



## **West Unscheduled Care Test of Change**

Evaluation report

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## Executive summary

### Background

Given the increasing pressures on General Practice, there is a need to test new models of delivering healthcare. The recent general medical services contract highlighted unscheduled care models as a priority area to address. Utilising an advanced practitioner to deliver unscheduled afternoon visits has shown promise across Scotland, but has yet to be fully tested in Aberdeen City. This report evaluates a recently implemented unscheduled care model test of change.

### Method

The West Unscheduled Care project was delivered as part of Aberdeen City Health and Social Care Partnership's programme to transform the delivery of health and social care in the city. This involved an Advanced Nurse Practitioner (ANP) conducting unscheduled home visits on behalf of GPs in the West Locality of Aberdeen. This evaluation reports on the first six months of implementation (November 2017 – May 2018).

Service-level data were collected per visit, including patient-facing time, visits by practice and outcome of visits. Practice staff and ANPs took part in mind-mapping sessions to explore perceived project benefits, barriers and implementation considerations. Patient questionnaires were distributed to determine overall satisfaction. Emergency admissions, bed days and A&E attendances were projected prior to implementation and compared to actual data to determine impact on hospital services.

### Results

There were 241 referrals with only two rejected. Practices referred between seven and 68 times over six months, with a total visiting time of 106.55 hours. The most common outcomes for visits were "medication & worsening statement given (WSG)" (107 cases), "self-care advice" (47 cases) and "hospital admission" (28 cases).

GPs were very satisfied with the service (average score of 90%). They reported reduced workload, patients were provided with a high-quality service and it reduced stress of other practice staff. The biggest drawbacks identified were concerns whether the service had capacity to accept referrals and the financing of the service in the longer term. GPs felt the service could be improved by extending operating hours to 1800.

ANPs felt they provided holistic care to patients and were providing GPs with a good service. They reported that some days were quiet, meaning the service could handle more patients. ANPs also suggested that other professionals, such as paramedic practitioners and district nurses, could carry out the service if sufficiently trained.

Patients who returned questionnaires responded positively. For example, 100% of responders rated the ANP as "very good" for their compassion, respectfulness and overall satisfaction. All respondents felt sufficiently involved in decisions around their care and were provided information in an understandable way.

No significant differences were visible between projected and actual emergency admissions, bed days and A&E attendances.

### Discussion and recommendations



Overall, this evaluation has reported a positive impact of the West Unscheduled Care project. Given the low rejection rate of referrals, it would appear this model can be delivered to more practices in its current form before capacity is reached. To scale up this project, consideration may also be given to recruit other advanced practitioners who may be qualified enough to deliver this service. In addition, the method of financing this service longer-term should be considered.



## Background

Globally, there is an increasing ageing population, with the United Nations recently projecting a 56% growth in individuals over the age of 60 between 2015 – 2030<sup>1</sup>. In Scotland, more recent estimates have shown increases in the 45-64 and over 75 age groups (10% and 16% respectively) over the last decade<sup>2</sup>. The association between an ageing society and disease prevalence is well established, with 1 in 2 Scots having a minimum of one morbidity by the age of 50<sup>3</sup>. The result of this is increased pressure on primary care, particularly in General Practice, where these issues are escalated through challenges retaining General Practitioners (GPs). Indeed, the proportion of GPs between the ages of 55 – 64 leaving General Practice doubled from 2005 – 2014<sup>4</sup>. Therefore, there is a need to test new ways of delivering primary care to address these issues.

The recently published general medical services contract in Scotland outlined priorities to transform how services are delivered in primary care and highlighted urgent care services as an area of opportunity<sup>5</sup>. Unscheduled care models, that utilise an advanced practitioner resource as the initial response for home visiting, have shown promise in several pilot sites across Scotland. For example, a newly implemented paramedic support service in Inverclyde demonstrated a 60% reduction of home visits completed by GPs, therefore reducing the pressures on practice working<sup>6</sup>. As a result, it is important to test other approaches to delivering unscheduled care across Scotland to understand the impact these may have in a localised context.

This report describes the evaluation of a new model of delivering unscheduled primary care in Aberdeen City.

## Method

### Design

The “West Unscheduled Care” project was launched in November 2017 as part of Aberdeen City Health & Social Care Partnership’s programme of activity to transform services in the city. Following a patient request for a home visit, their GP triaged the call to the Grampian Medical Emergency Department (G-MED), who would either accept or reject referrals. Patients would then be visited by an Advanced Nurse Practitioner (ANP), with a driver transporting the ANP to patients’ homes. A recent systematic review found that ANPs demonstrate equal or better outcomes than physicians for outcomes including cost, patient satisfaction and physiological measures<sup>7</sup>. Following the home visit, the ANP would contact the GP if required and complete the appropriate documentation.

This project was tested within the West Locality of Aberdeen City. The rationale for this was twofold: 1) it contains a higher proportion of elderly patients compared to the other localities within the city; 2) it has a large geographical catchment area (approximately 140 square miles), meaning home visits

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<sup>1</sup> United Nations (2015). World population ageing. United Nations, New York.

<sup>2</sup> National Records of Scotland (2018). Mid-year population estimated Scotland, mid-2017. National Records of Scotland, Edinburgh.

<sup>3</sup> Barnett, K. et al. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet*, 6736(12), 60240-2.

<sup>4</sup> Baird, B. et al. (2016). Understanding pressures in general practice. The King’s Fund, London.

<sup>5</sup> Scottish Government. (2018). The 2018 general medical services contract in Scotland. Scottish Government, Edinburgh.

<sup>6</sup> Scottish School of Primary Care. (2018). Evaluation of new models of primary care Inverclyde case study. Available from: [http://www.sspc.ac.uk/media/media\\_573766\\_en.pdf](http://www.sspc.ac.uk/media/media_573766_en.pdf) [accessed 17/5/18]

<sup>7</sup> Swan, M. et al. (2015). Quality of primary care by advanced practice nurses: a systematic review. *International Journal for Quality in Health Care*, 27(5):396-404.





will require a considerable amount of travel time to complete. Inclusion criteria were: patient unable to attend the surgery; patient home-visit request was between 1300-1730 hours; patient's clinical condition was suitable to be managed by an advanced practitioner and the patient agreed to being seen by an advanced practitioner. Exclusion criteria included patients with illness related to pregnancy; psychiatric symptoms and other complex patients that may be more effectively handled by GPs.

Funding was obtained from the Aberdeen City Integration Joint Board to deliver the project.

## Data collection and analysis

### Service descriptive data

Following each patient visit, ANPs recorded a variety of data, including referral practice; reason for referral; time spent with patient and the outcome of the visit. These data were then uploaded to a database for the purposes of storage, confidentiality and analysis. Analysis included number of referrals per practice, average and total patient-facing time and financial savings associated with GP time. House call and home visit consultations were also compared for two case-based practices across the dates of implementation (Nov 17 – May 18) to the previous relative period (Nov 16 – May 17).

### Patient experience of service

Patient experience was assessed using a questionnaire (formatted by the NHS Grampian Clinical Effectiveness team), based on a combination of previously validated tools (for example the GP Assessment Questionnaire) and adapted appropriately for the local context. Examples of questions included overall satisfaction with the ANP and time waited from phone call to visit. Questionnaires were administered to patients by the ANP following their consultation and were provided with pre-paid envelopes to return their responses. This method was chosen to avoid bias associated with handing responses directly to the ANP. However, logistical challenges associated with obtaining the pre-paid return envelopes meant that patients were only offered questionnaires as of March 2018. This significantly limited the potential response rate.

### GP experience of service

GP experience was assessed using a mind-mapping process. Mind-maps are diagrams used to represent topics or several areas of focus around a central point of interest. Here, the central point of interest was the GPs' experience of this service, with topics explored including: perceived project benefits; perceived project drawbacks; implementation barriers and future recommendations. This method was chosen based on previous recommendations, whereby mind-mapping has been advocated as a valuable strategy to adopt to balance academic rigour and pragmatism required in healthcare service settings<sup>8</sup>.

