An evaluation of the Elderly Care Advanced Nurse Practitioner, Kincorth & Cove Medical Practice

Introduction

In April 2015, due to the increasing elderly population and subsequent increased workload for GPs, the Kincorth and Cove Medical Practice recruited a full-time Band 7 Elderly Care Advanced Nurse Practitioner on a two-year contract. The purpose of the post was to assist GPs in the co-ordination of care for elderly patients (aged 65 and over) and liaise with other health professionals to provide continuity of care. The practice population has a similar age profile to the total Aberdeen GP-registered population but experienced a rise in the proportion aged over 65 in late 2014 (see Appendices I and II).

The practice had three main goals for the post: to support the sustainability of the practice, to improve quality of care for older patients and to reduce bed days in secondary care.

The Elderly Care Nurse's (ECN) duties include: triaging urgent calls related to elderly patients and if required visiting them in their own home; providing assessments in elderly patients' homes regarding health and/or environmental issues, enabling them to be as independent as possible in their own home and to anticipate and prevent clinical and social problems before they occur; signposting or referring elderly patients to the appropriate services; assisting in early identification of dementia; providing an in-reach service for elderly patients by tracking their progress in hospital and liaising with hospital staff to get patients discharged to their own homes earlier and safely. From the start her focus was on house-bound individuals.

The ECN role is likely to affect the work of GPs and other nurses working at Kincorth, including other advance nurse practitioners (ANPs) and practice nurses; indeed between April 2015 and February 2016 it was estimated by the practice that the work of the ECN had prevented over 260 GP appointments, a significant financial saving, as well as providing a greatly improved level of healthcare service for elderly patients. This evaluation was originally requested by the practice to assist in their decision about the future of the ECN post, but this has since been made permanent. Now it is hoped that this work will inform possible roll out of similar positions into other areas/localities.

Background

There is a growing body of evidence to support the development of nurse practitioner roles in primary care. A recent systematic review examined the safety and effectiveness of advanced practice nurses (APNs) working in primary care[1]. It found that the APN groups performed as well as family doctors in terms of clinical outcomes and patient satisfaction. The article drew its conclusions from seven randomised controlled trials (RCTs), mainly in Europe (Netherlands, 3; England and Wales, 2; North America, 2).

Results were mixed across studies regarding whether APNs ordered more diagnostic tests, and some evidence suggested APNs more frequently asked patients to return to the clinic after a consultation. APN consultations took slightly longer than physician consultations, but did not translate to overall increased costs. There was also evidence suggesting that APN patients required fewer total primary care visits, and that APNs demonstrated similar guideline adherence to physicians and provided more thorough patient education. Overall, APNs in these studies provided care that was in some ways different from care provided by physicians, but with comparable quality and at equal or lower cost.

A similar study, published a year earlier, examined 24 RCTs looking at the clinical effectiveness and cost of nurses working as substitutes for physicians in primary care, and had similar findings[2]. Despite the wide variety of settings, conditions, tasks and levels of clinical autonomy in the appraised literature, the review suggested that nurse-led care is associated with higher patient satisfaction, lowered overall mortality and lowered hospital admissions. Effects on other outcomes, such as quality of life and costs were found to be inconclusive.

A final study, completed locally in 2013, was based on 9 systematic reviews (containing some non-RCT studies) and had a wide remit that included ANPs[3]. The evidence, from the mainly European studies, suggested that for most outcomes nurse practitioners working as substitutes for physicians can achieve equal outcomes for patients. Patients were significantly more satisfied with nurse-led care compared with physician-led care, and nurses significantly reduced waiting times. Nurses ordered more tests and investigations and had longer consultations than physicians.

The national demographic changes combined with a growing shortfall of GPs means that making the best use of other professionals in primary care, particularly among the elderly population, seem a natural step. However, our review did not identify any studies focusing on ANPs working in a targeted way with this group.

Aims and objectives

The purpose of this evaluation is to provide local evidence on the effectiveness of the ECN in caring for the elderly in primary care. The main objectives from the practice's perspective are:

- to understand how practice has changed between practitioners (e.g. GP, practice nurse and ECN) and the effect it has had on individual workloads
- to assess the satisfaction of patients and their families with ECN care
- to understand the effect of the ECN post on other services and providers (e.g. hospital use, carers)
- to identify any aspects of the service that could be improved
- to consider the implications of extending this approach

Methods

Data were collected on practice workloads and on the uptake of secondary care by the practice population. Patient interviews were used to ascertain the acceptability of the service and patient satisfaction.

Data sources

- Activity data was gathered from GP IT system (Vision) and workloads were reviewed for GPs and ANPs. There were insufficient data on the system to review the ECN workload. Categories of work included home visits, surgery consultations, phone calls and administration.
- Referral data from Skystore and from Vision were reviewed.
- These sources were augmented with secondary care data from Trakcare and PMS (A&E attendances, hospital admissions, G-Med out of hours service) and the Scottish Morbidity Records data (emergency admissions)
- A small patient survey was conducted using telephone interviews to improve the understanding of the experiences, satisfaction and acceptability of care among recent patients of the ECN. Eligible patients were selected by the practice from the ECN's workload in a recent month chosen by the research team. The topic guide was based on the General Practice Assessment Questionnaire and the Patient Satisfaction Questionnaire see Appendix III.
- FTE estimates were obtained from the practice.

Data analysis

- Monthly data on GP and ANP activities, referrals and secondary/out of hours care for Kincorth patients were examined for trends 12 months before and after the ECN appointment.
- The patient survey was analysed thematically using transcripts from the telephone interviews.

