflects the number of patients in NHS Scotland who received medicines from 10+ BNF section and one high risk medicine in the six months before December 2017;

<sup>3</sup> SPARRA (Scottish Patients At Risk of Readmission and Admission) data for the 1<sup>st</sup> May, 2017;

<sup>4</sup> Not necessarily polypharmacy patients who are dispensed items from 10 or more BNF sections.

### Deliverable 3 – Service and Patient Outcomes (GP Pharmacy Team)

The Scotland-wide case studies focused on seven pharmacist independent prescribers each working across one or two general practices and delivering patient facing care. It comprised interviews with the pharmacist, their patients and the broader healthcare team. Patients also completed a questionnaire which included the CARE <sup>7</sup>(Consultation and Relational Empathy)

<sup>7</sup> S.W. Mercer, D.J. Murphy, (2008) "Validity and reliability of the CARE Measure in secondary care", Clinical Governance: An International Journal, Vol. 13 Issue: 4, pp.269-283, <https://doi.org/10.1108/14777270810912969>

Measure. While accepting the limitations of case studies in terms of issues of generalisability and transferability of findings, and the relatively low patient survey response rate (n=121) it is clear that patient questionnaire feedback is very positive in terms of the quality of the consultation and beliefs and confidence in the skill, knowledge and ability of the pharmacists (all rated very good / excellent by the majority of patients) This was further evidenced by patients during interviews (n=24) across six of the seven case studies.

From the qualitative interviews with GP Practice staff (n= 18), there was enthusiasm for and appreciation of the pharmacist's role in GP Practice. They were viewed as medicines specialists, prescribing support advisors and point of contact for communication with community and hospital pharmacy teams. In addition, some were keen to recognise the value to patients of having different healthcare professionals working together and the added value of different perspectives for person-centred care. Figure 2 presents some illustration of the patient and GP staff voice captured. Pharmacists themselves felt accepted and integral to the GP Practice team, reporting that they enjoyed the challenge and responsibility of a more clinical patient-facing role.

