Towards A Geriatric General Practice

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BGS Amulree Prize Winner
31st August 2016
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1. Introduction

Sarah had been John’s carer for the last eight years. She was also his devoted wife of the past thirty. She got John out of bed every morning at seven, washed him, dressed him and fed him. By ten, Sarah’s council-appointed carer came to take John out for his morning walk. Chinwe had only thirty minutes to spend with John, but it was the most enjoyable part of her rushed day. It gave Sarah thirty minutes to prepare herself for the rest of the day and collect her thoughts. John was diagnosed with Pick’s Dementia on his 62nd birthday. The previous year, Sarah found that John had become more withdrawn and anxious. He was normally an extrovert, a great lover of 70s punk rock with an easy charm, still wearing leather jackets to the pub and daring his wife that he would buy a motorcycle. Now, however, he was quiet. He had developed a ‘tic’; constantly rubbing his hands. They made an appointment with their GP, only across the road. They had been patients there for decades, but rarely had need to visit. The doctor was a locum. “Probably age-related anxiety; have you thought about cutting down on the wine?”

A few months passed. John became more apathetic. He had good days where Sarah thought he was his “old self,” strumming his Fender Telecaster. But more often now, he would wander aimlessly about the house, his bedshirt mis-buttoned. The week before his 62nd birthday, they began driving to the countryside for a get together with old friends. Half-way through the muted two-hour drive, Sarah noticed John had wet himself. He looked pale, unwell. Awake, but not responsive, simply staring, glazed, into the distance. She drove to the nearest Emergency Department. “A UTI,” they said, “can sometimes cause confusion. We’ll admit him, what other medications is he on?” Sarah did not understand. “He doesn’t take any, we’re both completely healthy. How can an infection cause him to be so confused with no warning?”. That night on the medical wards, he became agitated. The Medical Registrar was called. She took one look at John and took Sarah to a quiet room. She took a detailed history of his health and behaviour over the last year. She returned to examine John. The Registrar was an SpR in Neurology and had just completed an MD in Neurogeriatrics. She confirmed Sarah’s fear that something was not quite right. By John’s 62nd birthday, he had numerous blood tests, a lumbar puncture, a CT and an MRI scan. The UTI now resolved, he was in
much better form. The Consultant neurologist came to deliver the news. Frontotemporal dementia. No possible treatment. Likely rapid decline.

John’s decline was rapid. Within two years he was bedbound, mute and completely dependent on Sarah. He was also still alive and still her husband. Sometimes he would smile when she played his old records. He always seemed perkier once Chinwe brought him back from his morning tour in the red wheelchair. This morning, however, he looked tired. He had not really touched his breakfast. Chinwe agreed with Sarah: he has a UTI again, the bane of her existence. John got them frequently since his diagnosis. Each time, she would ring the GP for an appointment to get some antibiotics. “Sorry, you need to call at 8am for an emergency appointment.” “It’s not an emergency, I just need the doctor to write a prescription for some antibiotics.” The times she did get an appointment, it was a different doctor each time. At first she’d bring John, when he could still walk. “I’m sorry, he’s too confused for oral antibiotic treatment, I think he needs to be admitted.” “No doctor, as I said before, he has dementia, this is his usual state.” Then she would run over the road without John. “I can’t prescribe if I can’t see the patient, I haven’t met him.” “I need a urine sample.” The experience was exasperating. The last time she allowed John to be admitted via A&E, they had waited so long on a trolley that he got pneumonia from the waiting room. She had resolved to keep him out of hospital as much as possible, but it felt as if all forces were against her. She could never get a home visit. She could not get rescue antibiotics. She could never get an appointment with John’s “named” GP and the consultant neurologist saw John only once a year. A simple infection could ruin Sarah and John’s otherwise serene daily existence that she had planned so carefully.

This was the story of one of my patients when I worked as a HCA at a large GP practice in South London. The GP practice tried to stay true to the old partnership model of continuity of care, but in the two years I worked there, three partners retired early due to burnout, we lost two trainees to Australia and those that we could hire and retain wanted to be part-time salaried GPs. At the same time we had upwards of 15 new registrations a day and an average wait of two weeks for a routine appointment. A gargantuan private residential care home with 60 flats for elderly patients with multiple co-morbidities opened on our doorstep and almost caused a crisis in the partnership as the care home owner expected us to take all the new patients. There was absolutely no coordination with us or the CCG. It took almost a month of
home visits for the doctors to even get the necessary clinical information to re-prescribe dossett boxes.

To tackle the shortfall in access and continuity, SLIC was set up. Southwark and Lambeth Integrated Care was a partnership between three local NHS Hospital Trusts (Guy’s and St Thomas’, the Maudsley and King’s College Hospital), Southwark and Lambeth CCGs, Southwark and Lambeth local authorities and people in Southwark and Lambeth, funded by the Guy’s and St Thomas’ Charity. Its vision was “pro-active integrated care and joined up services”. I provided one of SLIC’s largest projects for our practice, the Holistic Assessment. HAs were home visit meetings with our older, iller patients to “identify their health, social care, mental health, benefits and housing needs, as well as a focus on self-care and support.” It amounted to a lot of documentation and sign-posting, without, I believe, any real impact of the realities of their care.

What our elderly patients really needed was faster and more regular access to named doctors who knew their histories. What they wanted was continuity and a focus on their social needs, coordinated, efficiently planned care and support to look after themselves. This essay is a response to my experience of primary care falling short. The way to achieve better primary care for all patients is to move towards a Geriatric General Practice. Geriatric General Practice (GGP) is a form of specialist general practice, defined as the provision of intensive, prevention-focussed, primary care catering exclusively for elderly patients with multiple chronic comorbidities. At its core is the idea that primary care should be organised around groups of patients with similar needs rather than around professionals with similar skills.

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1 Integrating Care in Southwark and Lambeth: What we did and how we did it, SLIC, p21
2. The State of General Practice

Although unrecognisable from its origins as a cottage industry at the foundation of the NHS in 1948, the essential model of General Practice is largely unchanged. General Practices are independent businesses, centrally contracted to provide primary care to a registered panel of patients. Yet, while the consulting room atmosphere remains unchanged, the world around it is utterly different. Patient needs—and expectations—are very different from those for whom the system was built.

