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Lessons for 'large-scale' general practice provider organisations in England from other inter-organisational healthcare collaborations

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ABSTRACT

Policymakers in England are increasingly encouraging the formation of 'large-scale' general practice provider collaborations with the expectation that this will help deliver better quality services and generate economies of scale. However, solid evidence that these expectations will be met is limited. This paper reviews evidence from other inter-organisational healthcare collaborations with similarities in their development or anticipated impact to identify lessons.

Medline. SSCI, Embase and HMIC database searches identified a range of initiatives which could provide transferable evidence. Iterative searching was undertaken to identify further relevant evidence. Thematic analysis was used to identify areas to consider in the development of large-scale general practice providers. Framework analysis was used to identify challenges which may affect the ability of such providers to achieve their anticipated impact. A narrative approach was used to synthesise the evidence.

Trade-offs exist in 'scaling-up' between mandated and voluntary collaboration; networks versus single organisations; small versus large collaborations; and different types of governance structures in terms of sustainability and performance. While positive impact seems plausible, evidence suggests that it is not a given that clinical outcomes or patient experience will improve, nor that cost savings will be achieved as a result of increasing organisational size. Since the impact and potential unintended consequences are not yet clear, it would be advisable for policymakers to move with caution, and be informed by ongoing evaluation.

1. Background

The 2012 Health and Social Care Act in England mandated the development of around 200 General Practitioner (GP) led National Health Service (NHS) statutory bodies called Clinical Commissioning Groups (CCGs). CCGs have since been responsible for the 'commissioning' (i.e. planning and purchasing) of most secondary and community healthcare services for local populations and are responsible for spending around two thirds of the total NHS budget in England [1]. In the background, over the past decade, new forms of 'large-scale' GP-led *provider* collaborations have evolved in England. These GP-led provider collaborations have largely emerged organically and have brought together traditionally independent GP practices for the provision of services.

Various terms have been used to describe these new forms of provider collaboration between GP practices, including: GP groups, clusters, consortia, family care networks, networks, federations, alliances, joint ventures, super-partnerships, multi-practice organisations, community health organisations, scaled-up general practice and large-scale general practice [2–7]. The terms have not always been used consistently, and the governance structures underlying the various organisational models are notably heterogeneous. However, in essence, they can be considered to be forms of collaboration between GP practices that exhibit different degrees of financial and administrative interdependency for the provision of care. In the paper we will broadly refer to them as scaled-up or large-scale general practice collaborations.

In 2017, four-fifths of respondents to a survey of GPs and GP practice managers in England were working in some form of

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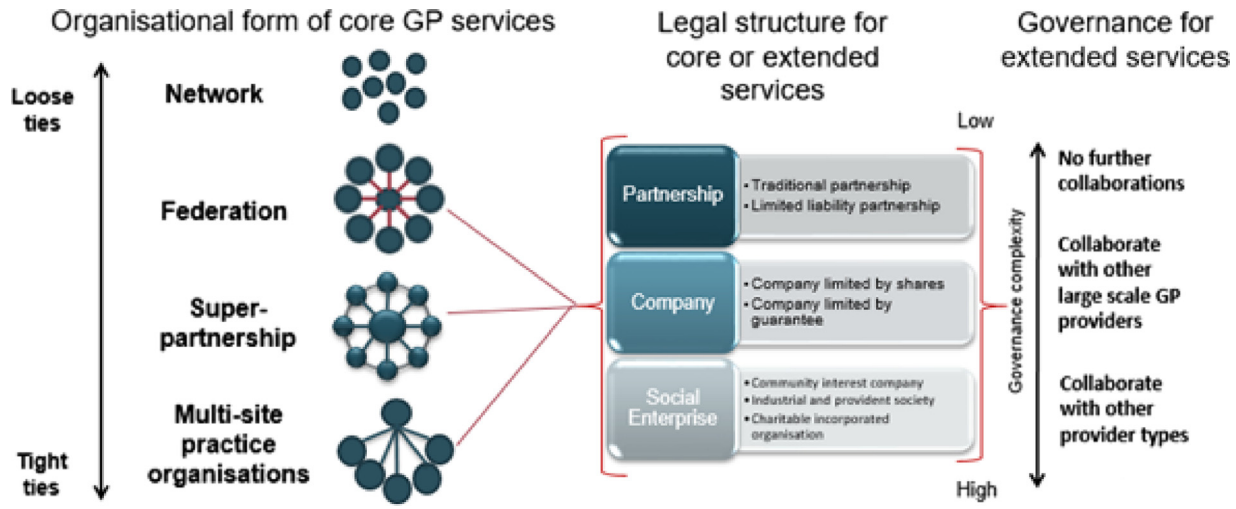

