Grampian Diabetes Practice Outreach Programme: a regionwide approach for supporting patients locally and up-skilling the primary care team

Initiated in 2006, the GDPOP (Grampian Diabetes Practice Outreach Programme) is now a routine part of diabetes care delivery throughout the region. Dr Hannah Robertson and Dr Kenneth McHardy here provide insights into the way in which the programme works, areas identified for improvement, and outcomes to date.

Situation
Various different models of delivering integrated diabetes care have been described by Diabetes UK. Grampian has additional challenges in the equitable delivery of diabetes care, being the second largest geographical region in the UK.

The Grampian Diabetes Practice Outreach Programme (GDPPOP) commenced in 2006 and now encompasses practices across the region. The programme’s core consists of practice visits from secondary care-based diabetes specialists to primary care and now includes each practice having an aligned consultant. The visits involve case-based discussions in a primary care setting between multiple members of the diabetes multidisciplinary team (MDT), typically including senior medical staff, diabetes specialist nurses (DSNs), practice nurses and general practitioners. It is a well-established model of care delivery that is now an integral part of the senior diabetes team’s work plan.

A review of the programme was undertaken with the following aims:
- To establish whether it was continuing to meet its original objectives.
- To determine its strengths.
- To identify areas for improvement.

Background
Diabetes prevalence in Grampian has increased 59% from 18,204 in 2006 to 28,996 in 2017. In addition, many patients have multiple comorbidities and complex health needs. Consequently, the burden of diabetes on primary care and specialist services is increasing and the need for specialist input to these complicated situations often results in patients needing to be seen by multiple secondary care clinicians.

The Scottish Government’s Modern Outpatient document outlined where patient care needs to be improved and where primary care needs support: ‘Better access to clinical decision-making support and specialist advice will make a significant impact on patients getting the right treatment and removing unnecessary steps from their journey.’ It goes on to observe that this should not be ‘about a transfer of workload but is about working together across the primary/secondary care interface to provide the best care in the most appropriate setting for each patient at the point of need.’

Prior to GDPOP practice meetings starting in 2006, primary care practices had begun to offer diabetes care following the introduction of national financial incentives and the Grampian Retinal Screening programme in 2002. The initial objectives of the meetings were to:
- Reduce the need for secondary care clinic visits for patients while still offering specialist opinion.
- Increase confidence in diabetes management at a practice level.
- Provide time and opportunity for clinically-based discussions offering educational support and advice to facilitate patient management.
- Enhance communication between practice and hospital diabetes teams.
- Discuss any complex patient issues.

Initially, visits were piloted in one practice and now consist of consultant diabetologists visiting 39 practices and being aligned to all Grampian primary care practices.

How GDPOP evolved
Practice visits
Initially highlighted at the NHS Grampian’s Diabetes Managed Services at Dr Gray’s Hospital in Elgin, the GDPOP was introduced as a way of delivering regular specialist input to a practice through the aligned consultant. This involves regular multidisciplinary team meetings, with either practices with GDPOP or not having GDPOP.

Clinical Network Conference in 2008, practices were able to ‘opt-in’ to the GDPOP.

By 2014, all senior diabetes clinicians were aligned to practices. Alignment with a practice results in queries from the practice about any primary care-based patients to be directed to the aligned doctor. Alignment of practices was decided by patient population per practice and diabetes time allocation in secondary care clinicians’ job plans.

In 2017, 39 from 78 practices throughout Grampian were visited regularly (see Figures 1 and 2). Grampian has two main centres – one based at Aberdeen Royal Infirmary with 3.5 whole time equivalent (WTE) consultants covering Aberdeen City and Aberdeenshire patients totalling 66 practices and an area of 6400km². The other centre is based at Dr Gray’s Hospital in Elgin with 1 WTE consultant covering 12 practices in Moray across 2200km².
- The number of visits per practice per year ranged from 1–4 averaging 3.2 per practice per year with the average number of people with...
diabetes being 422 per practice (range 59–998).
- The number of patients typically discussed averaged approximately six per visit ranging from 4–12.
- Approximately 750 patient discussions occurred annually (39 practices x 3.2 visits x 6 cases per year).
- Senior diabetologist time equated to less than one clinic per month with approximately 3.5 hours per visit (including travel) and an average of 12 visits per year.

Practices on the Northern Isles of Orkney and Shetland are also involved in the programme via video conferencing facilities, with five practices on Orkney having regular meetings and the consultant general physician on the Shetland Isles having regular input and support from the Grampian diabetes team.