GPs are seeing more patients, more frequently than ever. There were an estimated 372 million consultations in 2014-2015\(^2\), up 40% on the previous ten years, and ten times the population growth in the same period. Consultation rates are up too: from an annual average of five times in 2004/5 to seven times today\(^3\). Yet the number of GPs has increased at only half the rate of their hospital colleagues in response to this rocketing demand\(^4\).

The manner in which patients use GPs has also changed drastically. A quarter\(^5\) of appointments could have been conducted by another professional, whilst half were for patients with complex chronic conditions\(^6\). There is a clear split between younger patients demanding rapid access, expecting to interact with services through technology, outside of usual operating hours, and older patients requiring continuity, integration and co-ordination. Almost two-thirds of under 65s want same day appointments, compared with less than half of over 65s\(^7\). A third of 18 to 44 years olds felt that usual opening hours (8am to 6pm, 5 days a week) were inconvenient, compared with just 4% of over 75 year olds\(^8\). And two-thirds of 18 to 74 year olds without a long term condition did not value a preferred GP, against three-quarters of those aged over 75 who did\(^9\). Practices are thus caught between a rock and hard place; attempting to balance quick access to appointments for the healthy many against ensuring continuity for the older, iller few. All whilst demand rises inexorably.

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\(^2\) Stocktake of access to general practice in England, National Audit Office, (2015) p.4
\(^6\) Long Term Conditions Compendium of Information, Department of Health, (2012), p.2
\(^7\) Stocktake of access to general practice in England, National Audit Office, (2015) p.30
\(^8\) Ibid, p.35
\(^9\) Ibid, p.37
To add insult to injury, GP funding has fallen significantly, from 10.3%\textsuperscript{10} of NHS spending in 2004/5 to 7.3%\textsuperscript{11} in 2014/15. In cash terms, spending has fallen from £8.5 billion in 2004/5 to £7.3 billion in 2014/15. All the starker when one considers that 90% of all healthcare encounters in the UK occur within General Practice.

The stage has thus been set for a perfect storm in General Practice. Massively increased demand, greater patient complexity and rising treatment expectations are pitted against sluggish growth in GP numbers and precipitously falling expenditures. GPs themselves have been raising the alarm for some time. As early as 2011 Dr Michael Dixon, of the NHS Alliance, warned of unsustainably large practice lists in deprived areas. The year before that the Royal College of General Practitioners called for a “radical review” of out-of-hours care after the Ubani scandal\textsuperscript{12}. More recently, the Nuffield Trust asked if General Practice was “in crisis”. GPs answered\textsuperscript{13}: almost a fifth of GPs over 60 are planning on leaving the profession. Even younger GPs are joining them, with more than 15% of GPs aged 55-59 saying they will leave, three times the number ten years ago. Recruitment is falling too: GP training was oversubscribed in 2010/11. It has fallen every year since to 88% take-up in 2014/15\textsuperscript{14}. 70% say General Practice needs “fundamental reform,” almost two-thirds find the job “extremely stressful”\textsuperscript{15}.

Reform of General Practice has become the hot topic in health services research over recent years. Prestigious think tanks have weighed in; the Nuffield Trust calling for federations and super-partnerships\textsuperscript{16}, the King’s Fund making the case for local innovation\textsuperscript{17}. Centre-right lobby group Reform believes contract reform and competition are the answer\textsuperscript{18}, corporate accountants Deloitte say simply that more funding is required\textsuperscript{19}. All ring the bell for “integrated care”. The Government finally responded with its GP Forward View, published in

\textsuperscript{10} Under Pressure: the funding of patient care in general practice, Deloitte, (2014) p.1
\textsuperscript{12} RCGP calls for 'radical' review of OOH care. Pulse (2009)
\textsuperscript{13} Stocktake of access to general practice in England, National Audit Office, (2015) p.47
\textsuperscript{14} Ibid.
\textsuperscript{15} Primary Care Physicians In Ten Countries Report Challenges Caring For Patients With Complex Health Needs, Health Affairs, (2015), p.7
\textsuperscript{16} Securing the future of general practice, The Nuffield Trust, (2013), p.4
\textsuperscript{17} Co-ordinated care for people with complex chronic conditions, The King’s Fund, (2013), p.5
\textsuperscript{18} Who Cares? Future of General Practice, Reform, (2016), p.3
\textsuperscript{19} Under Pressure: the funding of patient care in general practice, Deloitte, (2014) p.10
April of this year. It pledged more money and more GPs. But on closer inspection, it only pays lip service to model reform. As Director of Policy at National Voices, Don Redding, points out, this is a bandaid for a bullet hole:

“The running assumption that more demand means ‘more clinicians’ betrays the fact that these are (welcome, but) limited adaptations to the traditional model, not a redesign.”

And yet almost all the domestic literature on reform falls prey to the same entrenched idea: that General Practice need be organised around groups of professionals with similar skills. This paper calls for something more radical: the fundamental reorganisation of General Practice around groups of patients with similar needs.

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20 Plugging holes in the crumbling plasterwork of GP practices, National Voices, (2016) p.1
3. The Need for Reform

The need for reform is clear. The need for a Geriatric General Practice is even clearer. The biggest driver of pressure on General Practice is the rise in elderly, frail patients with multiple co-morbidities. Patients over 75 make up a fifth of consultations to GPs, despite only accounting for 8% of the population at large. Those over 65 account for a third of appointments. This group is expected to grow by 38% in the next ten years. These patients also visit their GP the most, with over 75s seeing their GP on average ten times a year, double the figure in the 1990s and double that of their younger counterparts.

It is not just patient volume putting pressure on GP services, but complexity. Half of all GP appointments are taken up by patient with at least one long term condition. Multi-morbidity rises with age: 15% of 25-29 year olds have one long term condition, the same number of over 75s have three or more. Almost two-thirds of over 65s have one or more long term conditions. Patients with multi-morbidity account for almost four-fifths of GP appointments, a group expected to grow from two million in 2008 to three million in 2018.