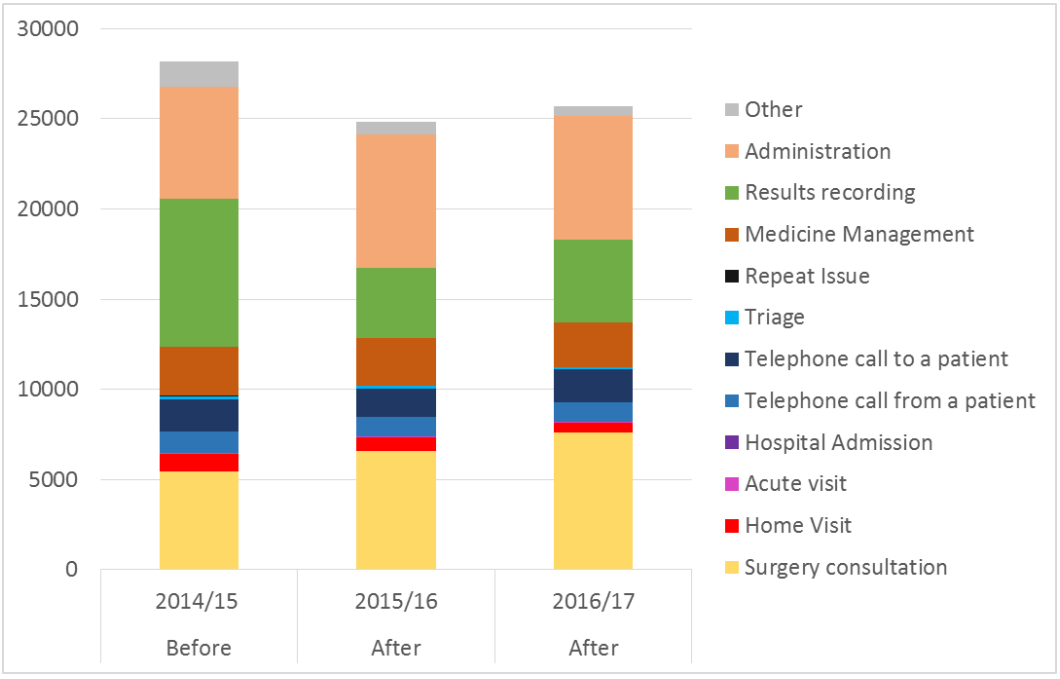
Findings

1. How have GP workloads changed since the ECN appointment?

- GPs are conducting more surgery consultations with patients who are over-65
- GPs are making fewer home visits to their older patients
- The total GP work activities associated with older patients has fallen
- Among younger patients the number of GP consultations and the overall related activities have both risen

Figure 1a shows that the overall GP workload among over-65s appears to have fallen slightly, comparing the 12 months before the ECN started (April 2014-March 2015) and the 24 months while she has been in post (April 2015-March 2016 and April 2016-March 2017). The main differences seen in the second and third years when the ECN is in position are: there were fewer home visits by GPs (538 in 2016/17 compared with 987 in 2014/15) and a higher number of surgery consultations (7,614 vs 5,455). There are also fewer results recording activities and slightly more administration.

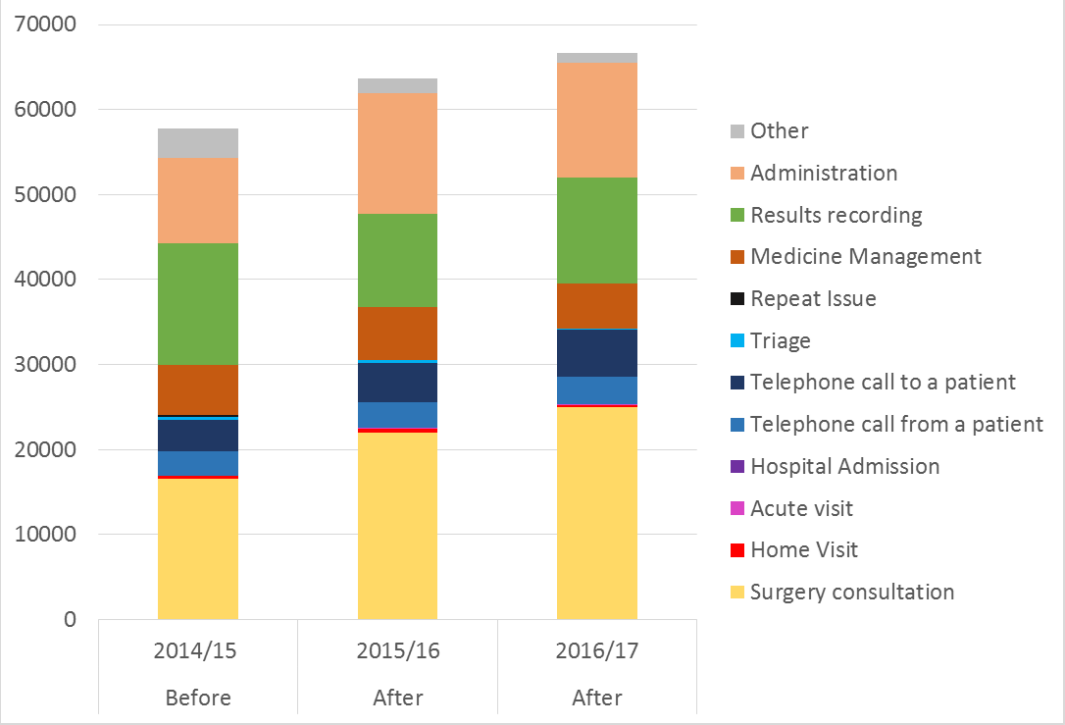
Figure 1a: GP workload[1] among over 65s before and after ECN appointment



[1]Note that in this workload estimation equal weight has been given to each activity recorded, so it may not reflect differences in time allocation.

There is an overall inverse pattern among the under 65s (see Figure 1b) with an increase in the total number of activities by GPs. However, as with the over 65s, the number of surgery consultations has risen from 16,610 to 24,999 while the number of home visits has remained fairly constant (275 and 251). The number of results recording activities has also dropped and the number of admin activities has risen.

Figure 1b: GP workload[1] among under 65s before and after ECN appointment

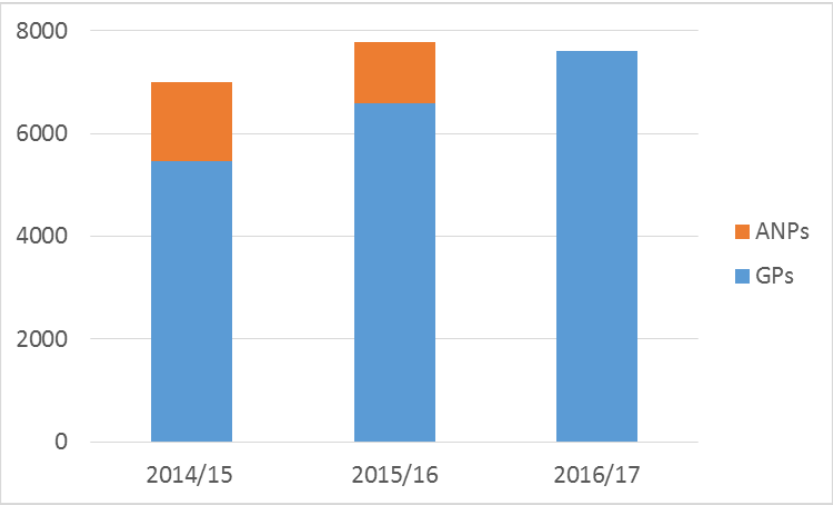


[1]Note that in this workload estimation equal weight has been given to each activity recorded, so it may not reflect differences in time allocation. Information on the duration of activities could not be used as fields were not consistently completed.

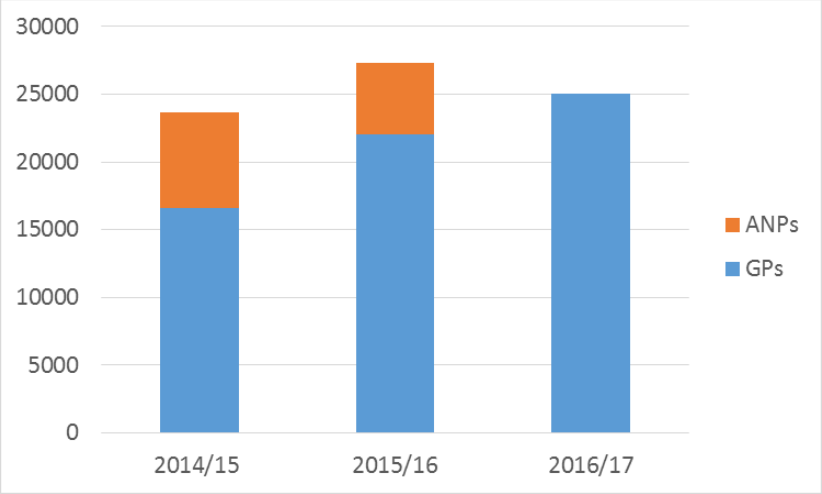
Feedback from the practice indicated that this increase in consultations was larger than expected, so further analysis looked at changes in all surgical consultations by GPs and ANPs (who see acute cases) combined (see Figure 2). This revealed a reduced increase in consultations as GPs covered the work of an ANP who had left and not been replaced.