Other regional educational opportunities
Parallel to the GDPOP evolving, there were multiple opportunities to develop the skills of all professionals across Grampian involved in the delivery of diabetes care. One of the main events, hosting nearly 200 delegates, is the Annual NHS Grampian Diabetes Managed Clinical Network Conference which offers plenary sessions as well as workshops. Continuing to be well attended, it builds on the relationships between primary and secondary care.

Another major opportunity has been an annual (since 1999) GP Scholarship Course involving 13 half-day sessions over nine months offering a mix of workshops, presentations, shadowing, practice-based projects and private study. It is done in parallel with the GDPOP meetings and delivering their diabetes service. The course is organised by a consultant diabetologist with NHS Education for Scotland.

The course’s feedback consistently shows improved confidence for general practitioners to deliver diabetes care in the community. Warwick University Diabetes courses, primarily for nurses in primary and community care sectors, are a distance learning programme with mentorship and support from the local diabetes team. Diabetes health psychologists have been instrumental in training professionals to support behaviour change and self-management. DSNs have run specific courses to train community and primary care-based staff to initiate and titrate insulin in people with type 2 diabetes.

Description of GDPOP meetings
Hosted in a primary care location, the primary care team determines the format of the meeting according to their current and emergent service and educational needs.

Professionals attending from the MDT depend on the availability of practice and secondary care staff, with core attenders being GPs and practice nurses delivering diabetes care, secondary care senior medical staff (consultant or specialty doctor) and a DSN. Other attendees have included dietitians, psychologists, podiatrists and trainees.

The content of meetings varies between practices and is directed by primary care, although any update or changes in diabetes from a specialist perspective can also be discussed. Discussions are typically based on complex patients, often with multiple comorbidities or challenging aspects to their diabetes management. As part of the patient-based discussions, newer agents, newer services in specialism – for example, subcutaneous insulin infusion pumps, glucose monitoring advances – are shared. In addition, with information from primary care and community teams about the growing local opportunities – such as psychological therapies, link

Figure 2. Map of hospital and general practices across Grampian, Shetland and Orkney visited as part of the GDPOP (excluding Aberdeen City practices)

PRACTICAL DIABETES VOL. 36 NO. 1
COPYRIGHT © 2019 JOHN WILEY & SONS
practitioners and third sector support – the discussions are patient centred and support self-management, often preventing the patient requiring a visit to secondary care location. These factors all support the seamless and optimised care that we aspire to deliver.

Discussions and decisions can be recorded on GP electronic note systems or on the patient’s unique electronic record in the SCI-Diabetes system which can facilitate information sharing across primary and secondary care.

Frequent case-based topics include up-titration of oral agents and choice of insulin regimens in people with type 2 diabetes which takes into account other aspects of their health and the individualised aims of their diabetes therapy. The programme also provides a forum for anticipating and guiding opportunistic conversations when the patient presents to primary care – for example relating to pregnancy planning, driving risk in the context of recurrent hypoglycaemia and management of people with type 1 diabetes in the context of ill health. It has provided the opportunity to review people with type 1 diabetes who have been ‘lost to follow up’ and identify outstanding screening or other issues that primary care can then help support at a local level. While all people in Grampian with type 1 diabetes are offered secondary care for their diabetes, in concordance with Rea and Attwood, traditional models of secondary care delivery can be challenging for many patients. GDPOP allows for a thorough patient-centred holistic discussion while offering advice and support from the secondary care team. Due to the broad nature of the patients’ problems discussed, specific outcomes are not routinely recorded.

Funding and staff allocation
Following a successful pilot, a two-year grant was awarded from an educational fund allowing DSN and consultants’ time to progress the MDT meetings to other practices. When this funding was no longer available, and with the expansion of the programme and increase in the prevalence of diabetes, consultant time for GDPOP meetings has been reorganised from new patient secondary care appointments and supported professional activity (SPA) time given the educational component of the meetings.

Table 1. Results of GDPOP secondary and primary care survey

<table>
<thead>
<tr>
<th>Aspt of GDPOP meetings enquired about</th>
<th>Responded 'helpful' or ‘very helpful’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary care</td>
<td></td>
</tr>
<tr>
<td>Overall helpfulness</td>
<td>8/9 (89%)</td>
</tr>
<tr>
<td>Improved liaison between primary and secondary care</td>
<td>9/9 (100%)</td>
</tr>
<tr>
<td>Relaxed nature of meetings which stimulates informal discussion about diabetes</td>
<td>8/9 (89%)</td>
</tr>
<tr>
<td>Gaining insight into primary care and its challenges</td>
<td>8/9 (89%)</td>
</tr>
<tr>
<td>An opportunity to be kept up to date in any changes in primary care</td>
<td>8/9 (89%)</td>
</tr>
<tr>
<td>Primary care</td>
<td></td>
</tr>
<tr>
<td>Overall value of meetings</td>
<td>46/48 (96%)</td>
</tr>
<tr>
<td>Improved confidence of primary care practitioners to manage complex diabetes in primary care</td>
<td>46/48 (96%)</td>
</tr>
<tr>
<td>Improved liaison between primary care and secondary care</td>
<td>45/48 (94%)</td>
</tr>
<tr>
<td>Relaxed nature of meetings which stimulates informal discussion about diabetes</td>
<td>47/48 (98%)</td>
</tr>
<tr>
<td>Updates about local service developments that can support patients</td>
<td>42/48 (88%)</td>
</tr>
<tr>
<td>Opportunity to be updated in developments in diabetes</td>
<td>45/48 (94%)</td>
</tr>
<tr>
<td>Provide an opportunity for more formal learning</td>
<td>36/48 (75%)</td>
</tr>
</tbody>
</table>