The one-size-fits-all model of General Practice as it stands is not responding to this growing, complex group of patients, whilst continuing to manage the increasing expectations of the non-geriatric population. We know that these patients experience a highly fragmented service, leading to sub-optimal care, outcomes and costs. Indeed, the pressure on capacity is bleeding into satisfaction in access and care. The number of patients reporting a poor experience in making an appointment increased by a third in the last five years. This is of particular concern for frail elderly patients, where avoidable hospital admissions can cause more harm than good. In 2012-13, an estimated 5.8 million extra A&E appointments were used after patients were unable to get a GP consultation. Given that a GP appointment costs

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22 Long Term Conditions Compendium of Information, Department of Health, (2012), p.4
24 Epidemiology and impact of multimorbidity in primary care, British Journal of General Practice, (2011), p.4
only a fifth of an A&E consultation, this amounts to almost £1 billion\textsuperscript{29} in mis-allocated expenditure, a staggering figure when compared to the dwindling GP budget alone. This Scottish GP sums up the difficulties primary care doctors are facing across the country:

“Another example – an 87-year-old with mild dementia who falls at home and is found to have a chest infection on home visit. I know she doesn’t need admission and could stay at home with adequate provision from the appropriate community team. For years, time and time again, the experience seems to be the same – several phone calls, a visit for assessment agreed, patient found not to meet some criteria, patient ends up in hospital anyway – a result that I could have achieved at a fraction of my time. I am left feeling that the NHS and social services seem to have become a National Assessment Service, rather than a service to deliver care\textsuperscript{30}.

Despite the rhetoric of shifting care out of hospitals, initiatives to provide “integrated care,” “joined up” or “care co-ordination”\textsuperscript{31} services are patchy, bureaucratic and often amount to window dressing, despite best intentions. For example, the King’s Fund paper, \textit{Co-ordinated care for people with complex chronic conditions}\textsuperscript{32}, lauded the work of five innovative care co-ordination programmes across the UK, such as Oxleas’s Advanced Dementia Service and the South Devon & Torbay Virtual Wards project. All five projects had positive impacts on their patient groups, from reduced A&E admissions to improved quality of life scores. However, the report warns that such localised projects simply cannot be scaled to national need and take many years to get off the ground\textsuperscript{33}. As Arvind Madan, national director from the innovative Hurley Group, argues “for GPs to believe in a better future we must first start to feel the impact of changes now”\textsuperscript{34}.

The pressures on General Practice will not be alleviated by a mushrooming of bespoke integrated care projects. The weight of evidence suggests that many programmes do not

\textsuperscript{29} Who Cares? Future of General Practice, Reform, (2016), p.24
\textsuperscript{30} Integrated Care Report, Deep End (2012), p.21
\textsuperscript{31} All together now: a conceptual exploration of integrated care, Healthcare Quarterly, (2009), p.6
\textsuperscript{32} Co-ordinated care for people with complex chronic conditions, The King’s Fund, (2013), p.24
\textsuperscript{33} Ibid p.27
\textsuperscript{34} Plugging holes in the crumbling plasterwork of GP practices, National Voices, (2016) p.1
achieve their objectives; their failure rate is high\textsuperscript{35}, their effectiveness is mixed\textsuperscript{36, 37}, and that ‘whole-system’ approaches (i.e. the Department of Health’s integrated care pioneer programme) have not necessarily led to effective care co-ordination strategies at the service level\textsuperscript{38}.

Furthermore, whilst the King’s Fund considered the likelihood of such programmes delivering cost savings “low”\textsuperscript{39}, all five projects felt vulnerable to funding priority shifts due to being “outside the system” and “lacking legitimacy”\textsuperscript{40}. Indeed, the Nuffield Trust has argued that the role of primary care in providing improved coordination of care is hotly contested:

> “Primary care often struggles to influence care beyond its immediate remit, as was vividly demonstrated by the Francis Inquiry into events at Mid Staffordshire NHS Foundation Trust, where GPs failed to link intelligence about patient outcomes and experience, and hence identify or influence what was a sustained pattern of poor care in the local hospital.”\textsuperscript{41}

Such integrated care projects often fail to engage GPs\textsuperscript{42}, a bizarre contradiction as GPs are central to the provision of continuous care. This failure to engage, however, is endogenous to the structure of co-ordinated care programmes. The absence of proximity collaboration is one aspect. A payment model which places care co-ordination on the fringes of the local healthcare economy, at the centre of which is General Practice, is another. The lack of a common health record hardly need be mentioned, given the fact that it serially plagues the communications of primary, secondary and social care. From a GP’s point of view, the lack of time to get involved in such projects, given existing intense workloads, is crucial. This has been called the “treadmill effect,”\textsuperscript{43} where trying to meet day-to-day pressures, “fire-
fighting,” leads to a lack of time to reflect on how to provide and organise care for the future. This GP laments:

“As a GP the barriers that prevent me working more closely in partnership are factors such as excessive workload, uncertainty and anxiety over job security, high turnover of staff, short life span of community projects, bewildering array of services and pathways, lack of time and difficulty in getting hold of people, dysfunctional and overly large planning committees, incomprehensible and verbose communications from on high, abstract rationalist planning that disparages experience and organically developed systems, a remorseless rise in demand and expectations, a self-defeating emphasis on measurable factors that undermines the quality of interpersonal relationships and care.”44

This is not to argue that there is no place for co-ordinated care in the management of frail, multimorbid elderly patients. On the contrary, its provision is mandatory if quality healthcare is to be maintained at all45. Rather, it must be embedded in the core business of General Practice through concrete relocation of skills, personnel and funding structures.

The answer is to provide the kind of care we know benefits these patients, directly to these patients. We need a division of labour: specialist GPs providing pro-active and systematic care to elderly patients with complex needs, with the remainder providing rapid access, technologically enhanced primary care to the non-geriatric population. This is the paradigm shift required.

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4. The Benefits of a Geriatric General Practice

Integrated, co-ordinated care is central to the management of frail, multimorbid elderly populations. Its absence is a huge frustration for patients and the professionals treating them. In 2011, National Voices said that “achieving integrated care would be the biggest contribution that health and social care services could make to improving quality and safety”\(^\text{46}\). A year later, the Nuffield Trust and the King’s Fund argued persuasively that its provision must be accorded the same political urgency as reducing waiting lists\(^\text{47}\). The evidence for its benefits is prolific\(^\text{48}\).

And yet, as discussed in Chapter 3, existing models of integrated care have failed to make any kind of impact on the capacity crisis in General Practice. A rising population and crashing budgets are factors, but fundamentally the issue is the delivery model. GPs handle appointments regardless of need, the long-established first port of call for patients entering the healthcare system. This results in highly inefficient misallocation of clinical time, resulting in between £2.0 to £4.8 billion in excess expenditures\(^\text{49}\).