Figure 2 Combined GP and ANP consultations

(a) Over 65s



(b) Under 65s



Over the period of this evaluation the number of GP and ANP sessions has decreased slightly as the list size has increased (see Table 1 below).

Table 1 Estimates of clinical sessions per week and list size

	GP sessions	ANP sessions	List size
1/4/15	70	11	11,959
1/4/16	72	9	12,540
1/4/17	70	9	12,533
26/9/17	68	9	12,623

2. Are patients and their families satisfied with ECN care?

- ❖ Access to ECN care was good
- ❖ Patient experience of care was very good (interpersonal skills, knowledge and skills, involving patients in their care)
- ❖ Most found the ECN was an appropriate provider of care

Fourteen patients were interviewed from the 15 selected by the practice. A total of 73 patients had been seen during February 2017, the month specified by the research team. The reasons given by the practice for excluding patients were mainly related to their physical and mental capacity. Some patients weren't included because the practice considered that the process might confuse them or worry them, and others had several medical conditions that meant it wouldn't be appropriate for them.

2.1 Access to care

All participants accessed care with the ECN by telephoning the surgery and either being put through to her immediately or leaving a message to which she responded by calling back very quickly to arrange to visit, usually that day or the next day, or at least within the week. All found the timing of these arranged visits acceptable and some reported that the ECN would visit spontaneously when she was in their area. All saw the ECN exclusively at home, with a variable number of contacts and frequency of visits (from once a fortnight to once every 3 months). Most said they are not able to go up to the surgery.

> *'When I phone I think I must be on a priority list because they come pretty quick'*
>
> *'She calls in even though I don't call her, she calls in.'*

From their responses it seems that the ECN encourages the patients to contact and gives each visit sufficient time.

> *'And sometimes she'll give me into trouble for nae callin' her earlier. I got me knuckles rapped.'*
>
> *'She always has enough time for my husband.' 'She's never rushing away'.*

Attempts to compare the level of access now to times before the ECN was in post proved unsuccessful as most of the patients had not required home visits for more than two years.

2.2 Experience of care

2.2.1 Interpersonal

Every patient interviewed reported high levels of satisfaction with the ECN's approach and her interpersonal skills.

> *'I'm very comfortable with her. You can talk to her about anything. Nothing is off limits. She makes you feel at ease. A very nice person.' 'She's so pleasant to talk to. She takes time to talk to you'*
>
> *'Very understanding. Nice bedside manner.' 'She's a gem.'*

'I'm putty in her hands. 'Affa nice and helpful.'

2.2.2 Knowledge and skill

Participants all expressed confidence in the ECN's knowledge and skills. They were reassured that she consulted with the GPs when she needed to, and several gave examples of this.

'She's up to speed with everything' 'Once [ECN] knows what the problem is she can do anything!'

'She keeps in touch with the doctor. Anything she's nae sure of she gets in touch with the doctor and comes back to me.'

'It was her that put my wife into the hospital…… I think she'd had a consultation with the doctor prior to coming here and she knew all what was happening.'

2.2.3 Involving patients in their care

All the patients were happy with the involvement they had in their own care. Most mentioned how the ECN listened to them and was good at explaining their conditions and treatments in a way they could understand.

'She simplifies things down. It's not all medical terms. It's brought into layman's terms.'

'She's very good. Answers all my questions. Can't fault her at all.'

Those who wanted to be involved in decisions about their care gave examples of how she had gone about this (e.g. discussing changes in medication or hospital visits); while others were content to allow her to make decisions.

'There's times I have to go into hospital and get things sorted, so there's times she'll put her foot down and say I have to gan, but she's nae bossy about it or nothing. She'll leave the decision to me.'

'There was time when she warned me I might have to go to hospital and I was "Oh no!", because I don't want to go to hospital if I can avoid it…but she said "Now if I say you have to go, you have to go", but in a nice way - we laughed about it. It would have to be on her say so. She is the one to decide, quite rightly, she knows best.'

2.4 Appropriate person

In response to questions about whether the ECN was the most appropriate professional to deal with their care there was a range of responses. Most were extremely positive:

I think she's absolutely outstanding. She's as good as a GP. It's better seeing her, you get a better talk with her, than you do with the doctor. You always feel with the doctor you've got ten minutes then get oot. She never says she's got 10 minutes, she never says 'I have to go'- never heard her say it yet.

['Is there time when you'd rather have seen a GP?'] *No I'd rather see her.*

Most had not needed this type of care before the ECN was in post so comparisons with previous care were not possible. Some comparisons were made with other health

professionals. Most of the positive comments related to the ECN's accessibility and interpersonal skills.

> *When you phone to speak to a doctor, it's a locum or duty doctor and they don't know you. She knows. That personal knowledge. Going back to 40/50 years ago when you only had the one doctor. [ECN name] picks up on it pretty quickly. I don't need to go over things with her 'cos she knows it!'*
>
> *'Give us more [ECN name]. I think it's a fantastic improvement.'*
>
> *It's a bit impossible to see your GP. I haven't seen my doctor for years*.

Some patients were more equivocal:

> *'I'm happy to see anyone so long as they're qualified.'*
>
> *'If something important happens, you just want someone to come'*.

Only one patient clearly stated that she'd prefer to see a GP. She wasn't sure why but thought it may be because of their greater knowledge and understanding. Several patients had seen the ECN (often for the first time) after requesting a GP visit but all these individuals reported satisfaction with the care they had received on these occasions.

Are there any aspects of the service that could be improved?

In the patient survey there were no explicit suggestions for improvement of the service, although all participants were asked directly about this. A couple of patients mentioned that the ECN was unable to prescribe, so this was taken back to the practice as a suggestion for the ECN to acquire a prescribing qualification. However the ECN is already a nurse-prescriber and the patient perception may have arisen due to inappropriate expectations that medication was required and/or the ECN seeking decision-support from colleagues at the surgery.

3. What effect has the ECN post had on other services and providers?

- There has been a decrease in emergency admissions to hospital among the over-65s
- A & E attendances have decreased for minor matters and increased for major
- Other out of hours contacts have remained stable
- Referrals appear to have increased considerably
- There is no evidence directly linking these changes to the ECN position

3.1 A&E

Among both age groups minor attendances appear to decrease and major attendances to increase after April 2015 (Figures 3a and 3b). This may be explained by a cultural change in attendance at A&E as the message to refrain from presenting with minor ailments gets through to the public. The changes are unlikely to be due to the ECN role. Although she has a role in prevention (e.g. falls, pharmacy) the small numbers involved are unlikely to make a visible impact on A&E attendance.