Fig. 1. Emerging forms of 'large-scale' general practice providers in England (adapted from Rosen et al 2016 [10]).

inter-practice collaboration for the provision of care. Over half of these were reported to have formed only in the preceding two years [8]. So far, provider collaborations have principally taken the form of what have been described as 'networks' and 'federations', with GP practices retaining their individual NHS service contracts, whilst sharing some administrative and/or clinical functions. In some cases, they have set up parallel organisations to deliver extended community-based services on contract to the NHS (Fig. 1). Large single general practice provider organisations, in the form of 'super-partnerships' or 'multi-site practice organisations', have also emerged recently. They typically have a more hierarchical governance structure with a central body controlling the contract(s) for core general practice services of the constituent practices. Whilst they remain in the minority, they appear to be on the rise, with 2% of survey respondents describing their inter-practice collaborations as 'super-partnerships' or 'multi-site practice organisations' in 2015, whereas 13% did so in 2017 [8,9].

These initiatives have built on existing relationships between GPs established through other activities, such as out-of-hours cooperatives or GP-led commissioning of other health services. Until recently they had mainly been driven by GPs themselves, often by local leaders, who were looking for new ways to try to cope with a growing number of pressures, including reduced funding, increasing patient demand, growing administrative and regulatory requirements, as well as challenges in the recruitment and retention of general practice staff [2,3,6,11,12].

In July 2016, NHS England proposed a new voluntary 'Multispecialty Community Provider' contract. This aimed to further incentivise the formation of large-scale general practice and community provider organisations across England, which would cover a population of at least 100,000 and be based on large-scale general practice collaborations of 30,000–50,000 registered patients across different GP practice sites [13]. This would be a substantial change to the organisational size and structure of the traditional GP practice in England, where in 2016 the average GP practice had 7521 registered patients. GP practices in England have typically been managed as a small business partnerships with leading GPs holding a NHS contract to provide NHS funded general practice services through a mixture of capitation, pay-for-performance and fee for service payments [14,15].

Scaling-up of the traditional 'corner-shop' model of general practice is increasingly being framed by policymakers in England as a necessary step to make general practice 'sustainable' in the NHS. The argument is that through working at scale general practice providers will be better placed to: strengthen the workforce to cope with increasing workload and workforce pressures; increase patient access and extend services to meet growing patient demand; more consistently improve quality and reduce unwarranted variations in care; and, create economies of scale and efficiencies within what is currently widely viewed as a difficult financial climate for the NHS [2,3,6,7,10–13,16–22]. However, while there are growing reports of the potential benefits of large-scale general practice provider collaborations in England [23–27], at the time of this review there was limited good quality research directly examining their development and impact in England to support what seem like plausible assumptions about what scaling-up general practice provider collaborations may achieve [28]. We therefore examined evidence from other initiatives in England and elsewhere with similarities in their development and aims to identify potential lessons.