Then there is referral out of General Practice that current models of integrated care require. By its very nature, the referral adds work, time and complexity into the system\(^\text{50}\). Two consultations instead of one. Someone to write the referral, someone else to receive it and act upon it. The physical limitations of the referral itself, given its inability to capture and share the tacit knowledge of the referee that the referrer possesses, and the propensity for it to get “lost” in the system. Instead, we should empower GPs to provide the care they know is clinically indicated themselves.

The goal is thus two-fold: to apportion GP time to those patients who need it most and to keep those patients in General Practice. This can be achieved by splitting General Practice

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\(^{48}\) See, i.e. Curry and Ham 2010; Goodwin and Smith 2011; Ham et al 2011b; Rosen et al 2011
\(^{49}\) Who Cares? Future of General Practice, Reform, (2016), p.21
\(^{50}\) Referral management: lessons for success, the King’s Fund, (2010), p.13
into a specialised service for the frail, multimorbid elderly whose needs are voluminous and complex, and a modernised service for the non-geriatric population.

The literature has shown time and again that geriatric care improves satisfaction, outcomes and cost. Systematic reviews have demonstrated as much for Comprehensive Geriatric Assessment (CGA), Geriatric Day Hospital, Inpatient Geriatric Consultation Services and Inpatient Geriatric Rehabilitation\textsuperscript{51}. Despite this, no review, however, has been conducted on how to organise geriatric care where it will impact the most: General Practice.

An Ovid-Medline search was conducted to remedy this, using two searches, “geriatric clinic” and “geriatric (variant: gerontology) outpatient”, limited to: abstracts in the English language, humans aged 65 and over, consensus development conferences, meta-analyses, observational studies, randomised controlled trials and systematic reviews. “Geriatric clinic” yielded 14 results, of which 7 were rejected by hand abstract searching. “Geriatric outpatient” yielded 20 results, of which 15 were rejected by hand abstract searching. Based on relevance and quality (i.e. reporting specific outcomes: deaths, place of residence/institutionalisation, dependency, global ‘poor’ outcome, ADL scores, subjective health status, patient satisfaction, and resource use), 12 were retained.

\textsuperscript{51} See, i.e. Forster, Young, & Langhorne, 2003; Scott, 1999; Stuck, Siu, Whieland, Adams, & Rubenstein, 1993; Wells, Seabrook, Stolee, Borrie, & Knoefel, 2003a, 2003b
In summary, five studies improved patient function using geriatric outpatient care, typically measured using global assessment scores. Three studies noted improvements in concordance, a reduction in polypharmacy and a reduction in adverse reactions when geriatric medicines optimisation was provided in outpatient care. Two studies saw a reduction in care home admissions following treatment with outpatient geriatric care. A further two studies saw improvements in mental health.

Based on the literature review above, the following organisational conclusions may be tentatively drawn:

1) Patient selection is crucial;
2) Geriatric outpatient care benefits most the multimorbid at high risk of care home placement;
3) Geriatric outpatient care that retains patients on its “books” permanently achieve better outcomes;

Figure 1: Study Results

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<th>Author</th>
<th>N Comparison</th>
<th>Cost</th>
<th>Mortality</th>
<th>Function</th>
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<td>Foo et al</td>
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<td>Burns et al</td>
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<td>Yeo et al</td>
<td>103 / 102</td>
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<td>Nipp et al</td>
<td>44 / 55</td>
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<td>Drenth et al</td>
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UC Usual Care  
CGA Comprehensive Geriatric Assessment  
GOutpt / Ginpt Geriatric Outpatient / Geriatric Inpatient  
+ results support intervention  
- results do not support intervention  

Source: Ovid-Medline Search
4) A MDT approach providing continuity of care is essential;

5) Geriatric outpatient care should not assume General Practice responsibilities, but should work with General Practice to prevent the creation of a parallel healthcare system;

These studies show that specialist geriatric care directed towards elderly patients in a General Practice-like setting has important clinical advantages. We know that, despite the hyperbole surrounding admissions avoidance programmes, the evidence\textsuperscript{52} overwhelmingly supports Comprehensive Geriatric Assessment in this respect. The true question is, how do we marry this evidence-based clinical care to General Practice? General Practice is the natural hub of local healthcare economies, thanks to its “first-port-of-call” nature, population-based approach, its long term relationships and cumulative shared knowledge of patients that allow it to provide continuity of care. It is also the place that patients recognise and trust\textsuperscript{53}. To surmount the challenges facing General Practice, we must provide specialist geriatric quality care in GP practices, away from the cost and chaos of hospitals, by GPs who are known and trusted by their patients.

There are, to this author’s knowledge, no studies of geriatric care delivered via the vehicle of General Practice in the UK. There are, however, several models domestically and internationally that have so far shown the light at the end of the tunnel.

\textsuperscript{52} Fit for Frailty: Part II, British Geriatrics Society, (2015) p.27

\textsuperscript{53} Integrated Care Report, Deep End (2012), p.2
5. What Geriatric General Practice Would Look Like

The basic idea of a Geriatric General Practice is not new. Indeed, two GPs, Drs Elliott and Stevenson wrote a paper for the Journal of the Royal College of Practitioners calling for “a system of geriatric care [...] , which will identify the elderly in the community, sort out those in need and those 'at risk', and meet their requirements within the resources available”\(^\text{54}\). This paper, published in 1973, outlines almost verbatim those concerns which plague the integrationists and reformists of primary care today: the difficulties of the appointments system, loss of continuity of care and seeing “one's own” doctor, polypharmacy in place of regular consultation, poorly managed discharge transitions from hospital, and so on\(^\text{55}\). They go on to suggest the very same remedies: appropriate list-based screening and identification, pro-active, population-based preventative care, comprehensive geriatric assessment provided in practice, reforms of access, transport, and the use of multi-disciplinary healthcare professionals centred around the patient and led by their (own) GP\(^\text{56}\). To quote French novelist Jean-Baptiste Alphonse Karr, “plus ça change…”.