Mind-mapping exercises were conducted in March – May 2018. Practice Managers were contacted to arrange a one-hour slot where these could be carried out in their practice. Attendees from each practice were dependent on the time and availability of practice staff. Attendees were reminded of the purpose of the evaluation and that their responses would be anonymised so their involvement would not jeopardise them in any way. Mind-mapping sessions were led by the Research Manager, with a Programme Manager taking fieldnotes on a wall-mounted mind-map as a reference point during discussion. Once all the key themes were explored, these were member checked with attendees to ensure that a truthful version of events had been captured.

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<sup>8</sup> Burgess-Allen, J & Owen-Smith, V. (2010). Using mind-mapping techniques for rapid qualitative data analysis in public participation processes. *Health Expectations*, 13, 406-415.



After all seven mind-mapping processes had been completed, findings were coded using NVivo software (Version 11; QSR International, Melbourne) and used as a basis to generate themes in relation to the key topics explored. This process also allowed for other important perspectives to be highlighted that were not initially considered prior to beginning data collection. Once completed, data were synthesised and restructured to provide a summary of key topics from across the attendees.

#### ANP experience of service

A similar process was used with the ANPs to understand their experience of the project. Here, the ANPs participated during their staff meeting and the mind-mapping process was conducted as a group activity. The same key topics were explored and these sessions were also led by both the Research and Programme Manager. Once the session was completed, the topics were refined and synthesised into key themes and restructured into a refined mind-map.

#### Ministerial Strategic Group (MSG) integration indicators

In line with the report on the MSG Integration Indicators published in December 2017<sup>9</sup>, the project team considered which indicators this project may positively influence. Unplanned admissions, unscheduled hospital bed days and A&E attendances were identified as metrics to monitor over the course of implementation. These indicators were also retrospectively examined prior to project start in order to track changes. Data were examined over the course of 12 months, to allow for data capture six months prior to project implementation and then six months throughout the project duration. In addition, historical data were used to project the volume of the above over the first six months and then compared to actual data to determine impact.

As the data collection methods utilised fall under the categorisation of a service evaluation, ethical approval was not required.

## Results

### GP practice information

The GP practices, practice population and number of GPs attached to each practice are visible in Table 1. Both practice population (1694 – 10509) and number of GPs (4 – 12) vary widely across the seven practices.

**Table 1. West locality GP practice characteristics (data correct as of Feb 2018)**

Practice	Practice population	Number of GPs
Albyn	10509	9
Camphill	1694	4
Cults	7148	5
Great Western Road	10092	12
Hamilton	6830	6
Kingswells	5829	5
Peterculter	8020	6
<i>Average</i>	<i>7160</i>	<i>6.7</i>

<sup>9</sup> Scottish Government. (2017). Measuring performance under integration. Available from: <http://www.improvementservice.org.uk/documents/OEPB/board-papers-aug2017/oepb-31aug17-item4a-letter.pdf> [accessed 12/06/2018]



## Visits overview

In the six-month period from 7<sup>th</sup> November 2017 – 7<sup>th</sup> May 2018, 241 visits were referred to the service, with 239 accepted. However, as rejections were only documented if GPs referred after discussion with the team leader who was receiving the call, these figures may be slightly higher than reported.

The characteristics of these patients visited are visible in Table 2. The reasons for being referred to the service varied, however those frequently reported were: vomiting; chest infections; abdominal pain; urinary tract infections and falls.

**Table 2. Demographic characteristics of patients visited (N=239)**

Characteristic	Number (N)
Age, mean (range)	79 years (24 – 97)
Female, N (%)	156 (65)
Albyn referrals, N	42
Camphill referrals, N	7
Cults referrals, N	35
Great Western Road referrals, N	68
Hamilton referrals, N	49
Kingswells referrals, N	13
Peterculter referrals, N	24

NB: 1 referral practice not reported

## GP practice usage of service

Figure 1 shows the number of visits by GP practice each month, in addition to the total number of monthly visits. The total number of visits per month varied, with April 2018 seeing 52 referrals to the service, the largest across the duration. The most and least frequent practices referring to the service over the six-month period were Great Western Road (68 referrals) and Camphill (7 referrals) respectively. Adjusting for practice population, Hamilton had the largest number of referrals (7.2 per 1000 patients), whilst Peterculter had the smallest (0.3 per 1000 patients).

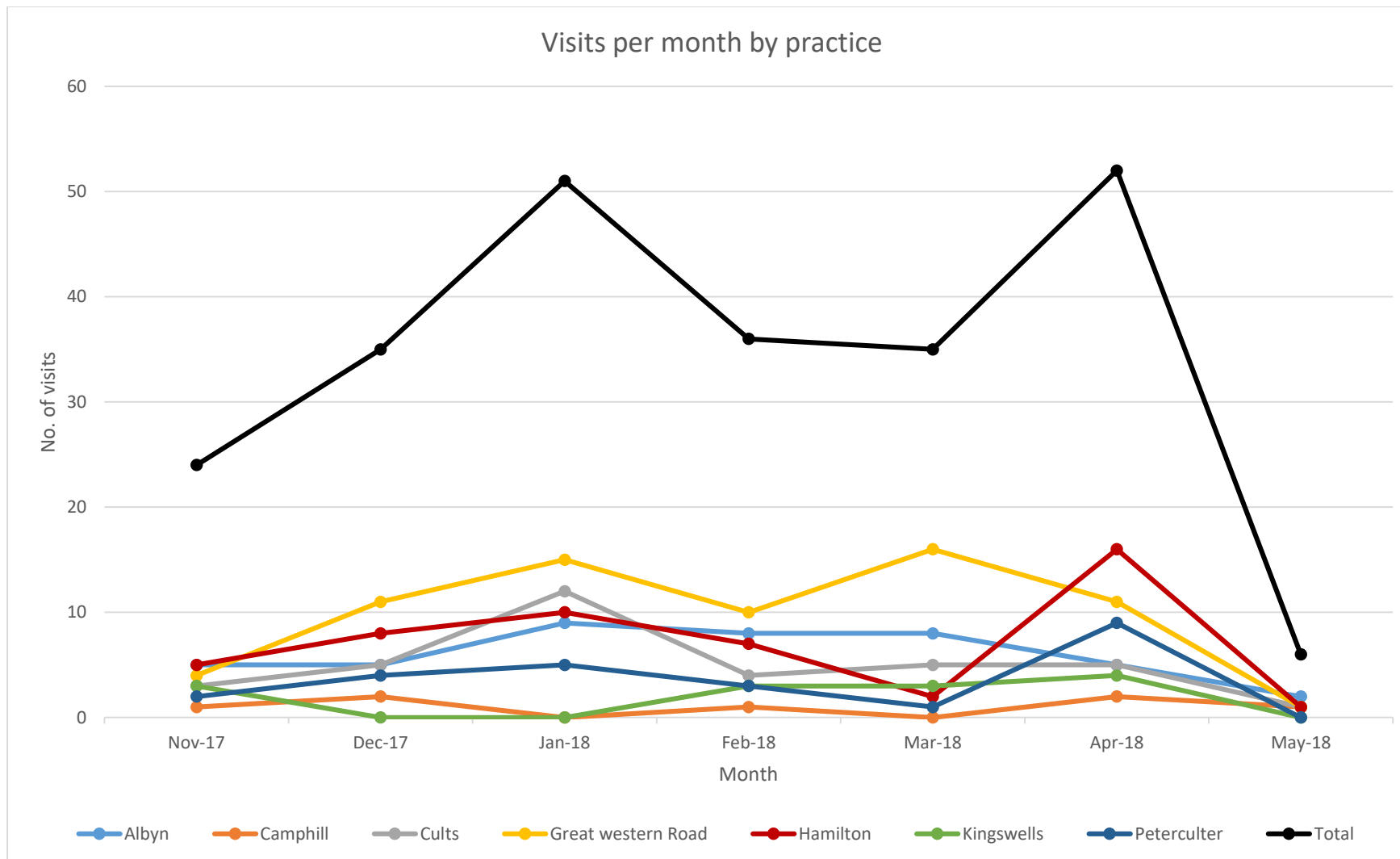


Figure 1. Overview of visits per month by practice. NB: As analysis is of the first six months of implementation, only data up until 7<sup>th</sup> May is presented.