2. Methods

NHS England policy documents, UK health 'think tank' publications (e.g. Health Foundation, King's Fund, Nuffield Trust), and guidance published by professional bodies (e.g. British Medical Association, National Association of Primary Care, Royal College of General Practitioners) on new forms of large-scale general practice provider collaborations in England were initially reviewed to identify the various organisational forms which have emerged over the past decade, the expectations placed upon them, and the context within which they have emerged. This informed the development of database search strategies which were undertaken by a librarian specialised in health services research (RP). Medline, Social Sciences Citation Index, Embase and Health Management Information Consortium were searched between January 1996 and March 2016, and re-run from April 2016 to January 2017 (see Appendix 1). The database searches aimed to systematically capture peer-reviewed literature evaluating large-scale general practice provider collaborations. Two distinct types of literature were found: a small set of studies examined the impacts of established large-scale general practice collaborations in England, which we have reviewed elsewhere [28]; and, the focus of this paper, a much broader set of papers containing international evidence from a range of inter-organisational collaborations which shared similarities with large-scale general practice collaborations in England – namely a similarity in the processes required to create large-scale general practice provider collaborations (e.g. a need to form new working relationships between small independent entities) and/or a similarity in their anticipated impacts through scaling-up organisational

size (e.g. an expectation to produce cost savings through economies of scale).

The initiatives we examine in this paper include specialist clinical networks, GP-led commissioning, out-of-hours GP cooperatives and integrated care initiatives in England and elsewhere. Due to the breadth and heterogeneous nature of the evidence, in particular the terms used to describe inter-organisational healthcare collaborations, an iterative process to search further grey and academic literature was necessary (see Appendix 2). This focused specifically on identifying [1] design principles for the organisational development of large-scale general practice provider collaborations; and [2] potential challenges to delivering the positive impacts expected by policymakers in England. Reference tracking, key word searching on relevant organisational websites, Google Scholar, Google and expert advice were used to structure the iterative searches from any date up to July 2016. In reviews of complex evidence this process of 'snowball' searching and seeking guidance from experts has been shown to increase the yield of relevant results [29]. Evidence was specifically sought from peer reviewed journals, research commissioned by the Department of Health, National Institute of Health Research and Health Services and Delivery Research Programme in England, independent evaluations of national programmes in England, and grey literature from health 'think tank' reports, relevant professional bodies, news reports and organisational websites. Titles and abstracts, executive summaries and websites were screened for relevance, and full articles were read if they appeared likely to provide lessons on the design principles relevant for development or potential challenges which may hinder the anticipated impact of large-scale general practice collaborations in England. This process was led by one reviewer (LP) and shaped by iterative review and guidance from other authors.

The search for evidence was stopped when publications which had already been identified repeatedly appeared in the searches and additional publications failed to generate new findings. All forms of evidence from England and elsewhere were used to identify themes and inform findings regarding the development and impact of inter-organisational healthcare collaborations. Peer reviewed publications, independent evaluations of relevant national programmes in England, research commissioned by the Department of Health, and National Institute of Health Research and Health Services and Delivery Research Programme in England where given extra weight in the synthesis of the evidence due to their relevance to the English context. Thematic analysis was used to synthesise the evidence on organisational 'development' and framework analysis, which used the four domains of anticipated 'impact' drawn from initial literature searches, was used to identify potential challenges in achieving these. A narrative approach was taken to present the findings [30].

Through the use of deductive and inductive approaches to identify recurrent themes and examples of unintended consequences from other initiatives with similarities to 'scaling-up' general practice provider organisations in England, this paper aims to help policymakers identify important areas for consideration when pursuing polices to 'scale-up' general practice, as well as areas of future research interest. It does not aim to provide conclusions about the size of effect which large-scale general practice collaborations may have.

3. Findings

After the exclusion of duplicates, the database searches identified 1516 papers. Based on the screening of titles and abstracts for potentially relevant publications, 46 of these were read in full. From the iterative searches, a further 277 publications were read in full. Within the evidence that would inform the development of large-scale general practice collaborations, themes were identified regarding trade-offs between (i) mandated or voluntary formation, (ii) organisational size, and (iii) governance and ownership structure (Table 1). Within the evidence on potential challenges affecting their anticipated impact, themes were aligned with the expectations of what large-scale general practice is expected to achieve in England. These covered (i) strengthening the workforce, (ii) increasing patient access and extending services, (iii) improving quality of care and reducing variation, and (iv) creating economies of scale and efficiencies (Table 2) [2,3,6,7,10–13,16–21].