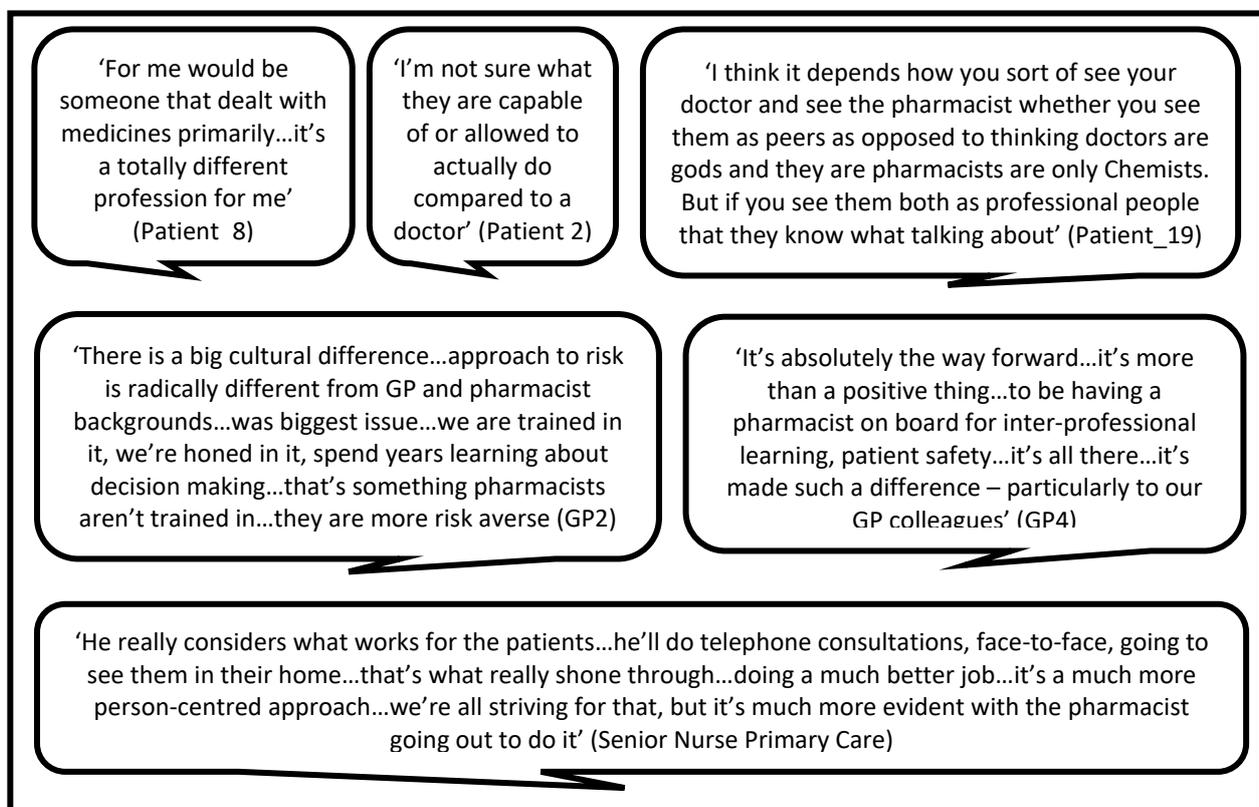


Figure 2 - Patient and GP Practice Team voices from in-depth case studies (n=7), April to July 2018

## Strengths and limitations of the evaluation

The support from senior stakeholders and engagement at scale of the pharmacy teams working in general practice has enabled this evaluation to gather and assimilate a wealth of knowledge and understanding regarding how Scotland is growing the pharmacy GP workforce, the activities they are performing, and how this is being perceived by both the wider GP team and patients. The high response rates attained in the survey suggest that the results are generalisable and are representative of the workforce across Scotland. However, the evaluation was challenged by the paucity of routinely collected data which limited: the ability to evidence changes in GP Practice / NHS Board patient clinical outcomes and any unintended consequences; time profiling the developing activity within the GP Practice; and estimating the capacity of GP time released. The data collection from the survey and case studies may have been influenced by social-desirability bias, while the survey data might also have been influenced by acquiescence bias. Additionally, the validity of the self-reported data could not be confirmed. The survey questionnaire was lengthy for participants to complete, as keeping it concise while meeting the deliverables was challenging, and relied on the goodwill of the respondents to give their time in sharing information. Additionally, the scheduling of patient, pharmacist and their GP Practice colleagues for interview was challenging and, once again, relied on the goodwill of interviewees.

## Conclusion

This evaluation clearly demonstrates the significant progress already made in establishing pharmacy teams within the wider GP Practice setting but also highlights the challenges faced by this expanding practitioner group. The landscape continues to change and evolve, including the recent agreement of the new pharmacotherapy service to be supported by pharmacy teams as part of the GMS contract 2018.<sup>8</sup> Consequently, it is important that there is continued focus and effort in supporting our evolving GP Practice-based pharmacy workforce as they integrate more fully into the broader primary care MDT.

---

<sup>8</sup> Scottish Government. The 2018 General Medical Services in Scotland: Contract Framework. The Scottish Government.2017; <https://www.gov.scot/Publications/2017/11/1343>

## Recommendations

The recommendations detailed in Figure 3, are principally focused on what health policy leaders and health service providers should consider to support future service provision, review and improvement, enabled through efficient routine data collection, accompanied by targeted in-depth qualitative investigations. The outcome will be the ability to more rapidly and effectively examine and quantify the evolving contribution of the GP Practice-based pharmacy team moving forward.