### Time allocation of referrals and visits

Table 3 shows the time associated with referrals and visits. On average, the ANP would arrive with a patient 43 minutes after G-MED received the referral. The total patient-facing time was 106.55 hours, equating to £6259.81 saved of GP time when deriving an hourly cost of £58.75 from the recent Deloitte review of GP earnings<sup>10</sup>. Exploratory work conducted by ISD Scotland quantified the average derived journey time for GPs across the West Locality as 10 minutes per appointment, subsequently saving an additional 2390 minutes of GP time, or a monetary value of £2340.21.

**Table 3. Time allocation of visits and referrals**

Characteristic	Number (minutes)
Visit time	
<i>Average</i>	27
<i>Median</i>	24
<i>Minimum</i>	8
<i>Maximum</i>	113
<b>Total visiting time (hours)</b>	<b>106.55</b>
Time from G-MED referral to ANP arrival	
<i>Average</i>	43
<i>Median</i>	32
<i>Minimum</i>	8
<i>Maximum</i>	224

NB: 15 visits did not report the total duration of ANP visits, in which case the average visit duration was calculated and applied to these visits to derive a total visiting time

### Outcome of visits

Figure 2 shows the outcome of ANP visits. The most common outcomes for visits was “medication & worsening statement given (WSG)” (107 cases). “Self-care advice” was the outcome for 47 cases, with 28 cases resulting in a hospital admission.

<sup>10</sup> Deloitte. (2017). A review of GP earnings and expenses. Available from: <https://beta.gov.scot/publications/2018-gms-contract-scotland/documents/00527540.pdf> [accessed 29/03/2018]

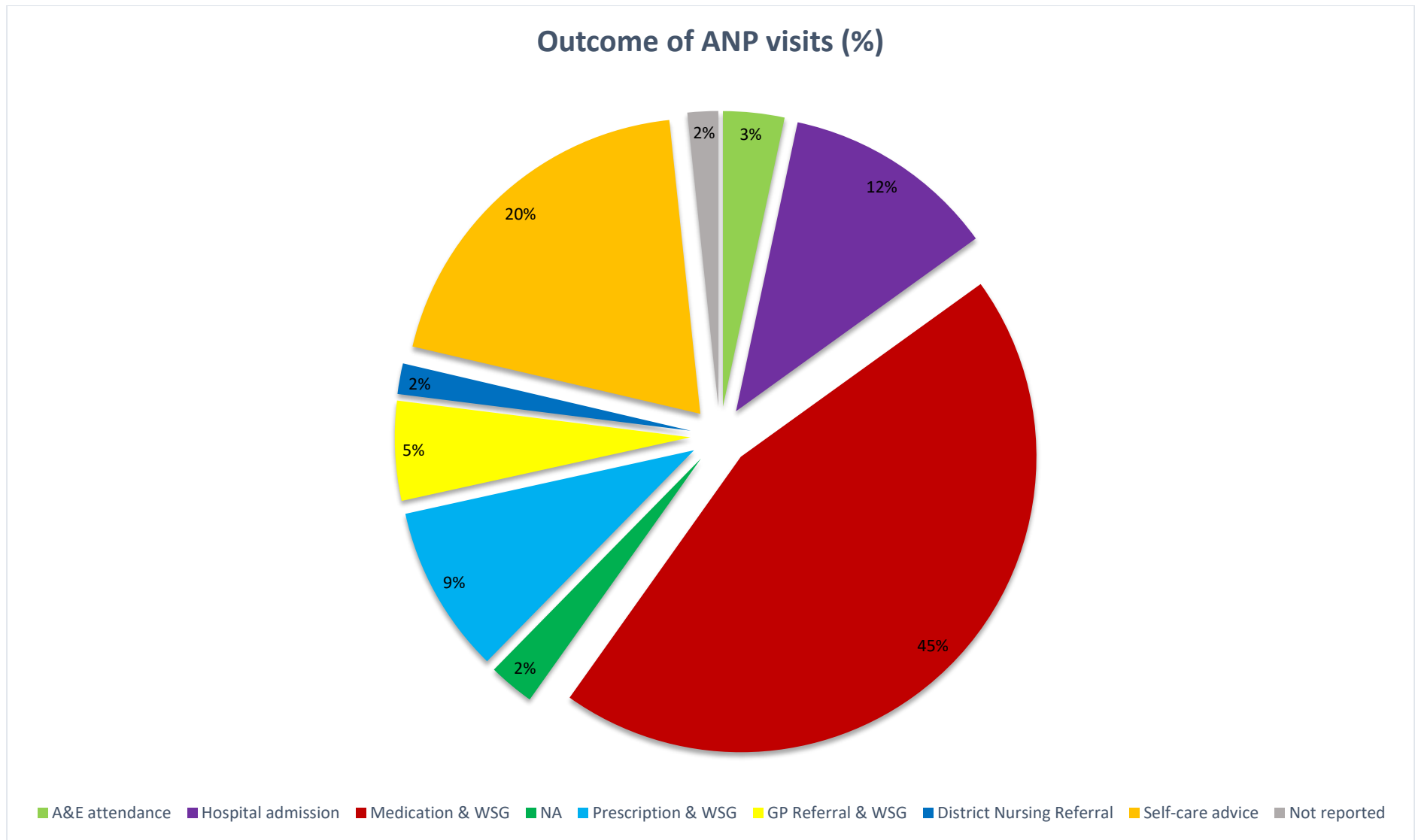


Figure 2. Outcome of ANP visits



### GP home visits data

Two practices were randomly selected to determine home visit workload over time. Table 4 demonstrates the number of home visit consultations and house call appointments by practices over two time periods: 1) November 2017 – May 2018, the six months of the project implementation and 2) November 2016 – May 2017, the corresponding period over the previous year. A reduction in both house calls and home visits were visible for both practices and, whilst it is not possible to solely attribute these reductions to this project, it is likely that it contributed significantly towards this reduced workload.

**Table 4. Comparative GP home visits during project implementation and corresponding period 12 months prior**

	Practice 1		Practice 2	
	House call appointments	Home visit consultation	House call appointments	Home visit consultation
Nov 16 – May 17	936	981	287	78
Nov 17 – May 18	904	849	285	60
<i>Reduction</i>	<i>32</i>	<i>132</i>	<i>2</i>	<i>18</i>

### Patient experience

As mentioned previously, issues with the pre-paid return envelopes meant that participant feedback forms were only distributed from March 2018. During this period, six patients provided responses and their characteristics are described in Table 5.

**Table 5. Patient responder demographic information**

Patient no.	M/F	Age (years)	LTC? (Y/N)	Time from request to referral (hours)
1	F	75+	Y	1-2
2	M	75+	Y	0.5-1
3	F	65-74	-	-
4	F	75+	Y	1-2
5	F	75+	N	1-2
6	M	16-44	Y	<0.5

NB: M = male; F = female; LTC = long-term condition

Responses to Likert-scale questions are visible in Table 6. Overall, the ANPs scored highly on all components assessed, such as listening to patients and treating them with respect.