Despite taking the better part of 40 years, several GPs have caught on and begun developing their own models of better care for the frail, multimorbid elderly. The Care PLUS project\(^\text{57}\), in Glasgow, focussed on multimorbid patients in areas of high deprivation. The intervention comprised patient self-management support, through written materials and sign-posting to local community assets. GPs were supported through intensive training, facilitated by experienced practitioners with extensive expertise in managing patients with complex needs. Most crucially, continuity of care was buttressed by the provision of longer, structured consultation times (30-45 minutes), which participating practices were encouraged to implement as they saw fit. The exploratory cluster randomised control trial demonstrated a significant reduction in negative well-being scores at 12 months (\(p = 0.0036\), effect size = 0.33). Furthermore, the trial demonstrated cost-effectiveness (£12,224 per QALY gained).

\(^{54}\) Geriatric care in general practice, Journal of the Royal College of General Practitioners, (1973), p.622
\(^{55}\) Ibid, p.615
\(^{56}\) Ibid, p.620
\(^{57}\) The Care PLUS study, BMC Medicine, (2016), p.1
Just this summer, Ealing CCG commissioned a “12 hours a day, 365 days a year, tailored primary care service”\(^{58}\) directly to 1,000 residents across 22 nursing homes, based out of the Argyle Road Surgery. The service will provide intensive review and follow-up, accompanied by rapid response to urgent visits, medicines management support and a focus on end of life care. The stated goals are to improve quality of care and reduce avoidable admission.

In June 2015, Blackpool, Fylde and Wyre CCGs commissioned an “Extensive Care” service\(^ {59} \). Patients over 60 are referred by their usual GP if they are at high risk of admission and have two or more specific chronic conditions. The service then takes over direct primary care from the patient’s GP. Patients are assessed at home by a link worker, and then in clinic by a care co-ordinator and Extensivist Doctor via comprehensive geriatric assessment, supported by a local consultant geriatrician. Following this initial contact, a post-clinic “huddle” devises a care plan. Whilst under Extensive Care, patients are reviewed regularly and have their medicines dispensed by this service.

All three projects contain concrete enhancements to traditional General Practice: longer appointments, rapid, direct access at home or in clinic, evidence-based geriatric clinical care and medicines management. But all three suffer the same weaknesses outlined in Chapter 3: time-limited out of practice referral, the peripatetic, provisory nature of a community project, a lack of GP engagement. All three projects are also prey to whimsical CCG funding priorities. What model, then, can overcome these weaknesses, whilst still harnessing their strengths? For that, we must look to an unlikely place: Florida, USA.

ChenMed started in the mid-1990s as a private community primary care centre. It’s founder, Dr. Jenling James Chen, remodelled the practice after a personal experience of poorly integrated healthcare\(^ {60} \). Today, the family-run group manages 36 practices across 8 states for 60,000 patients. The key features of their model are:

1) Intensive primary care exclusively for multimorbid, low-to-moderate income over 55s;

\(^{58}\) Tailored primary care service for care homes launched, Nursing Times, (2016), p.1
\(^{59}\) Working as an Extensivist GP, British Geriatric Society, (2016), p.1
\(^{60}\) Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1078
2) A patient to doctor ratio of 450:1, with an emphasis on seeing the same GP every time (>85%);
3) Longer appointments and frequent review (usually monthly, more frequently if unwell);
4) A “one stop shop” approach; every intervention that can be done in-house is, from bloods, ECGs and ultrasound, to podiatry, optometry and physiotherapy, there is even capacity for IV antibiotics and diuresis;
5) Low barriers to access, with flexibility in their workforce for guaranteed same day appointments, and free patient transport;
6) An on-site pharmacy that dispenses repeat medications in time for each appointment;
7) A “low tech, high touch” approach for patients (no pressure to book appointments online or through ‘apps’), but a “high tech, low admin” approach for GPs (through custom electronic health records that reduce documentation, provide data visualisation, and administrative support for referrals) and;
8) A focus on practitioner satisfaction: thrice-weekly meetings to discuss complex patients, doctors held accountable for their own panel of patients; even the office space is “open plan” to encourage collaboration amongst practitioners.

The King’s Fund, the Nuffield Trust, the Commonwealth Fund, PricewaterhouseCoopers, the Economist and even Forbes have lauded this “better than concierge”61 medicine. Surely it must cost a small fortune? Surprisingly, no. ChenMed’s patients are all insured free-at-the-point-of-use by Medicare, the United States’ public health programme for the elderly. ChenMed is allocated an average of $9,600 (£6,700) per patient per year (more than the UK average of £4,000, but ultimately reflecting the higher cost, for-profit environment of US healthcare)62. Indeed, ChenMed considers its reimbursement model innovative and to be a key driver of innovation itself: risk-adjusted capitation. Sound familiar? It was the basic principle of GP funding in the UK from the 1911 National Insurance Act until the 2004 contract changes. Crucially, however, the rump capitation system that still survives under the current GMS contract only covers primary care activity, which limits GPs’ accountability for care that happens in other settings63. According to ChenMed, capitation incentivises them to “develop and test innovations to determine which ones lower the cost of care without

compromising quality—and, ideally, increase it—\textsuperscript{64}. Capitation has several other important advantages\textsuperscript{65}. Upfront payments mean predictability and stability, allowing GPs to implement service change (in stark contrast to the funding vulnerability of external integrated care projects). Capitated GPs are also financially responsible for the majority of the care of their patient list, encouraging co-ordinated and integrated care. Finally, and critically, GPs assume greater financial risk and are thus incentivised to invest upfront in preventative care, keeping patients in the lowest cost environment (their own practice), whilst maintaining quality of care. The benefits of full capitation are not just theoretical, ChenMed reports a 20\% reduction in total cost of care\textsuperscript{66}. Closer to home, Ribera Salud in Spain uses a capitation model that saw cost improvements of 26\%\textsuperscript{67}.

It might seem that such drastic cost reductions would impact on quality. On the contrary, ChenMed’s Healthcare Effectiveness Data and Information Set (HEDIS) scores were in the top quintile of their comparator group, for example, achieving an impressive 76\%\textsuperscript{68} of diabetic patients with an HbA1c <7.5\% (by contrast, the UK average was 64\%\textsuperscript{69}). Are ChenMed aggressively chasing targets at the expense of patient satisfaction? Again, the answer is no: patient satisfaction is a key indicator for the group, surveying a third of their patients daily. In 2011, their Net Promoter Score was 92\textsuperscript{70} against an industry average of 75\textsuperscript{71}. For this author, however, the most important indicator of success is ChenMed’s impact on admissions. In 2011, ChenMed’s total hospital days per 1,000 patients were 1,058 versus the 1,712 national average, a staggering 38\% reduction\textsuperscript{72}.