Table 1
Areas for policymakers to consider in the development of 'large-scale' general practice providers.

Mandated or Voluntary Formation
• Voluntary formation can help harness clinician engagement and stimulate locally responsive innovation.
• Mandated formation can help provide clarity of purpose and channels of accountability.
• The distinction between voluntary and mandated formation is not always clear cut.
Organisational Size
• There is no clear consistent relationship between the size of healthcare organisations and performance.
• Optimal size is likely to depend on intended functions and how performance is measured.
• Trade-offs exist when defining the individual size, number and location of collaborating GP practices, as well as the population covered.
Governance and Ownership
• Good leadership, a shared vision of purpose and trusting relationships are key ingredients to the development of inter-organisational collaborations.
• Non-hierarchical and hierarchical organisations will bring about change through different internal mechanisms. They are likely to have different organisational goals and require different levers to maximise performance.
• Conflicts of interest can emerge when providers also act as commissioners of services.
• When any form of provider becomes 'too big to fail', public funds may need to be used to sustain them.

3.1. Development of collaborative organisations

3.1.1. Mandated or voluntary formation

Inter-organisational collaborations can be broadly considered in terms of whether they emerge voluntarily, 'bottom-up', or are mandated, 'top-down'. Experiences over the past two decades in Australia (Divisions of General Practice, Medicare Locals), New Zealand (Independent Practitioner Associations) and Canada (various forms of Family Physician networks), in which participation in a GP network has been incentivised by policymakers, but not mandated, suggests that whilst voluntary membership can help harness clinician engagement, 15–30% of GPs will never join a network voluntarily, and that it can be difficult to bring about focused change through such networks [31–38]. Mandated initiatives on the other hand may be better placed to provide clarity of purpose and guidance on the process of development. However mandated collaborations risk clinicians' disengagement and even resistance [39–44].

In practice however, the distinction between mandated and voluntary is not always clear cut, nor mutually exclusive when complex large-scale change is sought [45]. While there is no current policy requirement for the further development of large-scale general practice collaborations in England, there are clearly growing policy, peer and financial pressures driving GP practices to become part of larger groups [3,6,11–13,46]. Scaling-up may require both

mandatory policy changes (e.g. to funding structures) alongside voluntary grassroots leadership. There is therefore a careful balance to be struck between allowing sufficient flexibility to stimulate locally responsive grassroots innovation, but minimising duplication and organisational complexity that may result from natural evolution; versus creating a mandate with the aim of providing clarity of purpose and channels of accountability, but which risks stifling innovation.

3.1.2. Organisational size

There is no clear consistent relationship between the size of healthcare organisations and performance in the literature [47–51]. Therefore, the optimal size of general practice provider groups is likely to depend on their intended functions and how performance is measured. Multiple factors beyond size alone including leadership, resources available and the health economy in which they operate are likely to influence performance.

However, the evidence does highlight several issues to consider regarding organisational size. Trade-offs exist between being small enough to maintain flexible and inclusive decision-making processes, and being of sufficient size to influence the local health economy, bear financial risks, and meet the administrative requirements of regulation [52,53]. In professional partnerships and non-hierarchical organisations, once there are ten or more partners evidence suggests that dis-economies of scale emerge due to challenges in coordinating decisions, and partners becoming less responsive to external requirements and incentives [54,55]. With caution, this evidence could be applied to large-scale general practice collaborations in England, such as super-partnerships, where each GP practice could be considered as one business partner. With this in mind, scaled-up general practice providers that wish to function as a form of business partnership similar to traditional GP partnerships, may struggle to do so with more than ten GP practices.