Table 1. Results of GDPOP secondary and primary care survey

Time for review
More than 10 years from inception, a review was undertaken to ascertain whether objectives are still being met, what the programme’s strengths were and where improvements could be made. It will help support the strategy for the delivery of diabetes care longer term.

The review was performed with two anonymous online surveys: one to secondary care doctors and one to primary care staff. Data regarding new and review appointments were obtained from local IT systems.

Surveys
The surveys aimed to gain information about how long ago visits started, their frequency and their perceived helpfulness. Questions were formatted in a 5-option Likert scale ranging from ‘very helpful’ to ‘not helpful at all’ and included an option for ‘neither helpful nor unhelpful’. Full surveys are available on request.

Secondary care responses
Nine of the 10 secondary care doctors involved in GDPOP answered the survey. Four had been involved in GDPOP for at least eight years with the minimum duration being two years, and all five of the newest consultants having been involved since appointment.

The number of practices visited by each consultant ranged from two to eight depending on allocated time in job plans and engagement from aligned practices. Most practices were visited individually but three groups of adjacent practices have joint meetings with one or two other practices. The secondary care doctors felt that all five aspects enquired about the meetings were helpful or very helpful with only one respondent feeling that they were neither helpful nor unhelpful. See Table 1 for question stems and responses.
Several suggestions for improving the GDPOP from the survey include: having recognised time in job plans; more regular arrangement from practices; providing a more equitable service by visiting all practices across the region; having a more structured approach with practices and looking at their diabetes survey data and focusing on particular areas for diabetes improvement; improving links with primary care – for example aligning new referrals to appropriate consultants; and improved documentation of the meetings.

Primary care responses. There were 48 respondents from primary care with 31 (65%) being GPs and 14 (29%) being practice nurses; three (6%) ‘others’ included a nurse practitioner, a practice manager and one who did not state their role.

The primary care staff felt that all seven aspects enquired about the meetings were helpful or very helpful. (See Table 1 for question stems and responses.)

Free text comments from primary care included:
- ‘Very much like the opportunity to discuss hard-to-manage patients.’
- ‘...very useful and should continue – good if other specialities did the same.’
- ‘We... feel very well supported. Email allows contact with our diabetologist and DSN outwith meeting forum.’
- ‘Good relationship fostered with good support for more difficult cases.’
- ‘...most helpful and I always learn from them and this has increased my confidence in dealing with more complex diabetes in primary care.’
- ‘They do make a huge difference in terms of helping us manage more complex diabetes in the community and they are a great source of knowledge too.’
- ‘Essential and excellent service without which we could not manage the huge burden of diabetes care in the community.’
- ‘...very helpful in improving my knowledge especially in medication management. The relaxed nature of these meetings makes me feel relaxed and comfortable.’

Suggested improvements from primary care include: to increase the involvement of all health care professionals such as podiatrists, link workers, DSNs and dietitians; to hear feedback about patients when referred to allied health care professionals; to widen discussions to service delivery and practice populations; and to develop some ‘frequently asked questions’ with answers being available.

In addition, GDPOP provides a forum for the development of practical initiatives. For example, following a recent incident of severe hypoglycaemia in a nursing home, the Hypoglycaemia protocol and Hypo box currently used in secondary care were adapted for this particular context. Those involved included the GP, practice nurse, DSN and linked consultant diabetologist.

SCI-Diabetes
SCI-Diabetes has previously been described and is accessible to primary and secondary care professionals. It can be used in tandem to complement the primary care documentation system but also organised into ‘virtual’ groups of patients – for example those discussed across the primary/secondary care interface. While not consistently used at all GDPOP meetings, the overall characteristics of those discussed and documented on SCI-Diabetes meetings reflect the complexity and higher-risk population discussed between primary and secondary care. For example, those discussed were more likely to have retinopathy, less likely to have reached their cardiovascular risk targets and more likely to have higher HbA1c.