Figure 3a: Kincorth A&E Attendances among over-65s, April 2014-January 2017

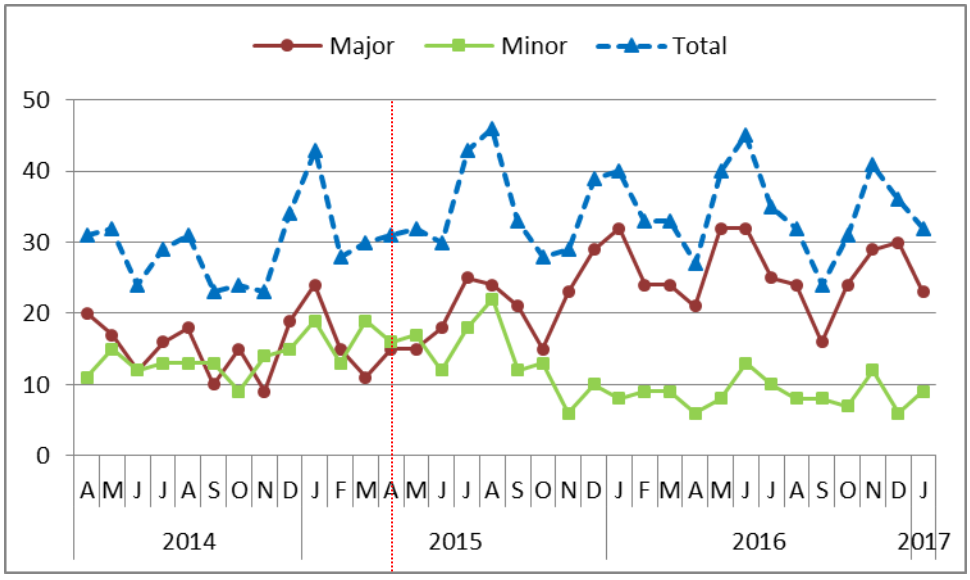
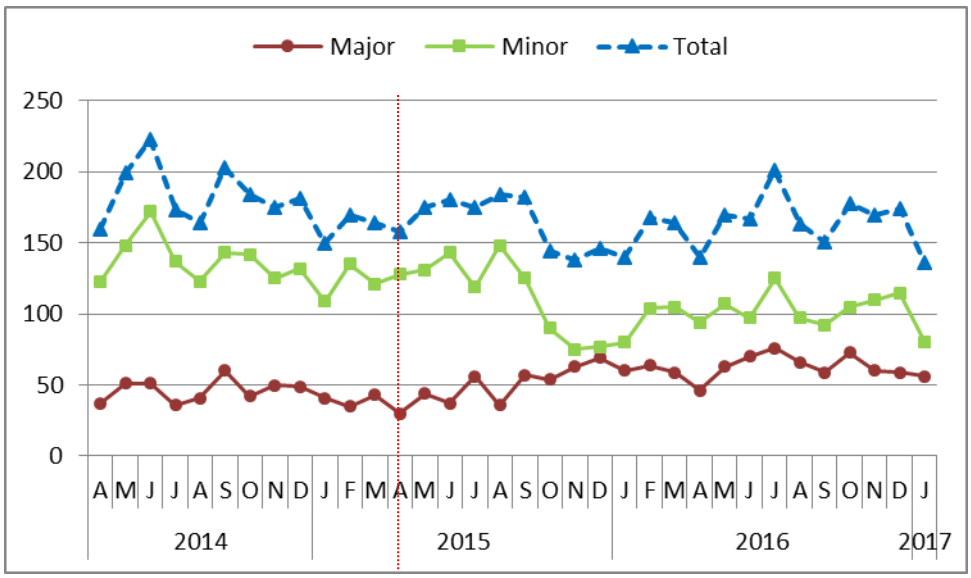


Figure 3b: Kincorth A&E Attendances among under-65s, April 2014-January 2017



3.2 Hospital admissions

Kincorth admissions are notably low and stable compared with other practices in the South cluster (see Appendix IV). The charts below show little change in the numbers of hospital admissions (Figures 4a) but a steady decline in the smoothed rates[1] of emergency admissions among the over 65s (Figure 4b).

Figure 4a: Kincorth Hospital Admissions for over-65s and under-65s, April 2014-January 2017

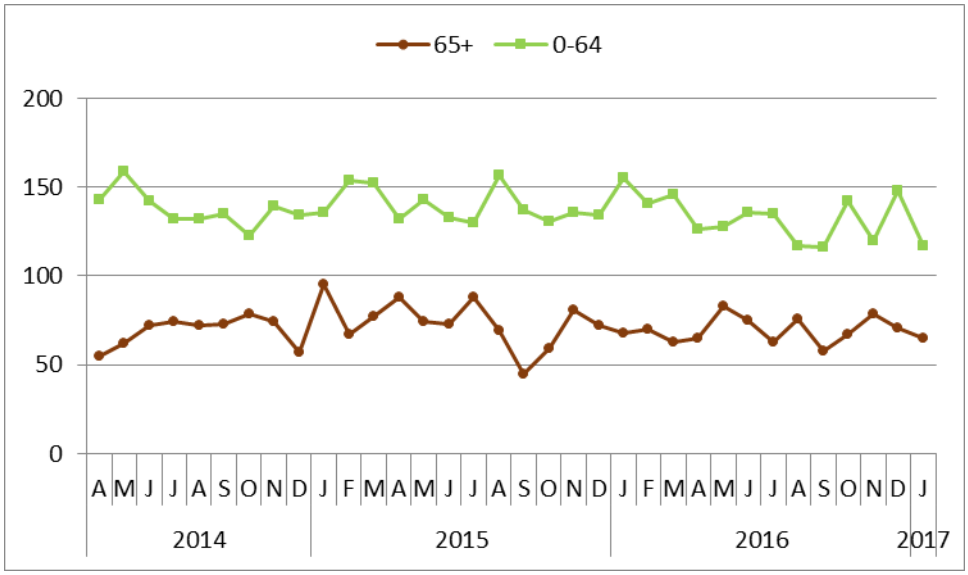
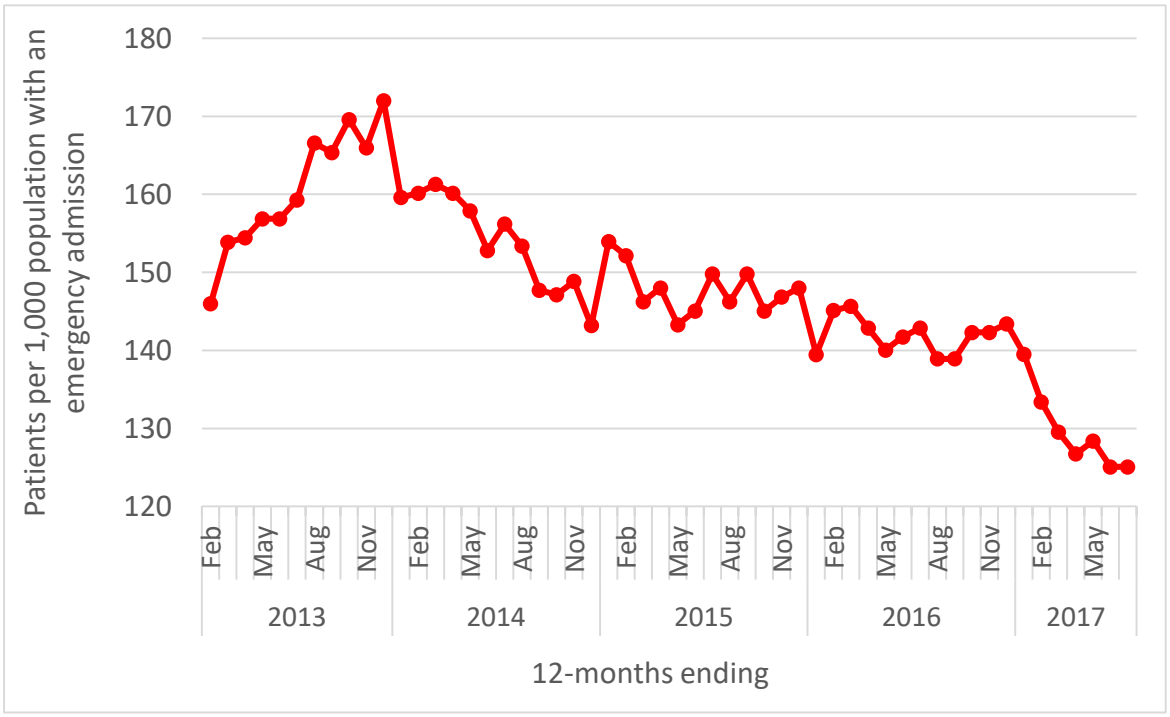