**Table 6. Patient Likert-scale responses (%)**

Component	Very good	Good	Satisfactory	Poor	Very poor
Feeling at ease	100	-	-	-	-
Respectful?	100	-	-	-	-
Compassionate?	100	-	-	-	-
Good listener?	100	-	-	-	-
Overall experience	100				



Further patient views are shown in Table 7. ANPs were able to explain treatments in an understandable way to all patients and responders had confidence in the ANP whom visited them.

**Table 7. Additional patient responses (%)**

Component	Yes	No	Unsure
Enough time?	100	-	-
Involved in decision-making?	100	-	-
Advice if deteriorate?	100	-	-
Confidence in ANP?	100	-	-

Of the patients who used open-ended responses to provide additional information, two described the ANP they saw as “excellent”. One wrote: *“the home visit was excellent – the nurse was very good and patient with me. I wish we could get someone like her all the time”* (Patient 3).

### GP experience

To ensure anonymity, each GP practice was assigned a unique practice number. The attendees, service satisfaction scores and whether participants would recommend the service, are visible in Table 8. In total, 5/7 practices attended mind-mapping sessions, with one practice providing feedback electronically and one practice declining to participate. Overall, satisfaction was very high (average 9/10), with all attendees recommending this service to other practices across the city. The synthesised themes from the mind-mapping processes are shown in Figure 3.

**Table 8. Attendees, usage and satisfaction scores during mind-mapping process**

Practice number	Mind-mapping attendees	Satisfaction score	Recommend? (Y/N)
1	1 x GP	8	Y
2	1 x GP	10	Y
3	1 x GP 1 x Practice Manager	7.5	Y (with changes)
4	n/a	10	Y
5	1 x GP	9.5	Y
6	1 x GP	9	Y
7	-	-	-
<i>Average</i>		9	

### Project benefits

GPs - There were a multitude of benefits identified from this project. For GPs, six practices reported time being saved, particularly through not having to leave the surgery and the associated travel time required for home visits:

*“If we start our afternoon surgery and a request for a house call comes in, it’s very disruptive either to leave what we’re doing and leave the patient sitting for us to go and come back or leave the patient at home and delay the home visit ‘til after surgery”* (GP, Practice 1).

The service was also reported to reduce stress, particularly on the duty doctor, and also increase their capacity to complete other pressing tasks, for example emergency consultations and patient call-backs.





Patients - For visited patients, five practices specifically reference the high-quality of care provided by the ANP. One GP went as far to say that they would prefer to be visited by an ANP than a GP due to their skillset and conscientiousness:

*"They're incredible [ANP]. So if I was unwell I might be looking to see an ANP rather than a GP ... they're good all round practitioners and they're good at assessing things" (GP, Practice 5).*

Having the ANP resource available also decreased the length of time patients had to wait to be seen and it was also suggested seeing a different health professional could provide a fresh perspective on how best to treat patients. Benefits were also highlighted for other patients too, for example getting faster access to care by having less disruption when visiting surgeries.

Practice working – in terms of the wider practice working, the main benefit was improving efficiencies, as practice staff did not have to wait until the duty doctor returned to the surgery to answer specific questions regarding other patients. This was also reported to reduce the pressure on practice staff:

*"It's less stressful for the staff because they're not thinking 'oh god where's he? Where's she [duty doctor]? How long are they going to be before they come back? Can this message wait for them or not? Do I interrupt a doctor who's not duty doctor who's seeing a patient?' So these are potential stresses for the staff." (GP, Practice 2)*

#### Project drawbacks

GPs – there were very limited drawbacks identified through this project and even fewer regarding the logistics of the service itself. Instead, drawbacks highlighted included that the service may not continue into the future, along with uncertainties of the capacity of the service (i.e. if all visits would be accepted).

*"The difficulty is that I now need to go and phone someone else, I don't know if they're [G-MED] going to accept the visit, I don't know when the service is going to come. So I've got to go through all of this and the patient is then left hanging wondering: 'what's actually happening?'" (GP, Practice 3).*

Patients – potential drawbacks identified to patients were all hypothetical, as no complaints had been received regarding the quality of care from the ANPs. These included: lack of care continuity (such as not seeing the same health professional) and length of appointments (it was generally felt that ANPs would spend longer with patients, however patients may not necessarily deem this as a positive).

*"It depends on the patient. Others will think "why are you taking 20 minutes, it only takes you 2 minutes to do what you need to do?" So some patients will like it [longer appointments with the ANP], some will not" (GP, Practice 3).*

Practice working – one practice reported that this project had a small increase in workload for receptionists and due to the project being a test of change, they were unable to plan other activities to do in practice time if referrals were not accepted:

*"They [receptionists] take the call, request the house call and then it comes to the GP to deal with it, so if anything it might give them a bit more work to do because they have to do the emailing of the information ... but it's one very small task they have to do as part of their workflow" (GP, Practice 1).*