In terms of the size of population needed to manage clinical risks and associated costs, this depends on the range of services that the organisation is responsible for and the pre-existing health of the population [56–58]. Drawing on primary care budget holding experience in England, a minimum population of around 100,000 is generally regarded as necessary to enable adequate risk sharing of pooled budgets across primary and secondary care, subject to exactly which services are provided, for which populations, and the financial risk related to these [59–61]. This aligns with the minimum population covered by the proposed 'Multispecialty Community Provider' contract [13].

Trade-offs related to organisational size may also exist between the ability to provide continuity of care and access for patients. The importance of retaining relational continuity of care in particular and ease of access for patients who most need these features of general practice is often cited in the literature [62]. While a large organisation may provide opportunities for new routes of access (discussed further below), these routes can also result in poorer relational continuity of care between clinicians and patients. However, large organisational size and relational continuity of care are not mutually exclusive. Smaller networks can exist within larger collaborations, with mechanisms to develop teams within teams to maintain relational, as well as other forms of, continuity of care where needed [63].

3.1.3. Governance and ownership

The degree of trust needed between GPs to embark on what may involve joint managerial and financial commitments is significant. It can influence how, and if, new provider collaborations evolve. Many of the more established large-scale general practice provider collaborations in England were founded by small groups of GPs with good pre-existing working relationships and a shared vision for 'scaling-up' [10]. The success or otherwise of previous initiatives that have brought GPs together, such as to commission services, have been dependent on the state of relationships between GPs in local areas [43,45,64,65]. Credible and competent leaders are repeatedly highlighted in the literature as essential to help overcome some of these challenges and to create environments where organisational change can take place [1,41,45,55,65,66]. The development of a successful network has been described as 'craftsmanship' and the literature emphasises the fundamental importance of clinical-managerial hybrid leaders with 'soft' skills [39]. Whilst leadership programmes have become increasingly common in the NHS in recent years, historically, the primary care workforce has been relatively unengaged in opportunities for leadership training [18].

The majority of emerging GP provider collaborations in England to date have come together as networks or federations of GP practices, retaining individual practice ownership [10]. Networks have typically been used to address complex health and social issues across professional boundaries [39,41,67]. This is on the basis that they have potential to improve innovation and responsiveness through collaboration based on trust and reciprocity amongst a diverse range of members, without having to become a single organisation. However, networks may encounter barriers to good governance more frequently than single organisations, such as weak information flows and organisational links, unaligned financial incentives and targets, limited power to hold members to account, and decisions being at risk of being overly influenced by considerations of income allocation between members [68].

Some evidence suggests that non-hierarchical organisations, co-operatives, and professional partnerships tend to compete for contracts on quality rather than price, as they try to maintain their members' incomes and working conditions [54]. In comparison, corporate provider organisations, which may not face the same type of pressures to maintain employees' interests, may be better placed to compete for contracts on price. However, in doing so purchasers may need to rely on complex incentive schemes and short-term contracts in order to better align the corporate provider's organisational goals with those of the NHS [54]. Such levers may be expensive to control and maintain in the long term. Therefore policymakers need to consider which organisational forms they wish to encourage competing for contracts in NHS's internal market, and then consider the trade-offs between short-term savings, and potential long-term costs associated with managing more complex contract and changing providers.

Scaled-up provider collaborations between GP practices in England can legally register as a variety of organisational forms including partnership agreements, private companies and social enterprises (Fig. 1). Each provides different limits to liability, profit status and re-investment / distribution requirements; opportunities to hold different types of NHS contracts; and access to the NHS pension scheme [3]. Many of the established provider collaborations have set up parallel private limited companies to provide additional community-based services. Some have set up community interest companies, whilst maintaining individual practice partnership contracts for the provision of core NHS general practice services [10]. The use of private corporate providers for delivering core general practice, albeit still limited to date, has not led to measurable improvements in quality or patient satisfaction [69,70]. Private corporate providers have and will likely continue to be controversial in England, where although currently most GP practices are small private partnerships, public and healthcare professional antipathy exists towards large private companies providing NHS services and high earning GPs [71–75].