Figure 4b: Emergency admission rates for over-65s in Kincorth practice, Feb. 2013-June 2017

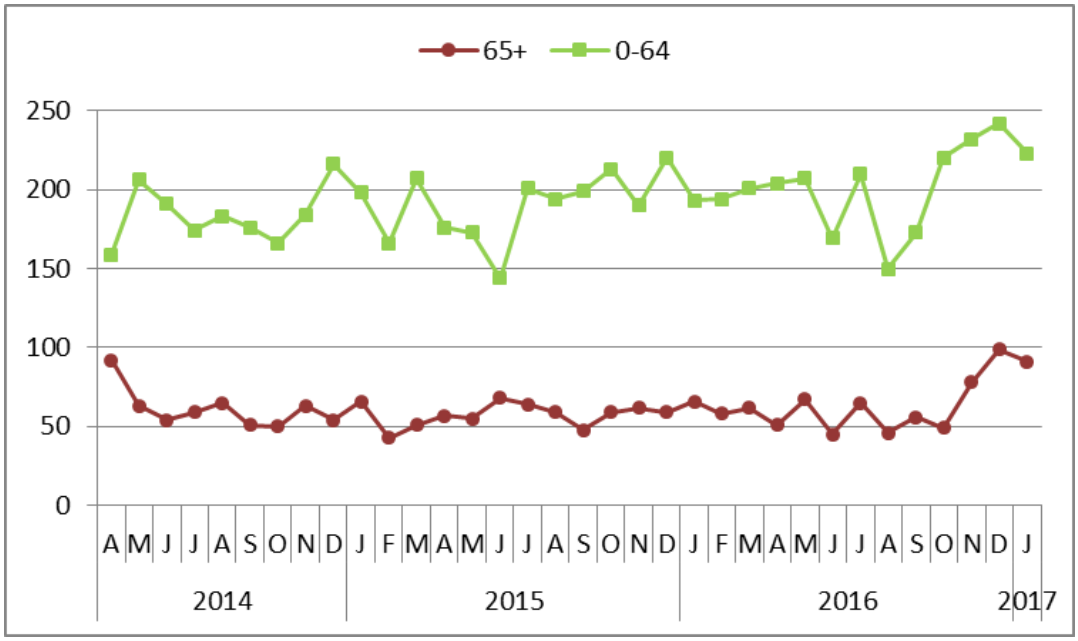


[1] Rates created using figures for the previous 12-month period. E.g. for April 2015 rate plotted using data from May 2014-April 2015

3.3 GMed contacts

Figure 5 shows there has been little apparent change in G-Med contacts by either the over-65s or the under-65s, apart from an increase in the last 3 months among the over-65s.

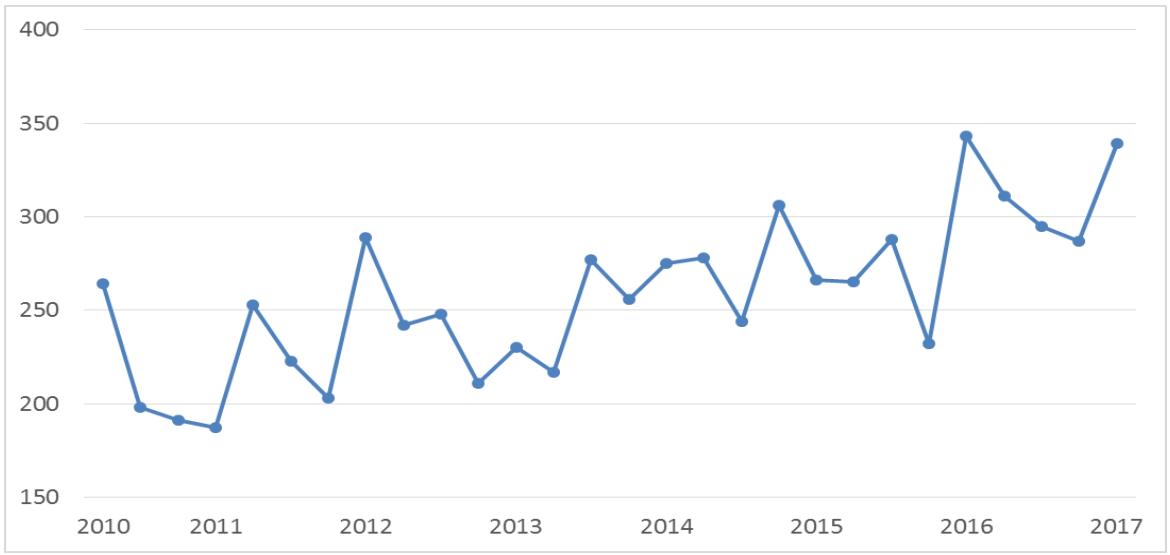
Figure 5: Kincorth G-Med contacts among over-65s and under-65s, April 2014-January 2017



3.5 Referrals made by the practice

There appears to have been an increase in the number of referrals made by the practice (Figure 6a). These data may not reflect anything about the ECN role as many of her referrals are informal, as part of collaborative working, and not recorded on the usual systems.