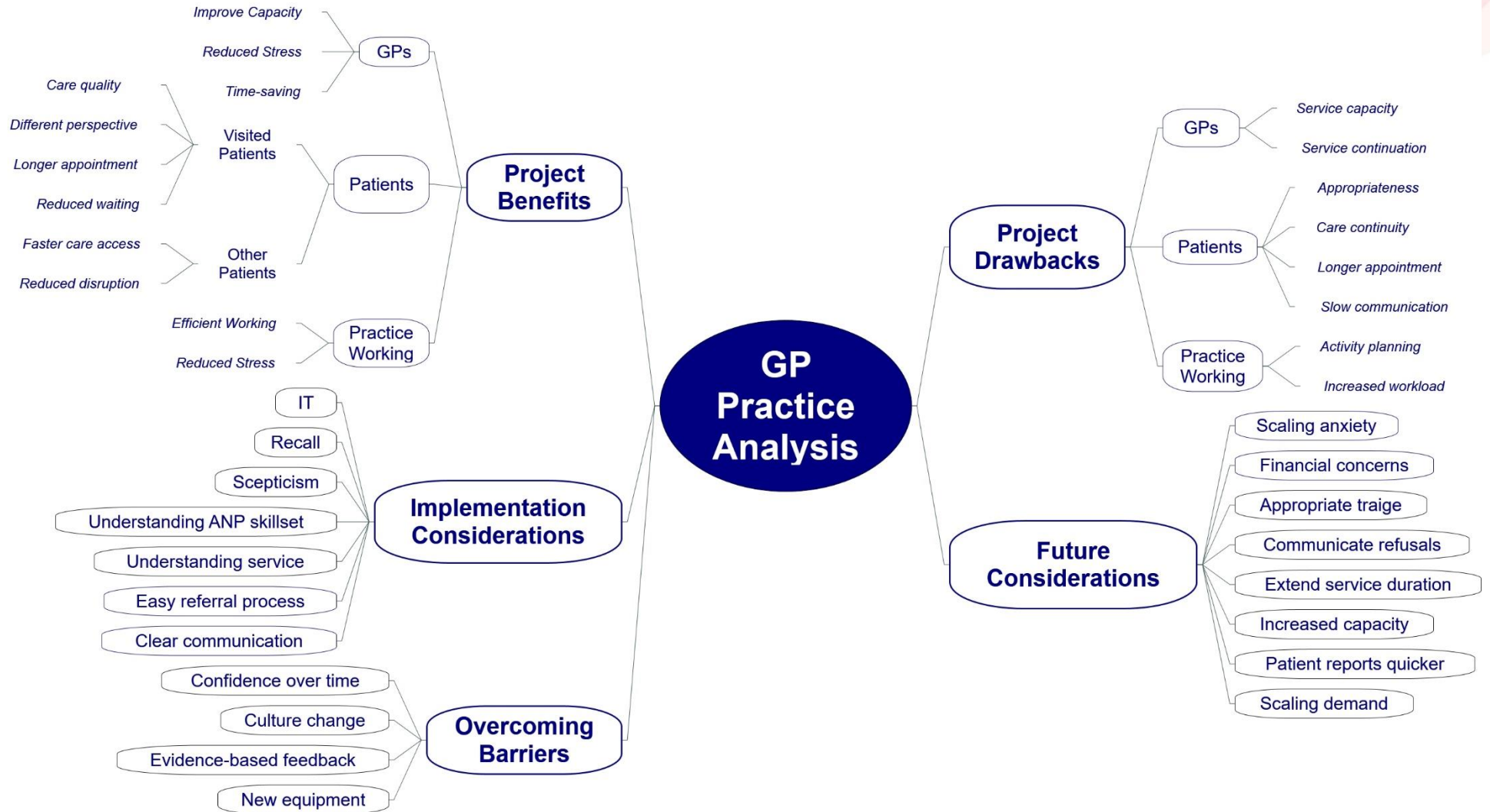


Figure 3. Synthesised mind-map of key practice themes



### Implementation barriers and facilitators

Practices were generally unanimous that implementation of the service was smooth. Practices spoke positively about the ease of referral to the service, in addition to receiving clear communication from the G-MED team and the ANPs when appropriate. The barriers highlighted to implementing this service in practices were all deemed to be minimal. For example, issues around remembering to contact the service and understanding of the ANPs' skillset, were all accepted to be inevitable and diminished over time. Initial IT difficulties in sending home visit summaries to the project team were alleviated by investing in new equipment. Additionally, two practices admitted to being sceptical whether the service would run successfully, however this also decreased over time:

*"It was a culture change, you know? I've been in general practice for way too long now and that's always been the case. Years and years ago in another practice a nurse practitioner was out, and then gradually they came in and the GPs were like "okay, this works, this is great", so the role expanded ... and gradually the confidence builds" (Practice Manager, Practice 3).*

### Future considerations

The most commonly requested revision of this service was to extend the hours of service up until 1800 hours. However, other requests were also provided around improving the service for the future, for example extending it to an all-day service. Interestingly, two practices highlighted the opportunity for a multi-disciplinary unscheduled visiting team that could include other Allied Health Professionals and Care Managers:

*"Might the service in the future look like a team that had a selection of different professionals ... the ability for a patient to be requesting directly rather than always having to go through the GP to get things going, that would be a huge advantage" (GP, Practice 6).*

There were two large concerns that were consistently stressed across participants: 1) a feeling that scaling the service city-wide could dilute the effectiveness of the service that they receive; 2) anxieties around funding for the service would not continue in the future:

*"My concern is more in terms of what happens in the future ... and that's to do with my experience of over a couple of decades of fantastic sounding pilot projects that are pump-primed only to not recur ... so I have to be allowed a certain amount of cynicism about that" (GP, Practice 6).*

### ANP experience

Three ANPs participated in the mind-mapping session. A summary of their synthesised responses are visible in Figure 4.

### Project benefits

Patients – The ANPs felt that patients were receiving a high-quality service. This, in part, may have been due to ANPs having more time to spend with patients than GPs, providing them the opportunity to gain important additional pieces of information:

*"We have a quick swizz at the surroundings, so you maybe pick up other things when you're there, whereas a GP, time management wise, it's really difficult for them to do that. We can pick up other things that we can highlight to the GPs" (ANP 2).*

ANPs also described the holistic care that they provided to patients. For example, they would not necessarily solely treat the specific problem that patients had, but instead provide additional support depending on need:



*“If we went to see somebody and they couldn’t get to the toilet we’d just take them to the toilet whilst we were there ... yes we’re Advanced Nurse Practitioners and when we’re going in we’re doing more of a GP role but at the end of the day, you still see yourself as a nurse” (ANP 1).*

GPs and practice working – The ANPs were in agreement that completing home visits would reduce the GPs’ workloads and therefore increase their capacity to “concentrate on other things that they might not always have time to do” (ANP 2). Furthermore, they would carry a range of supplementary equipment that a GP may not, therefore potentially providing a more efficient service to patients, in addition to reducing workload for other practice staff:

*“We’ve got everything in the boot. If we think someone needs an ECG we can do it. We can do bloods as well, that’s things that you’d need an appointment with a phlebotomist maybe 2/3 days down the line ... so you’re helping other services within the practice as well” (ANP 3).*

### Project drawbacks

Very few drawbacks were identified, with those highlighted being emphasised as minimal. The two that were identified were: 1) most of the patients were new to the practitioners, meaning they may not have had the same rapport as the GP, however, it was agreed that this did not negatively impact the quality of care patients received; 2) occasional postponements in receiving patient summaries from GPs, meaning that ANPs could visit patients with no prior knowledge:

*“We do get the email beforehand that gives us their ECS and stuff, but sometimes there’s been a delay in getting that email. So you’ve gone in, you’ve not got the email through and you’ve had to spend a wee bit of time saying to the patient ‘what’s your past medical history?’ ... things you wouldn’t necessarily need to ask if you had that information in front of you” (ANP 2).*

### Implementation barriers and facilitators

Whilst there were limited barriers identified to implementing this test of change, the attendees did highlight three areas needing adapted that could jeopardise the scaling of this project should they not be addressed. Firstly, the ANPs typically worked out-of-hours (1800 hours onwards) at an enhanced hourly rate, whereas this project involved them working earlier in the day (1400-1800 hours). Whilst the majority of their hours were accumulated out-of-hours, meaning their pay enhancement still applied, they stressed that this was vital if they were to continue:

*“The way we had to do our shift pattern was so we didn’t lose our enhancements ... if we just did the day time we would be losing quite a lot of money which, for us, you think well what’s the benefit to us, because we’re providing you [the GPs] with a really really good service but we’re actually losing money” (ANP 2).*