In the US, large independent primary care medical groups have also formed with ambitions similar to those described in England for large-scale general practice collaborations. These groups are often capital poor in comparison to hospitals or corporate buyers

of primary care practices. They must, therefore, continually decide whether to remain independent or sell their organisation, which may provide capital for development, as well as one-off income for the leading doctors [76]. Within the models of large-scale general practice provider organisations which are emerging in England, this may also happen, highlighting the potential conflict of interest that exists when GPs can be both commissioners and providers of services [77]. It also highlights the risk that if GP practices become absorbed into much larger private providers of general practice care, NHS Trusts or other forms of large-scale integrated provider organisations, they may become 'too big' to fail, resulting in large private provider organisations needing to be bailed out with public funds or adding to NHS Trust deficits [78,79].

3.2. Challenges which may affect anticipated impact

3.2.1. Strengthening the workforce

New forms of large-scale collaborations between GPs are expected to provide opportunities to improve the workforce, such as through developing joint standardised training and education, peer support and peer competition to achieve targets, investment in a more diverse workforce, sharing staff and providing greater career progression opportunities [2,3,6,7,10–13,16–21].

However anticipated improvements in organisational learning through professional exchange do not always materialise simply on the basis of becoming a larger or networked organisation. Evidence suggests it takes time for the exchange of knowledge and learning to happen, for health professionals to gain confidence that their performance is being fairly assessed, and for leadership to develop a culture of learning and improvement in the organisation [67,80–82].

Health Education England's 2015 Primary Care Workforce Commission acknowledged that various forms of large scale general practice collaborations could enable the delivery of a wider range of services, allow greater diversity of multi-disciplinary staff in the delivery of primary care, offer better opportunities for staff development and training, and allow more effective relationships with commissioners, specialists, hospitals and social services. However, the Commission was cautious with its recommendations, highlighting that many of these assumptions were untested [18]. Crucially, there are major factors that are beyond the power of new GP collaborations to address, such as the current national shortage of general practitioners and nurses [15,83].

In the UK the proportion of GPs now working as salaried employees, rather than GP partners responsible for the running of a GP practice, has grown in recent years from 8% in 2003 to 25% in 2014, with the greatest rise being seen in England [84]. Whilst the reasons for this are multifactorial, the growing proportion of salaried GP workforce in England is likely a product of, and has served the expansion of larger general practice providers and is likely to continue to do so. This change in the make-up of the workforce has implications for policymakers, in particular, the need to focus attention on how to motivate GPs and other salaried healthcare professionals to deliver better care beyond the use of practice-level contracts and financial incentives [85,86].

3.2.2. Increasing access and extending services

A wider skill-mix of staff and multi-disciplinary team work, extended opening hours, patient overflow hubs, centralised telephone triage, and routine telephone and video-call appointments are some of the mechanisms through which it has been proposed that access to core general practice services can be improved and which would be enabled by 'scaling-up' organisational size [2,3,6,7,10–13,16–21,87]. These ways of working are theoretically better delivered by large-scale GP providers than the traditional smaller, individual GP practice, due to greater capacity for staff and back-office functions.

Table 2
Important challenges identified from the evidence which may be encountered when trying to achieve desired impacts of 'large-scale' general practice providers in England.

Strengthening the workforce
- The exchange of knowledge and learning is not a given through scaling-up. Substantial time and resources are needed.
- There are health system problems, such as the current national shortage of general practitioners and nurses in England, that new GP collaborations will not have the power to address.
- The expansion of the salaried workforce within large-scale general practice organisations is likely to require an examination of non-financial levers to motivate health professionals.

Increasing access and extending services
- Increased and new routes of access to general practice may not significantly reduce accident and emergency and out-of-hours attendance, nor improve patient satisfaction.
- GP groups will find it hard to make meaningful system-wide change without aligned payment systems across general practice, secondary care and social care.
- Policymakers and health professionals often drive organisational change with limited patient and public involvement, resulting in services that do not meet patient expectations.