ChenMed is not alone. Its essential model—and successes—have begun to be replicated by other or “Direct Primary Care” (DPC)\textsuperscript{73} in the United States, where the pressure to rein in cost and improve outcomes has become formidable. Iora Health, for example, focusses on patients at the sharp end of the inverse care law. Their patient-to-doctor ratio is around 1,000:1, but they employ “health coaches” (care co-ordinators) at one third that ratio. The

\textsuperscript{64} Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1079
\textsuperscript{67} Who Cares? Future of General Practice, Reform, (2016), p.44.
\textsuperscript{68} Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1081
\textsuperscript{69} National Diabetes Audit, NHS England, (2015), p11
\textsuperscript{70} Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1079
\textsuperscript{71} Net promoter industry benchmarks, Satmetrix, (2011)
\textsuperscript{72} Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1081
\textsuperscript{73} Health Rosetta: Value-based Primary Care, Rosetium, (2016), p.1
results: a 50% reduction in A&E visits and a 30% reduction in hospital admissions\textsuperscript{74}. Qliance, which caters for low income manual unionised workers, had a 25% reduction in outpatient referrals, 48% fewer A&E attendances and 41% fewer hospital admissions than patients in a matched control group. This translated into a 12.3% net lower total cost of care, even after taking into account the higher primary care costs at usual practices\textsuperscript{75}.

What ChenMed and its value-based primary care analogues have achieved is the Quadruple Aim\textsuperscript{76}: enhancing patient experience, improving population health, reducing costs, and improving the job satisfaction of healthcare professionals. These are results we ignore at our peril.

\textsuperscript{74} Transforming Care: Reporting on Health System Improvement, Commonwealth Fund, (2016), p.3
\textsuperscript{75} Direct Primary Care: Industry Landscape, Avado, (2013), p.7
\textsuperscript{76} From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider, Annals of Family Medicine, (2014), p.573
6. Can the Direct Primary Care Model Migrate to UK General Practice?

The remarkable outcomes produced by the likes of ChenMed on the one hand, and the unrelenting pressure on UK General Practice on the other, compels this author to believe that the answer must be yes. And what is more, the transition could be at pace and scale.

The appetite for reform in the UK is robust, with patients demanding improvements from politicians, primary care professionals scrambling to innovate and managers fervently looking at ways to reduce cost. The will to make such profound structural changes to General Practice is thus there. Furthermore, despite its obvious deficiencies, the Health and Social Care Act (2012) has put the ball in the court of those who know most intimately what their patients want: GP themselves.

The following are responses to questions on implementation that are likely to be raised.

1) Will Geriatric Primary Care exacerbate the existing GP shortage?

No. The current GP workforce is misallocated and dispersed. A switch to the GGP/non-GGP split model would result in synergy gains in the former and relief gains in the latter. We know that a third of GP appointments are used by those over 65, despite only accounting for less than a fifth of the population and on that basis have modelled a switch below:

**Figure 2: Won't Geriatric Primary Care worsen the existing GP shortage?**

<table>
<thead>
<tr>
<th>Organisational</th>
<th>Current Model</th>
<th>GGP Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient:Doctor Ratio</td>
<td>1,336:1</td>
<td>750:1</td>
</tr>
<tr>
<td>Registered Population Covered</td>
<td>49,307,670</td>
<td>8,776,765</td>
</tr>
<tr>
<td>Number of FTE GPs</td>
<td>36,900</td>
<td>11,702</td>
</tr>
<tr>
<td>Estimated Number GP Consultations</td>
<td>372,471,000</td>
<td>118,445,778</td>
</tr>
<tr>
<td><strong>Total Annual per GP Consultations</strong></td>
<td><strong>10,094</strong></td>
<td><strong>10,122</strong></td>
</tr>
</tbody>
</table>


**77** The patient acceptance requirement for Geriatric General Practice has been modelled as >65 years due to the way age-related hospital statistics are collected in the UK. This is merely illustrative for convenience. There are numerous ways patient populations could be split (i.e. PRISMA, eFI, etc.).

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Based on a sensitivity analysis, a patient-doctor ratio of 750:1 in a Geriatric General Practice (GGP), a 50% reduction in panel load, would result in a similar total annual consultation rate across both populations, based on age-related consultation patterns. These figures are only a high-level view of workload distribution, as it does not take into account consultation complexity. For example, the “typical” consultation for a frail elderly multimorbid patient likely involves substantially more post-consultation administration than that of an otherwise healthy patient (i.e. an episode of worsening congestive heart failure versus a repeat contraceptive pill prescription). An IFS analysis of hospital spending\textsuperscript{78} demonstrates a strong age-related cross-sectional concentration of expenditures. Assuming, reasonably, that cost approximates time and complexity, the study shows that 1\% of under 25s account for a third of hospital spending. The relationship is reversed as the patient group ages, with a more diffuse distribution. Allocating greater numbers of dedicated GPs to the higher consuming, more complex older group will thus result in far greater efficiency.

Practices like ChenMed in the US have highlighted another benefit of the model: GP retention. It is now widely established that the hated ten-minute consultation results in “hamster wheel” medicine, a situation neither GPs nor patients are happy with. The DPC model, however, is strongly linked to improved practitioner work satisfaction. Proponents argue that the way to solve the GP shortage is to make the profession appealing once again:

> “The increased accessibility and quality of DPC can’t help but mitigate the shortage. I am the urgent care. I am the ER. I do the home care needed to decrease hospitalizations. I’m their pharmacy and the lab. I’m their diagnostic center. I’m the missing link to ensure continuity of care and eliminate costs. How many fewer doctors are needed now because one doctor is correctly incentivized to improve all of these factors? How many physicians will avoid

\textsuperscript{78} Public hospital spending in England, IFS, (2015), p.4
retirement, change their practice, and return to and embrace Family Medicine again? How many students will gravitate towards primary care now because it’s better care, better lifestyle and better money?” Dr Josh Umbehr

2) This level of care is surely unaffordable, especially given the current NHS funding squeeze?