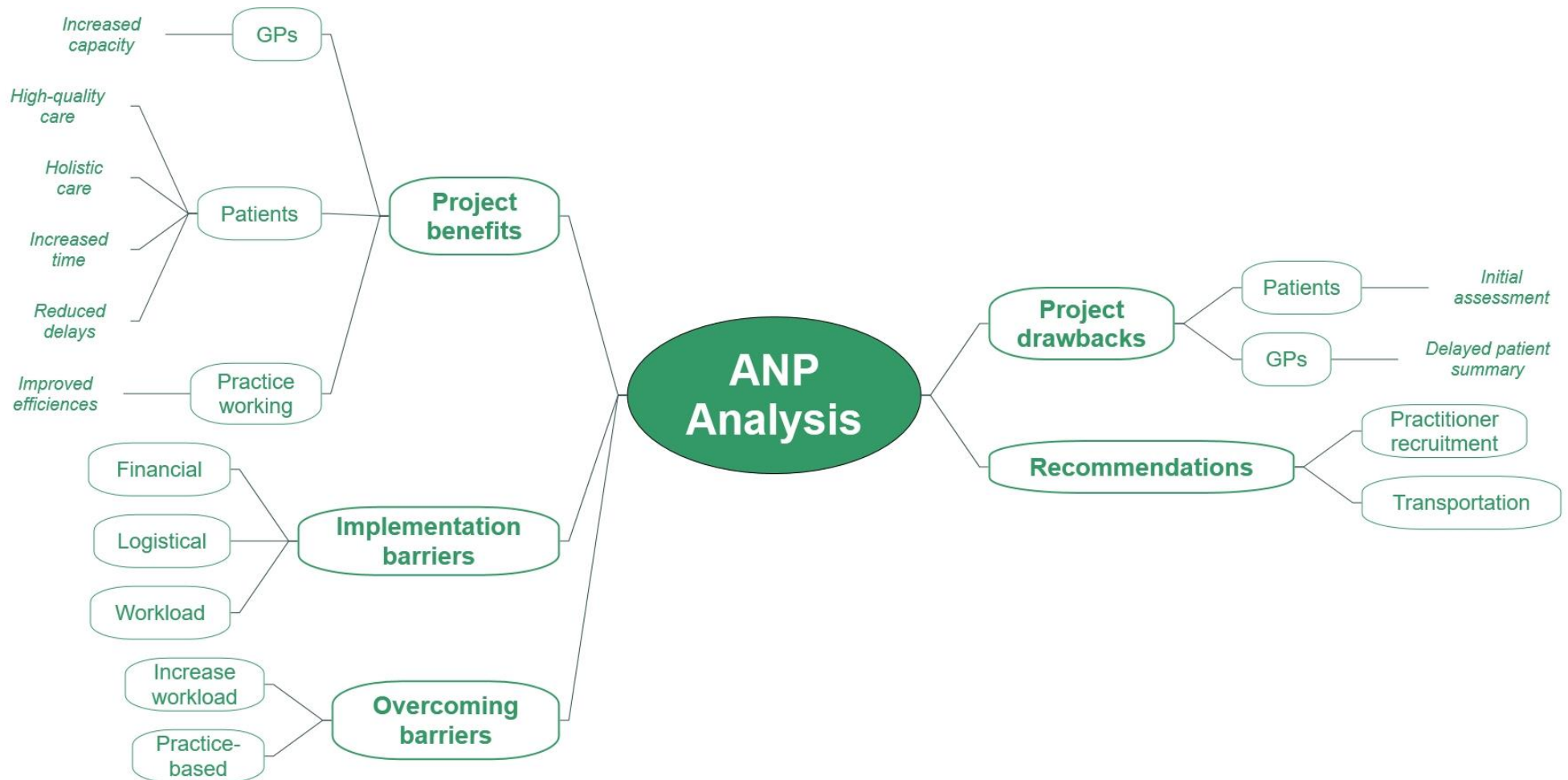


Figure 4. Synthesised mind-map of key ANP themes



ANPs suggested the possibility of being practice-based as a solution to increasing their workload, in addition to reducing pressure on practice staff.

### Recommendations

Two clear recommendations were provided to move this project forward. Firstly, the ANPs noted how valuable the function of the driver was in this service, allowing them to review medical history and write up patient summary notes in between visits. Also, due to the volume of equipment they carried to home-visits, it was more practical to keep this within the G-MED cars, as opposed to using their own vehicles.

Further, the issue of practitioner recruitment was also highlighted. Whilst it was acknowledged that hiring ANPs could be challenging, the attendees suggested that other professionals, including paramedic practitioners and district nurses, could be trained up to deliver this service:

*“I think some of them are frustrated [district nurses] that they don’t get to utilise those skills ... I think a lot of them would want to do something different” (ANP 1)*

### MSG objectives

#### Emergency admissions

Figure 5 shows the number of emergency admissions in the West Locality and Aberdeen City longitudinally compared with the projected numbers. Overall, the trend within the West Locality remains consistent with the projected numbers, with a slight spike visible during the winter months of 2017. Detailed projections per GP practice are available in Appendix 1.

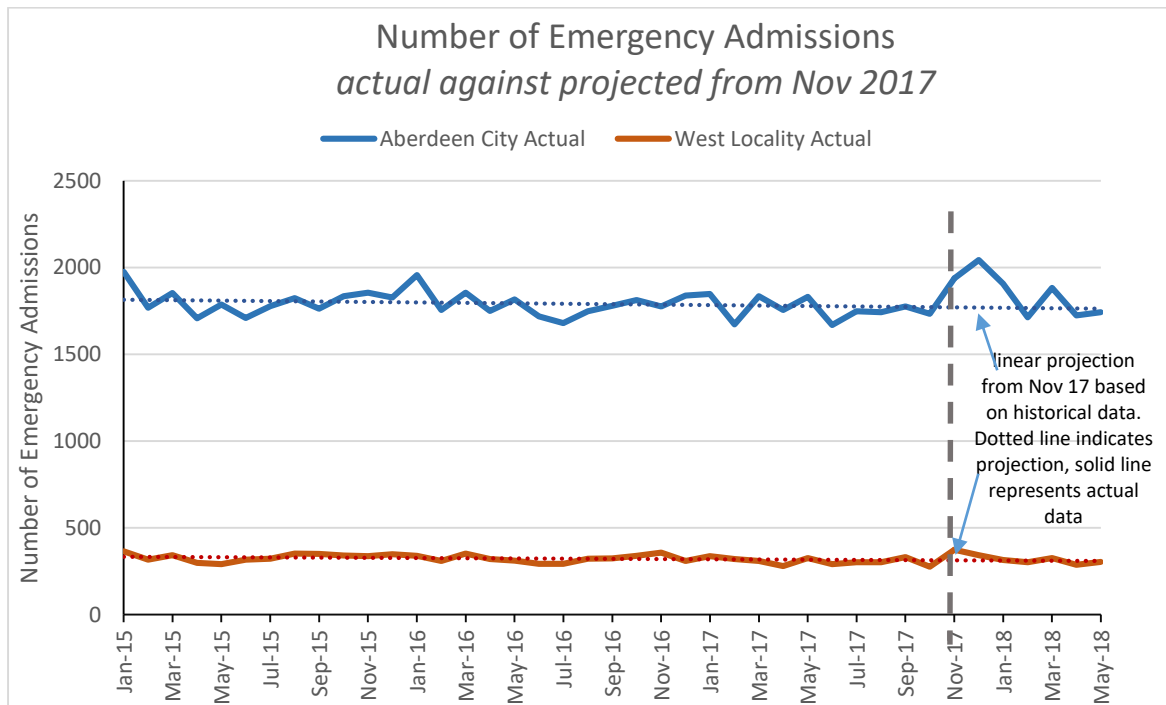


Figure 5. Number of emergency admissions actual vs. projected



### Emergency bed days

Figure 6 shows the number of emergency bed days in the West Locality and Aberdeen City longitudinally compared with the projected numbers. The trend within the West Locality remains consistent with the projected numbers before marginally decreasing from January 2018 onwards. Detailed projections per GP practice are available in Appendix 2.