Improving quality of care and reducing variation
- There is variation in networks' abilities to make network level and system-wide change, and therefore there will be variation their ability to consistently improve care.
- Striking a balance between individual autonomy over care delivery and standardisation of practice can be challenging. Flexibility at GP practice level in order to tailor care to meet local population needs will always be important.
- There are important lessons from previous failures in the implementation new information technology systems in healthcare for GP groups looking to use this to improve care when scaling-up.

Creating Efficiencies and Economies of Scale
- How much, if any, cost savings may be kept and conditions regarding how these should be spent will affect GPs' motivation.
- Economies of scale from larger organisations may not outweigh diseconomies of scale which may emerge due to new more complex governance and management processes.
- Little evidence exists to suggest that integrated care initiatives have reduced the use of services or generated cost savings.

Between 2013 and 2015 twenty pilot sites participated the 'Prime Minister's GP Access Fund' which provided £50 million to collaborations of GP practice sites to improve access to, and stimulate innovation in general practice services in England. The pilot phase covered 1100 GP practice sites and 7.5 million patients. Aggregated data from the national evaluation demonstrated an increase in access routes and availability of GP appointments made possible by GP practices working together. However, despite a 15% reduction in minor self-presenting hospital accident and emergency department attendances, there were no measurable improvements in patient satisfaction, reductions in emergency hospital admissions or patient contacts with GP out-of-hours services during the period of evaluation [88].

Large-scale general practice collaborations are also expected to be able to expand services beyond core general practice, for example, by increasing the skill-mix of staff and offering extended services in the community or by improving clinical pathways across primary, community and secondary care. There are expectations that GP collaborations will be able to deliver care in partnership with other providers, including secondary care, social care, private and/or voluntary sectors through joint contracting and the receipt of wide-ranging capitated budgets [13]. However, evidence to date suggests that GPs have been most comfortable modifying services related closely to general practice and most relevant to their daily

practice, such as prescribing and developing primary and community health services [31,43]. Similarly there is little evidence so far that GP involvement in commissioning has improved the delivery of secondary care services or overall outcomes [43]. This suggests a limited ability of GP collaborations to make meaningful system-wide change without significant financial investment to help bear risks, cultural change within GP-led organisations, and better alignment between payment mechanisms for general practice and secondary care providers.

Increasing access and extending services in the community are expected to improve patient experience. However, examples exist in the literature of unexpected results, such as limited patient uptake of GP appointments at weekends despite an apparent problem with access [87,88]. Similarly there are examples of unexpected outcomes in the implementation of new routes of access and failures in the use of new information technology, sometimes notably resulting in a fall in patient satisfaction [89–92]. In many areas, evidence regarding the use of information technology for the provision of general practice still remains sparse [93,94].

Perceptions of the impact of changes to how health services are organised on quality of care may differ between policymakers, healthcare providers and patients. Evaluations of integrated care initiatives show that whilst staff perceived a sense of improvement derived from new ways of working across professional groups, patients did not share this [88,95]. Changes to how health services are organised have often been driven by professionals' or policymakers' priorities rather than those of patients [41,95]. This raises the question about the nature of patient and public involvement in service change. Despite recognition of its importance in shaping the NHS, meaningful patient and public involvement has been often absent in shaping decisions regarding large-scale organisational changes [58,95–98]. Therefore, utilising patient and public involvement in the evolution of large-scale general practice collaborations in England to ensure they are designed to best meet patient needs is likely to prove challenging.

3.2.3. *Improving quality of care and reducing variation*

It has been proposed that large-scale general practice collaborations will be better placed to improve clinical quality and reduce unwarranted variations in care between practices and GPs by, for example, investing in technology (also discussed above), strengthening clinical governance, standardising procedures, performance monitoring and benchmarking, peer review and feedback, spreading best practice, and having a population-based approach to services [2,3,6,7,10–13,16–21].