Figure 6a: Kincorth referrals quarterly among over-65s, April 2014-January 2017
(SCI Referral Database)



Discussion and recommendations

The Kincorth practice took an innovative step in establishing the ECN role in response to an ageing population. The practice has acknowledged its success by making the role permanent and now it is a model that health and social care partners may wish to consider in the light of ongoing GP recruitment difficulties.

The focus of the ECN role is on house-bound individuals, which often means dealing with complex health needs. In the current model the ECN is part of the existing workforce and not providing extra resource.

Considering what has been gained: the practice had three main goals for the post: to support the sustainability of the practice, to improve quality of care for older patients and to reduce bed days in secondary care.

(i) *Sustainability*. According to the practice, the work of the duty doctor has much improved since the introduction of the ECN and GP satisfaction has risen. Fewer house calls, mean that GPs have more time for surgery consultations with their rising patient list. Some complex cases can be passed directly to the ECN resulting in fewer house calls and subsequent time consuming follow-up for GPs. A review of the duty doctor dashboard shows how the list increases when the ECN is on leave, as her daily visits and phone calls fall to the GPs. There is also a suggestion that the ECN may make the practice more attractive to potential staff as the number of job applicants has risen and GP trainees are staying on. Although many factors are likely to be influencing these positive changes, all the Kincorth GPs support the continuation of the ECN role despite early mixed views on its usefulness.

(ii) *Quality*. We have not looked at quality indicators in this evaluation, but patient satisfaction has been explored and seems to support the ECN role. It also clear that the ECN provides an improvement in continuity of care for patients, with herself and through her with the GPs and the wider team. In the context of more part-time working among GPs, the full-time ECN can liaise and support links between patients and GPs. Her focus on elderly patients means that she is also able to build relationships and liaise with other services in a way that facilitates collaborative working and referral. Previously GPs had to fit liaison into their other tasks, but for the ECN this is an important part of her role.

(iii) *Bed days in secondary care*. While there was no examination of the number of bed days in this study, the emergency admissions rate has fallen considerably, although it is not possible to link this to the ECN role.

In addition an element has been identified of the ECN addressing a previously unmet need for carer support by taking on a role of communication and concern about their wellbeing.

Planned developments of the role aim to optimise services and give new challenges to the post-holder. There will be greater emphasis on preventive rather than reactive work, seeking earlier opportunities to intervene, in line with the Scottish Government's Reshaping Care for Older People programme[4]. Consideration also needs to be given to improving GP support for ECN decision-making and finding better ways to manage the ECN caseload, perhaps by handing patients over to other surveillance/support providers. The Kincorth ECN may also potentially provide support to other ANPs in the area.

The experience in Kincorth demonstrates that the implications of extending this approach may include an increase in relevant patient-centred care and a reduction in primary care costs. There is also the suggestion of a reduction in emergency admissions to hospital and that having an ECN makes a practice more attractive to prospective members of the practice team, both within the local area and further afield. For all these reasons, if more practices were to include an ECN in their team this could be used in promoting Aberdeen/Grampian for recruitment more widely in the NHS.

Limitations of the evaluation. The workload review gives only a snapshot of the situation at two points in time. We were not able to estimate changes in the time spent on different activities and limited to a comparison of the number of activities performed as timing data were not available. The data on the ECN activities were also difficult to access on the Vision system.

Strengths of the evaluation. These findings are derived from work using both qualitative and quantitative methods, and are consistent with the current literature.

Recommendations

- That the Kincorth and Cove practice continue to support their ECN position.
- That the HSCP are approached with these findings as part of making a case for ECNs. The demonstrated success of this Kincorth pilot may inform decisions about support for the introduction of ECNs in other practices.

References

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2. Martínez-González NA, Djalali S, Tandjung R, Huber-Geismann F, Markun S, Wensing M, Rosemann T. Substitution of physicians by nurses in primary care: a systematic review and meta-analysis. BMC health services research. 2014 May 12; 14(1):214.

3. Robertson L, Manson P, Hall S, Black C, Littlejohn C. Unscheduled care Evidence Group: Advanced Clinical Practitioners. University of Aberdeen 2013.

4. Scottish Government. Reshaping Care for Older People: a programme for change 2011-2021. http://www.gov.scot/Topics/Health/Support-Social-Care/Support/Older-People/Reshaping-Care

Appendix I Kincorth and Cove practice population age distribution

Figure 1a Age group distribution of practice population, 2014-2017 (numbers)

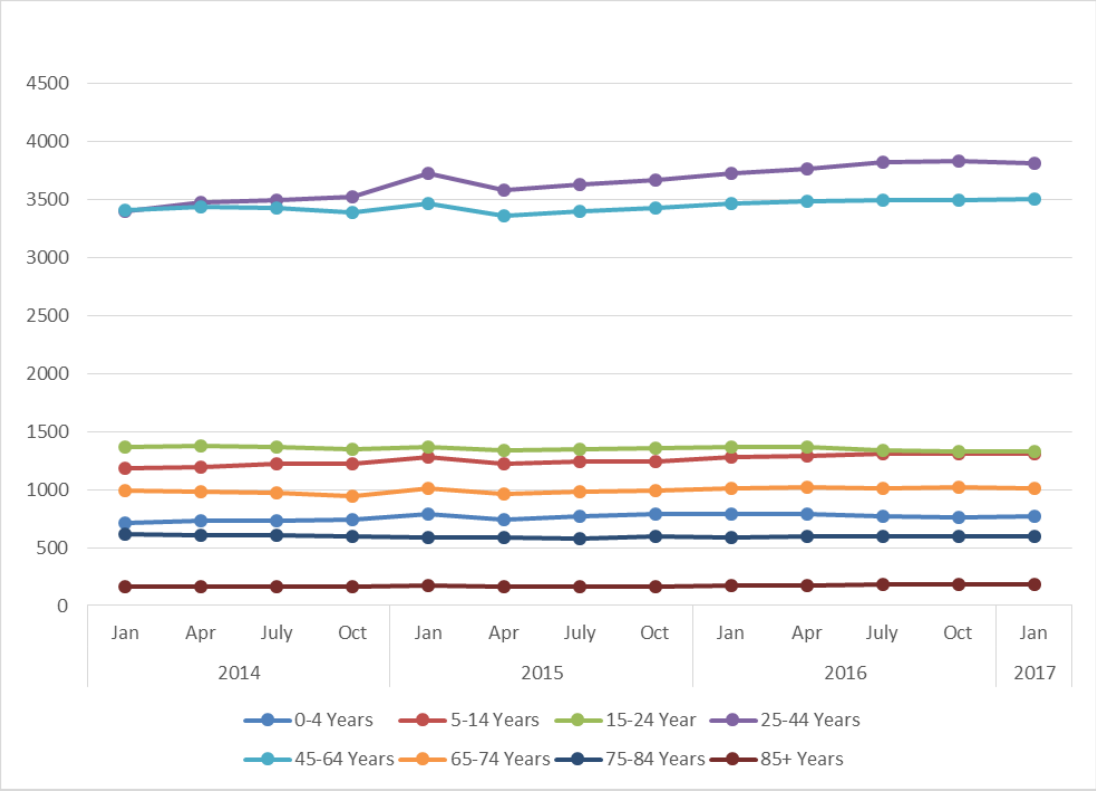
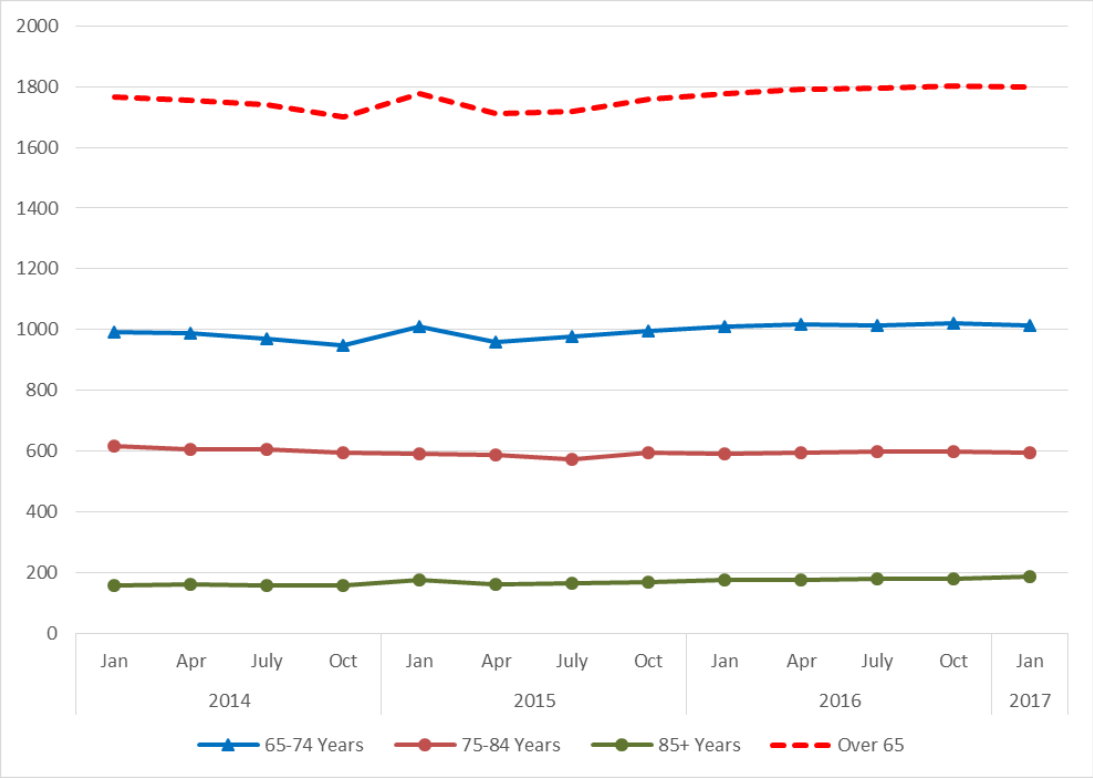