Influence of GDPOP
Data available regarding referrals to secondary care showed new patient appointments decreased by 31% from 2014 to 2017 and the review appointments decreased by 28%. This is despite an increase in diabetes prevalence in Grampian from 27 220 patients in 2014 to 28 996 in 2017. New patient waiting times remain on target at five weeks.

Scottish Diabetes Survey results over a similar period indicate no deterioration in most measures despite the demise of the Quality and Outcomes Framework and fewer attending clinic. Grampian continues to have low levels of patient disengagement as indicated by HbA1c or retinal screening checked within the preceding 15 months. In addition, the percentage of people with HbA1c >75mmol/mol fell by 5.5% in type 1 diabetes and by 2.5% in type 2 diabetes between 2014 and 2017. This compares with Scottish data of a 3.1% decrease in type 1 diabetes and a 0.1% decrease in type 2 diabetes for this cohort of patients.

Discussion
GDPOP has grown substantially over the last decade with MDT meetings held in half of the practices in Grampian, having 100% of practices aligned to senior diabetologists. Parallel to GDPOP, multiple opportunities for primary care staff to develop skills and knowledge in diabetes care delivery have been offered and undertaken.

Both primary and secondary care clinicians involved in the programme consider it to be a core part of diabetes care delivery in Grampian.

This review has shown that the programme continues to meet its original objectives, showing a decrease in secondary care clinic requirement by promoting patient-centred care often allowing the patient to remain under the care of their primary care team. The surveys show that the GDPOP meetings increase confidence in diabetes management at a practice level. The programme provides time and opportunity for clinically-based discussions, typically of complex patients, in parallel to offering educational support and advice to facilitate patient management. As a
result there is enhanced communication and empathy between practice and hospital diabetes teams. The review identified that the strengths of GDPOP are the relaxed nature of the meetings, and the opportunity for the development of practical initiatives. In parallel, there has been a marked reduction in the proportion of people with HbA1c >75mmol/mol.

As well as continuing to meet its original aims and objectives, GDPOP is aligned to Integration Joint Board (IJB) transformation and helps promote cost effective and appropriate prescribing in an area where primary care needs support due to the increasing burden of diabetes in the context of challenging GP recruitment. The MDT involvement at the meetings supports a more resilient model with the whole team developing their knowledge and skills.

In addition, GDPOP promotes four of the priorities of the Scottish Diabetes Group Diabetes Improvement Plan, namely ‘Person-centred care’, ‘Equality of access’, ‘Supporting and developing staff’, and ‘Improving information’.


**Recommendations**

The authors feel that GDPOP should continue in the format originally designed with its strengths being the person-centred, case-based approach in a relaxed atmosphere. Ideally, availability of this programme should be across Grampian but resource and competing needs of professionals will need to be considered and improved prior to any expansion.

Opportunities to further develop currently held meetings would depend on practice needs. Possibilities include: improving the means of feedback on patient progress; encouraging more members of the diabetes MDT such as pharmacists to attend regularly and extend to include link workers where available; and considering service development and Quality Improvement opportunities by looking at local data through SCI-Diabetes or the Scottish Therapeutics Utility.

Secondary care clinicians would be keen to expand and include more practices throughout Grampian, but barriers to this include time and financial resource.

The use of SCI-Diabetes as part of the GDPOP meetings offers a potential way to improve the quality of documentation.

**Conclusion**

Since 2006, the GDPOP has been expanding and is now a routine part of diabetes care delivery in Grampian. It is consistent with regional IJB transformation and national strategies and, with its multidisciplinary nature allowing flexibility in an evolving workforce, it has resilience for future development across Grampian.

**Key points**

- GDPOP is a well-established practice outreach programme involving diabetes multidisciplinary team members from primary and secondary care
- It allows patients to have specialist opinions about their care within a primary care setting and can avoid further secondary care appointments
- The relaxed atmosphere of the meeting in a primary care setting promotes integration between specialty and primary care teams
- It is in keeping with the aims and vision of multiple national strategies

**References**


**Declarations of interests**

Dr HMAR has received speaker’s fees from Janssen (Johnson & Johnson).

**Correspondence to:**

Dr Kenneth McHardy, MChB, MD, FRCPE, FACdMED, Consultant Diabetologist (Retired)

Dr Hannah MA Robertson, Consultant Diabetologist, Aberdeen Royal Infirmary, Aberdeen, Scotland, UK

Dr Kenneth McHardy, MChB, MD, FRCPE, FACdMED, Consultant Diabetologist, Aberdeen Royal Infirmary, Aberdeen AB25 2ZN, Scotland, UK

email: hannahrobertson@nhs.net