The value proposition of DPC/GGP is almost entirely thanks to its ability to dramatically decrease downstream utilisation in secondary care. By keeping the costliest group of patients well in the community and out of hospital, its potential for savings in truly extraordinary. An economic analysis of the effect of a nationwide roll out of DPC in the US demonstrated that not only would it halt healthcare inflation, it would actively reverse it\(^7\). By using a composite of reductions in secondary care costs for the over 65 group, derived from analysis of the reductions achieved by a group of US DPC organisations, GGP in the UK could save £112.5 billion over the next five-year cycle against forecast expenditures.

Current allocations for NHS spending are already likely to be insufficient. Figure 5 shows current proposed allocations to NHS England as part of the Government’s plan for an additional £8bn in spending by 2020. However, analysis\(^8\) from the Nuffield Trust has shown that healthcare inflation, coupled with a 3.1% increase in annual activity growth will lead to a £4bn funding shortfall in 2020-21 and a cumulative £24.5bn deficit over the period, despite the intentions of the Sustainability and Transformation Fund.

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\(^7\) Direct Primary Care: Industry Landscape, Avado, (2013), p.30
\(^8\) Ibid. p.7
\(^8\) Feeling the Crunch: NHS Finances to 2020, Nuffield Trust, (2016), p.4
By contrast, despite a doubling of the GP budget to take into account the higher general and transition costs of GPC implementation, and a phased run-in of reduced secondary care utilisation (year 1: 50%, year 2: 75%), modelling DPC results in a major reduction in secondary care costs from the second year. The total cost reductions from this model (an average of 16% over the forecast period) correlates with that reported by DPC organisations in the US (an average of 18%, see Appendix A, Figure 6).

<table>
<thead>
<tr>
<th>(2014-15)</th>
<th>Number of Appointments</th>
<th>Cost (£)</th>
<th>Reduction</th>
<th>Savings (£bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;E Attendances</td>
<td>3,885,390</td>
<td>124</td>
<td>1,955,646</td>
<td>0.2</td>
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<tr>
<td>Outpatient Appointments</td>
<td>29,927,542</td>
<td>108</td>
<td>13,617,032</td>
<td>1.5</td>
</tr>
<tr>
<td>Hospital Admissions (ACSC)</td>
<td>7,665,657</td>
<td>3,366</td>
<td>2,912,950</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>11.5</strong></td>
</tr>
</tbody>
</table>

Source: Own calculations Hospital Episode Statistics (2014-15), King's Fund, Reform
These projections are conservative as they do not factor in the likely reductions in secondary care utilisation from the non-GGP population as a reflection of their improved primary care; nor can it include cost reductions resultant from generally improved health concomitant with intensive preventative medicine. With reduced capacity pressures in secondary care, Trusts are much more likely to meet their efficiency targets and this has been reflected by reducing activity growth by 2%. Furthermore, these projections solely predict outcomes for the NHS budget. The savings accrued within the adult social care budget could be just as large thanks to reductions in care home admissions and reduced delayed transfers of care.

Finally, the GGP/DPC model can be scaled to meet the entire national requirement. ChenMed has demonstrated scalability in a variety of healthcare markets across the US. Since 2011, the organisation has grown patient numbers by an average of 63% per annum in a highly competitive market.82

The bottom line is this: all the evidence to date points to Herculean cost savings from this model of care.

82 Innovations At Miami Practice Show Promise For Treating High-Risk Medicare, Health Affairs (2013), p.1079
3) How does Geriatric General Practice comply with NHS Constitution Principle 1: to provide a comprehensive service available to all?

The extent to which care for the elderly should be privileged above other pressing public health crises—obesity, cancer, mental health—is an important ethical dilemma. Using a utilitarian paradigm, significant reductions in expenditure whilst assuring (indeed, vastly improving) quality of care for all is a powerful argument. The expenditure freed up by enhanced efficiency can be ploughed back into public physical and mental health initiatives. Rationally, the remaining non-geriatric General Practice will adjust its service model to serve the specific needs of its paediatric, maternal, mental health and under-65-populations. It is arguable that if asked, a reduction of one fifth of their most complex, needful patients, would be viewed with relief by GPs. At the very least, the workforce modelling above demonstrates that, purely nominatively, the consultation demands of the remaining non-geriatric population will be met by the reduced GP numbers, not taking into account the current innovations in access management being undertaken in primary care.

4) Is the current GP workforce in a position vis-à-vis skills and training to accept this division?

Undoubtedly, there will be resistance to change from many in General Practice. Such a division does represent an attack on the principle of true generalist medicine. However, this author believes that the current state of General Practice, coupled with the remarkable patient and practitioner satisfaction with the GGP model, cannot but convince the sceptical.

GPs will not be alone in this ambitious reorganisation. Geriatricians will take the lead in representing secondary care to the new model. They will bring their considerable leadership experience to bear, as they have done through existing integration projects, to support their generalist colleagues.

Furthermore, GPs are more than equipped to manage a specialist-generalist community geriatric role. Frankly, they have been doing it for decades without formal organisational support. As Dr Keith Miller argues:
“In the spirit of integration, can there be no expansion of tailored training schemes for specialist generalists with community-focussed expertise? Move aside, Geriatrician, I want your job – and I’d like you to redesign training in geriatric medicine for me to attain it.”

Practically, the most compelling way to demonstrate the benefits of a Geriatric General Practice will be through a well-organised pilot in a high-need location. To that end, this paper demands such action.

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7. Conclusion

General Practice is approaching crisis. Overwhelmed by increasing numbers of complex, frail multimorbid elderly patients on the one hand, hemmed in by the rise of the consumer-patient on the other, the current system has reached breaking point. This one-size-fits-all model demands reform. GPs, hospital specialists, nurses, entrepreneurs, health services researchers and academics have not been idle. Up and down the country, they have experimented with a number of innovative integrated care projects. But against a background of politically imposed austerity and professional exhaustion, such projects have not been able to hold back the tide.

We know that co-ordinated, specialist geriatric care with a preventative focus works in the outpatient setting. What it requires is a vehicle for delivery. That vehicle is the Geriatric General Practice model.

This model must ensure a division of labour that allocates GP time in the most efficient way. Fewer patients per GP for the illest, resulting in longer appointments and accountable ownership of the patient panel. It must adopt a funding system that prioritises prevention, integration, and innovation. Full capitation has proven itself in this regard. And it must embrace convenience through proximity: a single point of access with a physical, geographical concentration of personnel, skills and services.

Whatever final model General Practice adopts, it is pivotal that it become a service organised around patients with similar needs, not professionals with similar skills.