Figure 1b Age group distribution of over-65s practice population, 2014-2017 (numbers)



Appendix II Kincorth practice population compared with all registered in Aberdeen City

Figure 1a: Kincorth and Aberdeen City GP Registered Population by age category April 2016 (%)

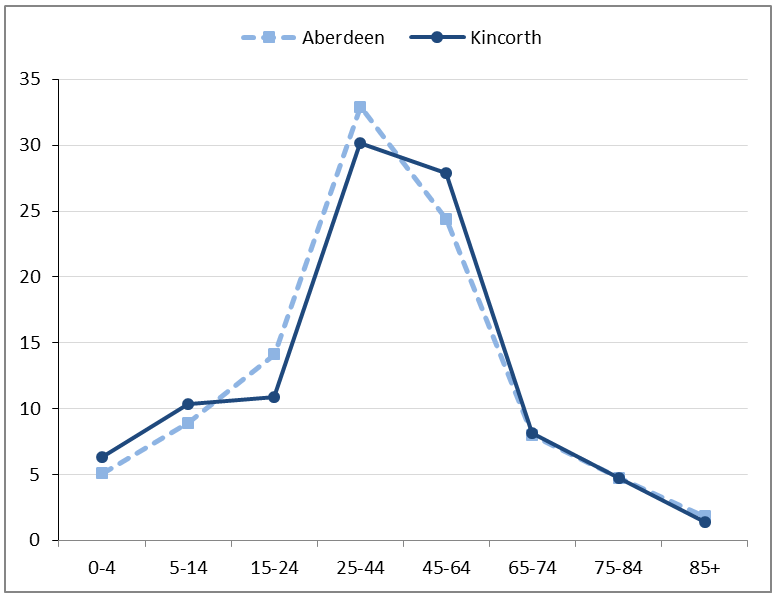
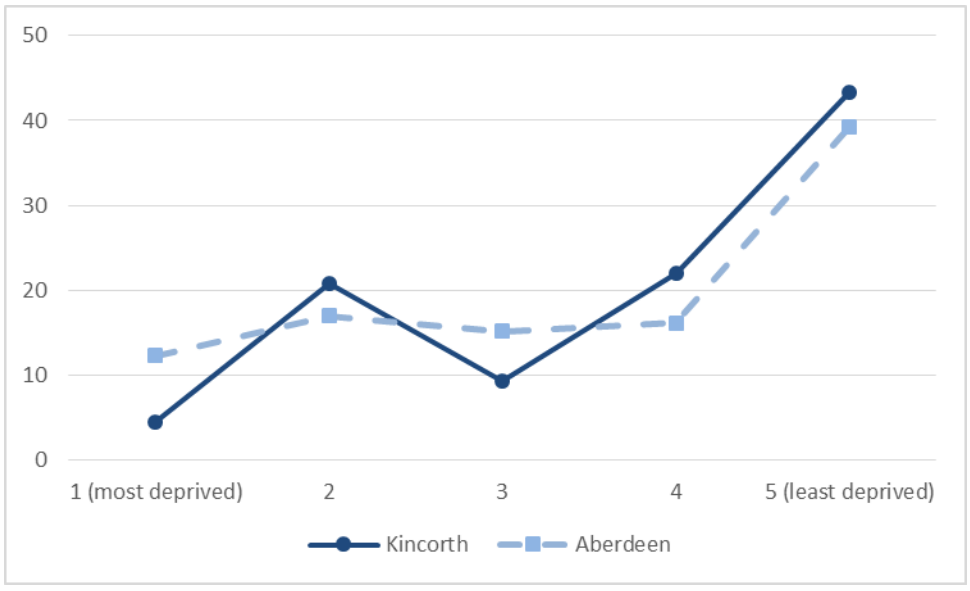


Figure 1b: Kincorth and Aberdeen City GP Registered Population by SIMD category April 2016 (%)



Appendix III: Topic Guide for patient interviews

Introduction:

Name, PHR with the NHS

Check they received a call from the GP practice in the last week informing them about the study

Check they understand what the interview's about and why they've been asked

Let the know that the report will go to the practice and may refer to what they say and may contain quotes but nothing will be identifiable as coming from them

Check if OK to record

Opening questions

As a starting point, I am just going to ask a few questions about how often you see Anne-Marie and the process for seeing her.