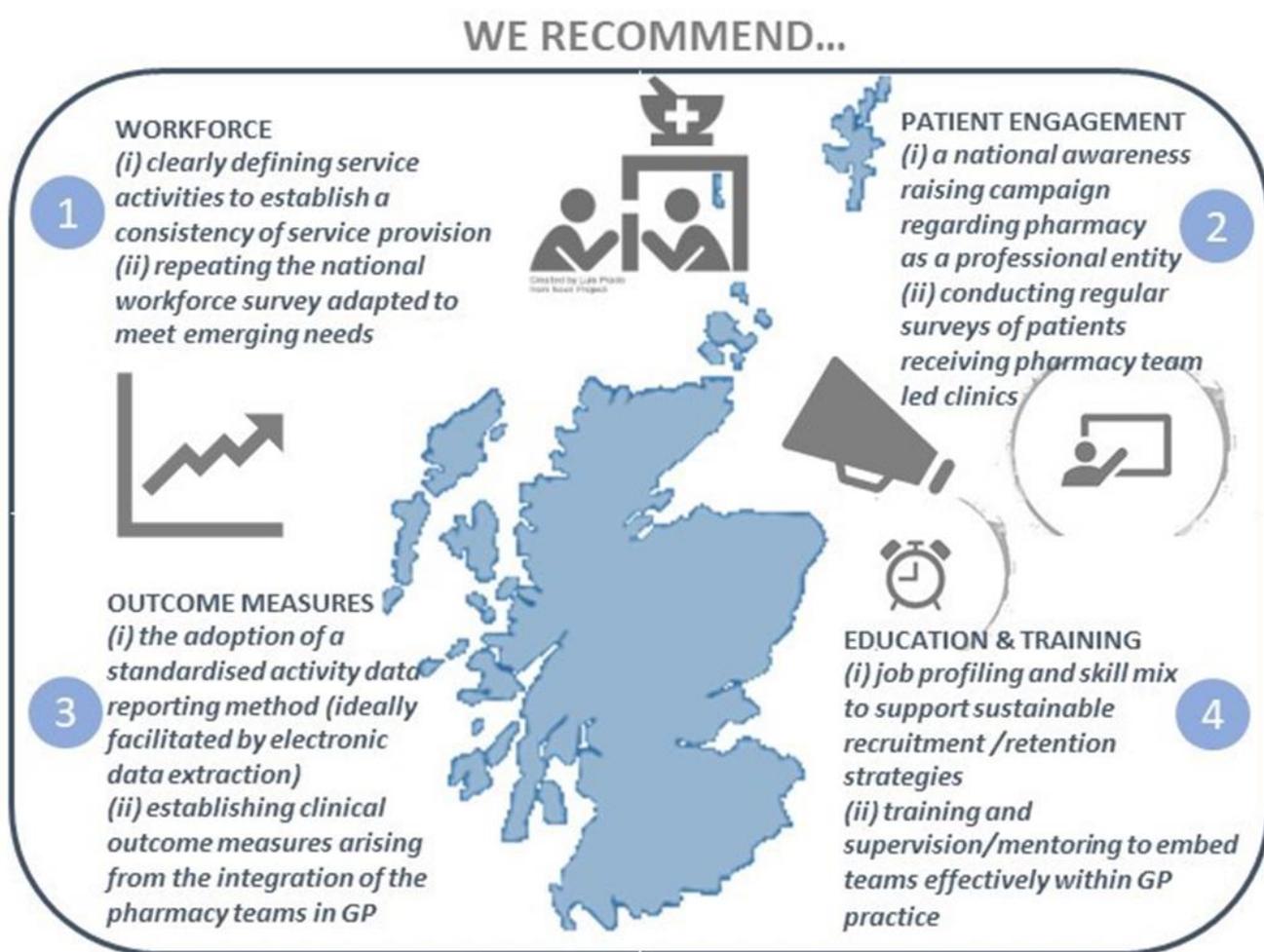


Figure 3: Recommendations

This evaluation serves as a foundation on which to develop a strong evidence base to demonstrate the impact of this evolving workforce on patient care. Future evaluations should consider the following areas:

- Establish job profiles for evolving pharmacy team roles to inform sustainable job planning.
- Examine standardisation of work activities to enable improved quantification of work processes to inform workforce modelling.
- Establish national collection, curation and analysis of primary care pharmacy team activity and outcome measures (e.g. disease specific clinical measures, care bundle compliance, polypharmacy metrics, prescription cost and volume) to assess service impact.
- Extend evaluation of the impact of the GP Practice pharmacy team on the broader multidisciplinary team encompassing the hospital and community pharmacy workforce.
- Deploy regular national workforce survey to meet emerging needs - including the evolving pharmacotherapy service
- Conduct regular patient surveys to evaluate patients' experiences of pharmacist led clinics.