Let us now return to the story of John and Sarah. A Geriatric General Practice had opened at a former GP surgery not far from them. Sarah registered a few months ago after seeing Dr Maureen Baker and Professor David Oliver discussing the benefits of this major reorganisation on Newsnight. A week after registering, a nurse practitioner, Mark, made a home visit and conducted an hour-long holistic assessment of both Sarah and John’s care needs. They discussed end of life care, Sarah’s wish to keep John out of hospital and at home where possible, and his frequent UTIs. Two weeks after the home visit, Sarah attended the
practice with John to meet their named doctor, Claire. They saw a HCA first, who took a full set of observations, John’s weight, an ECG and a set of basic blood tests. The doctor took a careful history, making reference to John and Sarah’s medical records they had obtained from their previous GP. Claire reviewed all the test results and medication history during the thirty-minute consultation. She rationalised three of John’s medications, the remainder of which were available for collection at the end of their appointment. The pharmacist on-site was able to give advice on changing the regimen to reduce side effects. Sarah was impressed. She felt that the staff were focussed, and able to take the time to listen.

The real test came a few months after. She and Chinwe knew that John had developed yet another UTI. Sarah braced herself. She decided to ring the Practice first. The receptionist put her straight through to the on-call nurse practitioner, Mark. Sarah explained the situation patiently. The nurse practitioner listened just as patiently. “Yes, I remember from your care plan that this has been an issue for John in the past. Are you able to bring him in today for a review?” Sarah was cautiously reassured. She and John made their way to the practice. After a wait of only ten minutes, the nurse called them into her clinic. Unhurriedly, Mark took a history, including any other recent changes. He took a set of observations. John’s blood pressure was a little lower than his record usually showed. “We’ll need a urine sample, but I know John uses incontinence pads. How do you feel about catheterising?” Sarah felt unsure “so, we’ll need to send him to hospital then?” “Not at all, I can have it done here by the duty doctor”.

Twenty minutes later, Claire came by with another younger looking doctor. “Hello Sarah and John, Mark has told me everything. I agree that we should try to get a sample if you’re comfortable with that. I’m afraid I’m between patients at the moment, but my colleague Tom will take over. Is that OK?” Tom had that nervous enthusiasm Sarah had seen in other junior doctors. She broke the ice by asking about his training. Tom was in the first year of the new Geriatric GP-VTS. He had just finished six months in Orthogeriatrics at the. Mark, Tom and Sarah helped John onto the examination couch. Tom took his time and looked practised. He thoroughly examined John, including a DRE. John appeared comfortable. “Ah, I see.” He proceeded efficiently with the catheterisation and assisted Mark in redressing John. Whilst washing his hands, he explained to Sarah that John’s prostate felt enlarged and that this was the likely cause of his recurrent infections. “So, it’s cancer?” “I don’t believe it is, but along with the urine sample we’ll send another blood test to help us get a better picture.” He
explained what the results might show and how he intended to follow up, with both Claire and discussing it at their weekly clinical meetings with the visiting consultant geriatrician. Mark completed the urine dip which did indeed show the likely presence of infection. “We’ll prescribe a longer course of oral antibiotics and one of our HCAs will visit you both at home for the next couple of days for blood tests, if that suits? I’ll ring you with the test results in a couple of days.”

Sarah was relieved. The entire episode only took a couple of hours and John had been fully assessed, with a plan put in place to ensure he was recovering over the next couple of days. Mark had the time to teach her how to manage the catheter and advised monitoring John’s blood pressure as well. Sarah had the duty number if there were any changes in the meantime. A couple of days later, Claire rang Sarah. John was on the right course of antibiotics and his PSA was only slightly elevated. They discussed the pros and cons of referral for further investigations at length and both agreed that it would be better to manage John in the community. Claire prescribed BPH treatment, which was delivered the following day.

Over the final two years of John’s life, he remained UTI free and was not once admitted to hospital. Claire visited frequently in his last few months, co-ordinating an end of life plan in concert with the Practice’s visiting palliative care consultant. John died comfortably at home, in his own bed, with Sarah at his side.
8. Appendix

Figure 4: NHS England Allocated Funding vs Forecast Cost

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<td>8.0</td>
<td>8.3</td>
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<td>100.4</td>
<td>105.8</td>
<td>109.2</td>
<td>111.7</td>
<td>114.8</td>
<td>118.9</td>
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</table>

| Total Forecast Expenditure | 98.0 | 105.0 | 107.5 | 113.4 | 116.9 | 119.6 | 122.9 |

Source: NHS England Annual Report and Allocations, Nuffield Trust

Figure 6: Modelled Budget After GGP Implementation vs Forecast Expenditure

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<td>General Practice</td>
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<td>Primary Care (ex-GP)</td>
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<td>14.4</td>
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<td>57.8</td>
<td>60.1</td>
<td>62.5</td>
</tr>
<tr>
<td>Other</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Total Modelled Costs</td>
<td>98.0</td>
<td>103.5</td>
<td>97.8</td>
<td>88.8</td>
<td>91.4</td>
<td>94.2</td>
<td>97.0</td>
</tr>
</tbody>
</table>

| Total Forecast Expenditure | 98.0 | 105.0 | 107.5 | 113.4 | 116.9 | 119.6 | 122.9 |

Source: NHS England Annual Report and Allocations, Nuffield Trust

Figure 7: DPC Composite Downstream Utilisation Reductions

<table>
<thead>
<tr>
<th>% vs baseline</th>
<th>Qliance</th>
<th>Iora</th>
<th>ChenMed</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;E Attendance</td>
<td>-65.0%</td>
<td>-48.0%</td>
<td>-38.0%</td>
<td>-50.3%</td>
</tr>
<tr>
<td>Hospital Admissions</td>
<td>-35.0%</td>
<td>-41.0%</td>
<td>n/a</td>
<td>-38.0%</td>
</tr>
<tr>
<td>Outpatient Referrals</td>
<td>-66.0%</td>
<td>-25.0%</td>
<td>n/a</td>
<td>-45.5%</td>
</tr>
<tr>
<td>Total Cost of Care</td>
<td>-21.8%</td>
<td>-12.3%</td>
<td>-20.0%</td>
<td>-18.0%</td>
</tr>
</tbody>
</table>

Source: Direct Primary Care: Industry Landscape, Company Reports
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