1. In the past 12 months how many times have you seen the elderly care nurse? [Anne-Marie Jackson – establish how to refer to her]

2. Do you usually see [the elderly care nurse] in your home or at the practice?

3. When you want to see [the elderly care nurse]:

What's the process for seeing her? How quickly do you usually get to see her? How acceptable is this?

4. How does your care with [the elderly care nurse] differ from the care:

You received previously before seeing her? You receive from other members of the team (e.g. GP, practice nurse)

Experience of care

In this section, I would like to get an understanding of what your appointments with Anne-Marie are normally like and how you feel about the care you get.

Additional prompts: tell me more about that/ why do you say that? /can you give me an example of what you mean?

Use previous experiences and care from other professionals as comparators when useful.

5. Could you tell me about what your interactions with Anne-Marie are like (including how [she] is with you)

How comfortable do you feel with her?

/Do you feel listened to?

Does you feel she treats you with respect?

/compassion and understanding?

6. How confident do you feel in her ability to treat you?

Does she seem to have all the information she needs to treat you?

/all the skills?

Do you feel you have enough time with [the nurse]?

7. How involved do you feel in your care?

Are you involved (as much as you want) in decisions about your care and treatment?

Does [the nurse] take account of the things that matter to you?

Does [she] talk in a way that helps you understand your condition and your treatment?

8. What's been good (if anything) in seeing [the elderly care nurse]?

/are there any advantages to you in seeing her rather than your GP or practice nurse?

9. What's been not-so-good (if anything) in seeing [the elderly care nurse]?

/are there any disadvantages to you in seeing her rather than your GP or practice nurse?

We are just coming towards the end so I just have a couple more questions

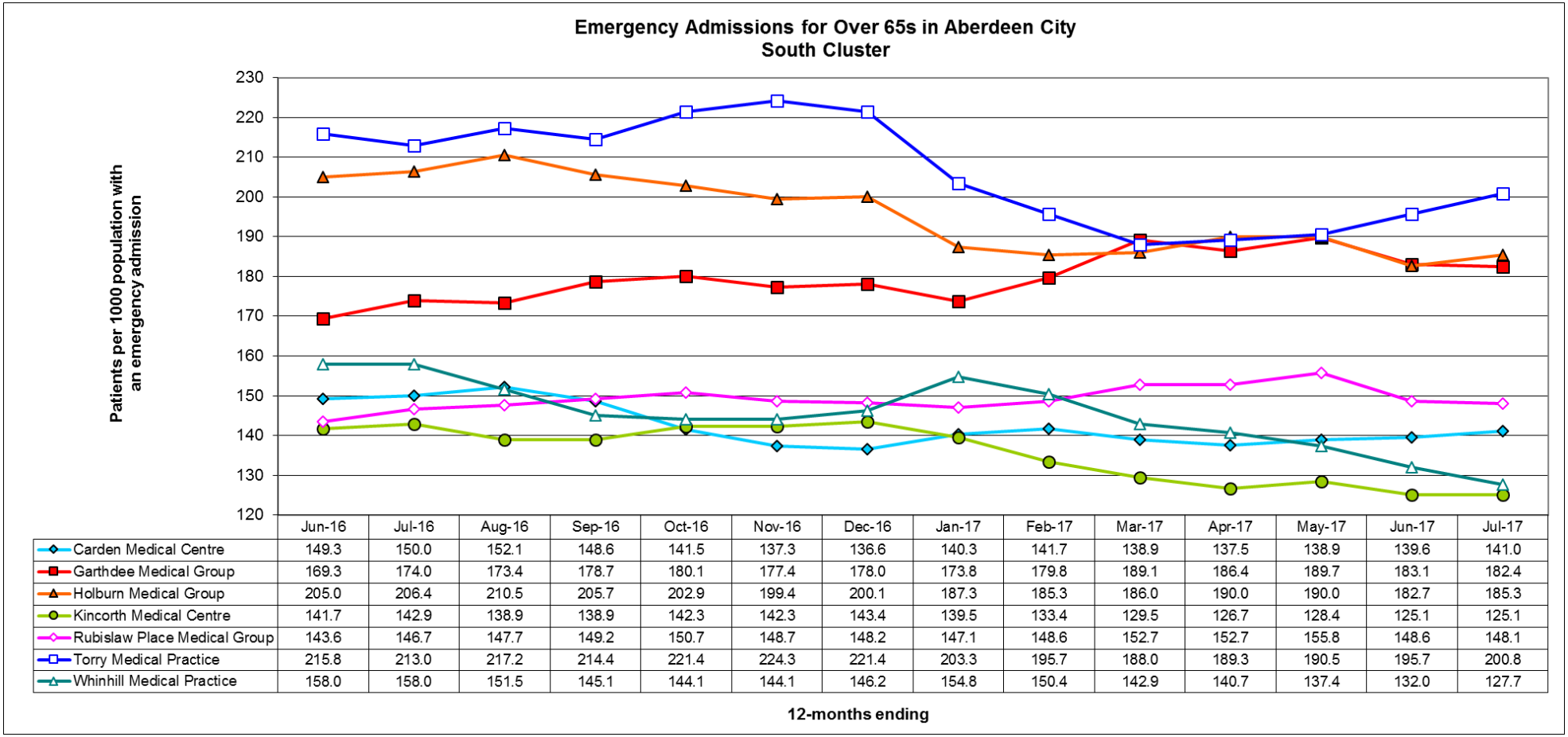
10. Thinking about your appointments with Anne-Marie in the last 12 months, do you feel that she has been the appropriate professional to deal with your condition(s) or have there been any times where you have felt that she has not been the appropriate person?

/Are there any occasions when you'd have preferred to see someone else? Reason?

11. To summarise, how would you rate your overall satisfaction with the care you receive from [the elderly care nurse] on a scale of 0-10 with 0 being very unsatisfied and 10 very satisfied.

12. Is there anything else you'd like to tell me about your experience with [the elderly care nurse]?

Appendix IV



	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17
Carden Medical Centre	149.3	150.0	152.1	148.6	141.5	137.3	136.6	140.3	141.7	138.9	137.5	138.9	139.6	141.0
Garthdee Medical Group	169.3	174.0	173.4	178.7	180.1	177.4	178.0	173.8	179.8	189.1	186.4	189.7	183.1	182.4
Holburn Medical Group	205.0	206.4	210.5	205.7	202.9	199.4	200.1	187.3	185.3	186.0	190.0	190.0	182.7	185.3
Kincorth Medical Centre	141.7	142.9	138.9	138.9	142.3	142.3	143.4	139.5	133.4	129.5	126.7	128.4	125.1	125.1
Rubislaw Place Medical Group	143.6	146.7	147.7	149.2	150.7	148.7	148.2	147.1	148.6	152.7	152.7	155.8	148.6	148.1
Torry Medical Practice	215.8	213.0	217.2	214.4	221.4	224.3	221.4	203.3	195.7	188.0	189.3	190.5	195.7	200.8
Whinhill Medical Practice	158.0	158.0	151.5	145.1	144.1	144.1	146.2	154.8	150.4	142.9	140.7	137.4	132.0	127.7