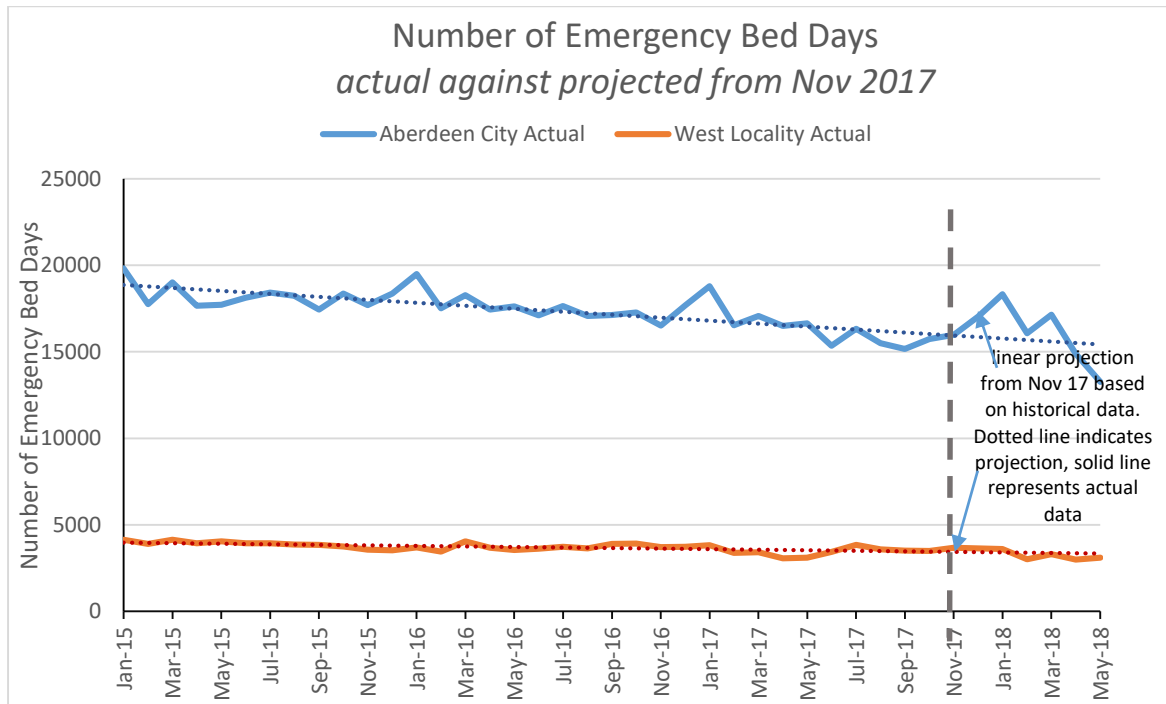


Figure 6. Number of emergency bed days actual vs. projected

### A&E attendances

Figure 7. shows the number of A&E attendances in the West Locality and Aberdeen City longitudinally compared with the projected numbers. Again, the trend within the West Locality remains consistent with the projected numbers, with limited deviation from the hypothesised figures. Detailed projections per GP practice are available in Appendix 3.

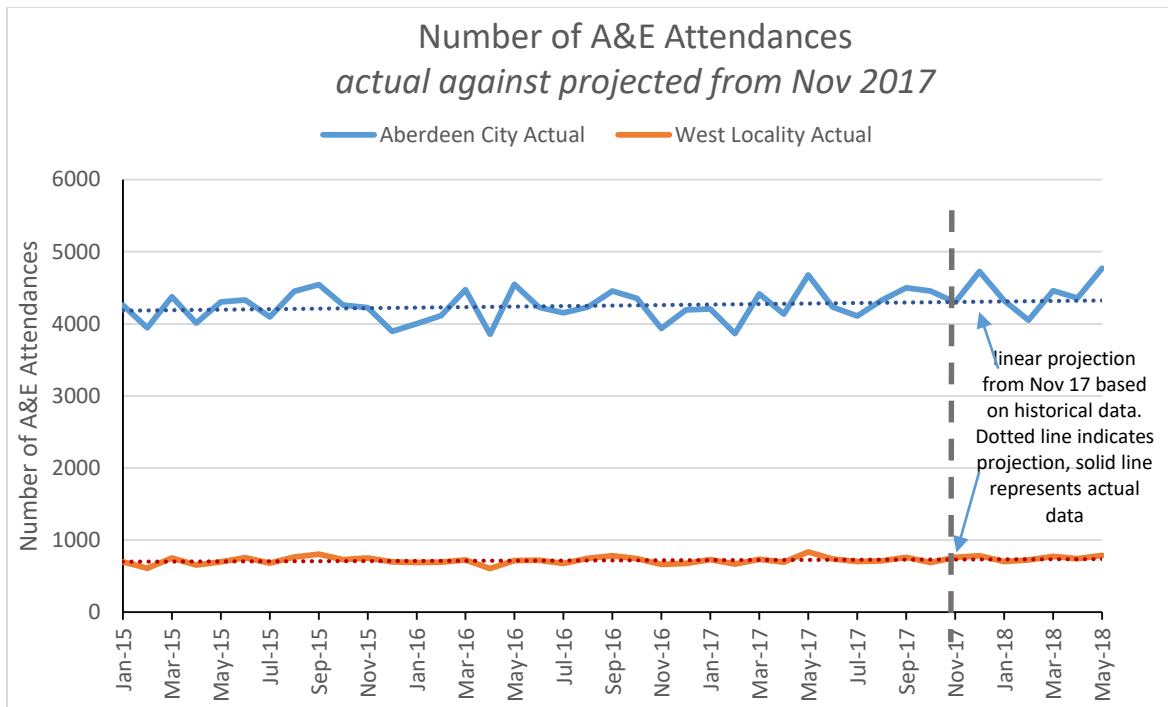


Figure 7. Number of emergency bed days actual vs. projected

## Discussion and recommendations

This report describes the evaluation of a new unscheduled care service delivered through an ANP resource within the West Locality of Aberdeen City. Over a 6-month period, the ANPs completed a total of 239 visits, with a project cost during this time of £16,315. It has already been noted that the total visiting time of ANPs has saved GP time equivalent to the cost of £6259.81, with £2340.21 travel time also being saved, meaning a total saving of £8600.02. Considering that these costs do not include other factors such as reducing waiting time for other patients and potential admission avoidance, it is likely that, from a purely financial perspective, this project provides considerable value relative to actual spend.

The qualitative findings from both GP practices and ANPs about their experience of the service were predominantly positive. GPs were able to provide examples of additional tasks they had been able to complete due to ANPs carrying out home visits (such as patient call-backs and administrative tasks) and there was a self-reported reduction in stress of all practice staff. Given the problems previously highlighted regarding GP retention, in addition to considering that 37% of GPs do not pursue full-time clinical work due to work-related stress, this service may play an important role in reducing staff turnover (and the associated costs) in primary care<sup>11</sup>.

From a practice perspective, the implementation of the project was well executed. In particular, mind-mapping participants commented on the ease of the referral process and clear communication with G-MED and ANPs when necessary. Initial implementation challenges of staff forgetting about the service were quickly overcome through increased familiarity, with one practice holding a briefing session with staff to alleviate this potential barrier. The most consistent improvement that was suggested across practices was to increase the service duration until 1800 hours, to provide additional

<sup>11</sup> Baird, B. et al. (2016). Understanding pressures in general practice. The King's Fund, London.





cover for the final proportion of the working day. This may help improve the sustainability of General Practice by alleviating pressures associated with late unscheduled calls, for example for practice staff with childcare needs. Additionally, the skillset and knowledge of the ANPs was regularly advocated by GPs, reinforced by previous systematic reviews showing that substituting physicians for nurse-led care may have positive effects on mortality, hospital admissions and patient satisfaction<sup>12</sup>.

This evaluation attempted to demonstrate the impact of the service on emergency admissions, emergency bed days and A&E attendances. The actual activity data appears to follow the linear projection trend line applied, with no significant decreases being visible. However, these findings should not necessarily be deemed as an absence of effect. The project duration reported on (six months) is relatively small and implementation occurred over the winter months, where spikes in the above indicators are typically prevalent. It is likely that longitudinal monitoring of these data is required to understand the full impact.

Given the positive findings presented within this evaluation, thought should be given about how to scale this project to other parts of the city. With a low referral rejection rate of just 0.8%, this would suggest that the current level of capacity outweighs demand. Therefore, one pragmatic way to begin to roll out this model may be to increase the number of practices within this service's catchment area in order to determine what the probable capacity of this current model is. As a second observation, two of the practices suggested that a multi-disciplinary team may be a valuable model to explore to deliver unscheduled care. Indeed, it is not always necessary for a GP to deliver home visits; one rationale behind the increasing usage of advanced practitioners to deliver this service<sup>13</sup>. However, there are opportunities to dove-tail this service with other transformative projects within the city, for example the Acute Care @ Home project, that consists of a multi-disciplinary team to avoid hospital admission and accelerate discharge of acute geriatric patients<sup>14,15</sup>. Given that the average age of patients visited here was high (79 years), this could be a natural extension of the service and would allow for further integration of care. Noting that several practices voiced their reluctance to pay for this service, the source of funding to scale this test of change is crucial towards its continuance.

## Acknowledgements

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<sup>12</sup> Martinez-Gonzalez NA. et al. (2014). Substitution of physicians by nurses in primary care: a systematic review and meta-analysis. *BMC Health Services Research*, 14(214).

<sup>13</sup> Scottish Government. (2018). The 2018 general medical services contract in Scotland. Scottish Government, Edinburgh.

<sup>14</sup> Shepperd, S. et al. (2016). Admission avoidance hospital at home (review). Cochrane database of systematic reviews, Issue 9.

<sup>15</sup> Goncalves-Bradley, DC. et al. (2016). Early discharge hospital at home (review). Cochrane database of systematic reviews, Issue 6.



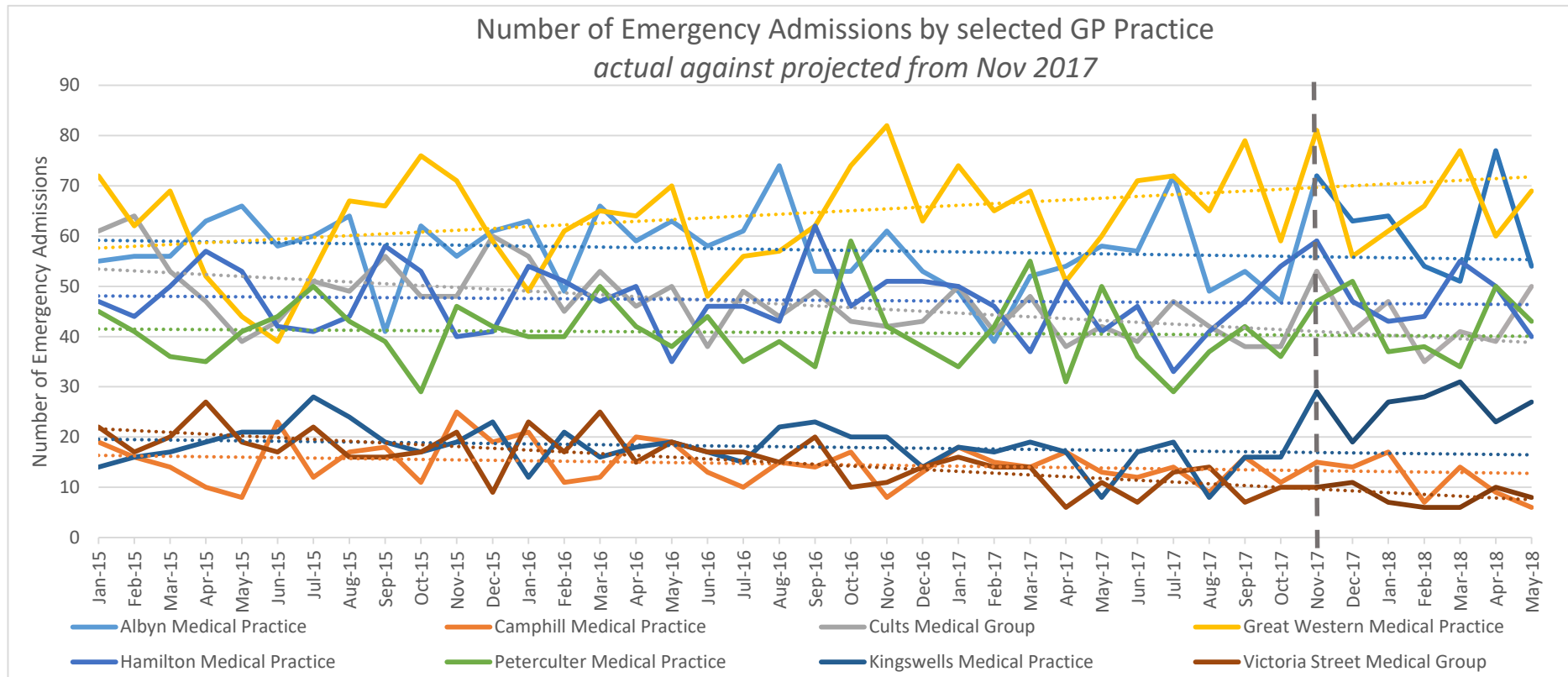
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## Appendix 1. Emergency admissions by practice actual against projected

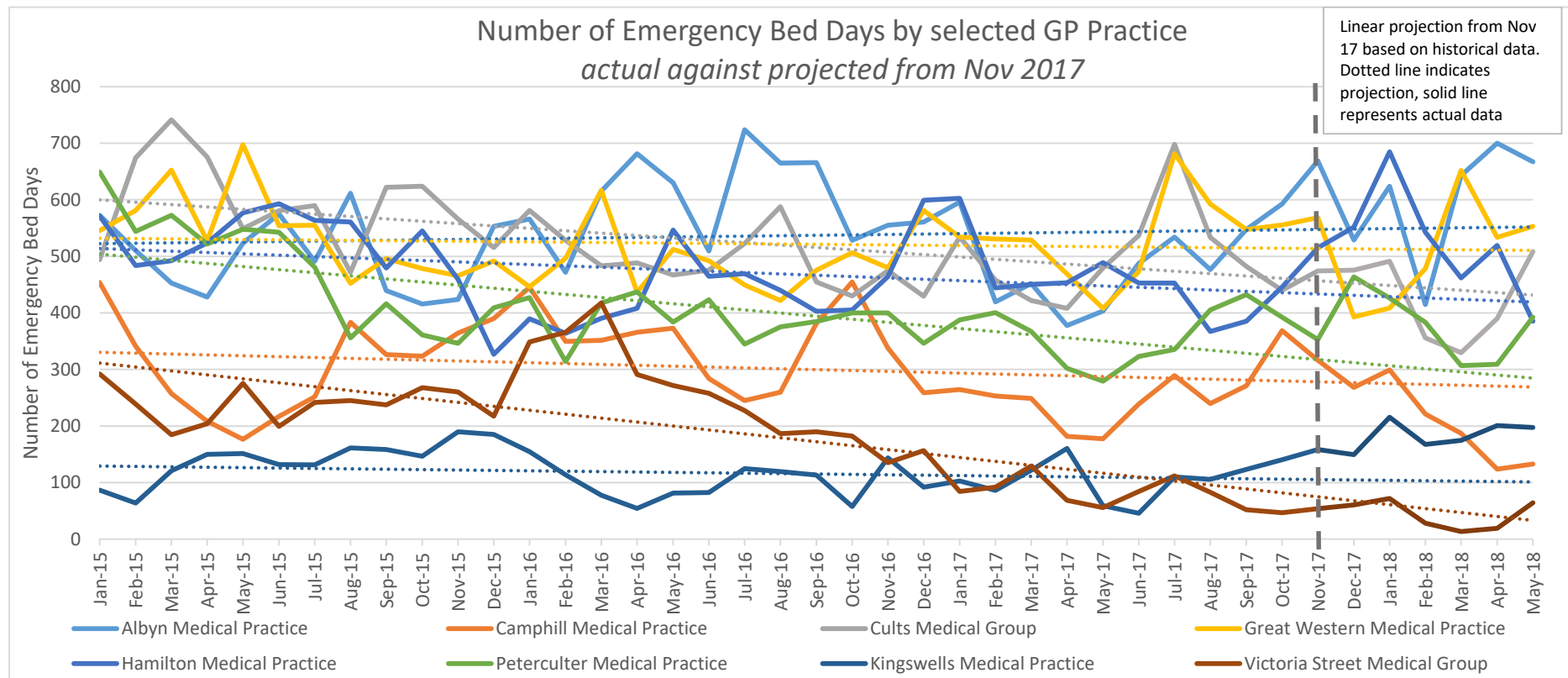
Note: Kingswells practice was formerly Victoria Street Medical Group, therefore data has been included for both practices.





## Appendix 2. Emergency bed days by practice actual against projected

Note: Kingswells practice was formerly Victoria Street Medical Group, therefore data has been included for both practices.





### Appendix 3. A&E attendances by practice actual against projected

Note: Kingswells practice was formerly Victoria Street Medical Group, therefore data has been included for both practices.