Even after adjusting for case-mix, variation in care (for example, referral rates and prescribing behaviour) has been well documented between GPs, both within the same GP practice and between different practices, and the reasons for variation are not always clear [99,100]. While the use of, for example, organisation-wide protocols and inter-practice learning or benchmarking should in theory reduce unwarranted variation, there are still likely to be differences in clinical behaviour beyond the influence of large-scale general practice collaborations.

The evaluation of the integrated care pilots in England reported reductions in outpatient attendances and elective admissions, but no reductions in emergency admissions [95]. Clinical networks can be effective vehicles for improving the delivery of healthcare across a range of disciplines. However, there is a lack of rigorous quantitative research on their impact with notable variation in networks' abilities to make meaningful network or system-wide change [39,41,67,82]. Collaborations that emerge voluntarily, without being fully inclusive of all GP practices in a locality, may accentuate unwarranted variation between GP practices in and out of the collaboration. Striking a balance between individual autonomy over care delivery and standardisation of practice can be challenging. Allowing flexibility at GP practice level in order to tailor care to meet local needs is important, versus mandating requirements in an effort to reduce variations in care.

Significant expectations have been placed on the ability of large-scale general practice collaborations in England to make better use of technology to improve access, as well as to improve the quality of care through the use of more widely shared electronic records and performance data. However, experience highlights that important information governance issues and incompatible information systems may limit the potential of information technology to improve the quality of care. Many of these challenges relate to national policies and systems beyond the control of local groups. The costs of implementing new information technology often exceed predicted estimates, with a drop in efficiency likely during the initial stages as people learn to use new systems. These challenges have been seen across evaluations of GP-led commissioning, clinical networks and integrated care initiatives [42,67,68,88,97]. Therefore, while larger scale general practice collaborations may provide a setting where changes in information technology to support quality improvement activity can be rolled out at scale, NHS experience to date suggests caution about the anticipated speed and cost at which these can be achieved.

3.2.4. *Creating efficiencies and economies of scale*

Large-scale collaborations between general practices are expected to create efficiencies and economies of scale through, for example, sharing common back-office functions, sharing training and staffing, task shifting within the workforce, joint investment in technology, purchasing at scale and better integration of care [2,3,6,7,10–13,16–21].

Some of the potential issues regarding efficiencies expected through changes to the workforce and technology have already been discussed above. Evidence from GP-led commissioning suggests that if groups of GPs have some influence over budgets of local hospitals, they can improve the responsiveness of hospital services resulting in shorter waiting times and quicker feedback to GPs on their patients' hospital care. However, their power to move care out of hospital and truly influence funding flows has not been substantiated [43]. Recent research into CCGs has identified significant variation in their level of engagement with providers, patients and local authorities, alongside examples of clouded channels of accountability and failure to best utilise GPs' time and expertise [45,64,101].

In New Zealand, the development of Independent Practitioner Associations (privately owned networks of GPs) in the 1990s was in part driven by ambitions of creating greater efficiencies. Evidence suggests that they were typically able to make 5–10% savings over the first two years on laboratory and pharmaceutical expenditure which they previously had not been responsible for [40]. In most cases they were allowed to retain these savings. This points to some short-term gains to be made in areas where GPs previously have not had responsibility for budgets and possible gains through purchasing at scale (e.g. vaccines, dispensable supplies). It also raises the question of how much, if any, of the cost savings GPs should be allowed to keep and conditions regarding how these should be spent.

The ability to use cost savings, as well as wider issues of ownership of new organisations, discussed earlier, are likely to influence the motivation of local leaders to invest time and resources in developing new relationships, investing in technology and facilities, or creating efficiencies. Evidence from the US suggests that hospital-owned primary care doctor organisations can increase some forms of care coordination, but can be associated with higher total expenditure [102], and that hospital-owned practices may have more preventable admissions than doctor-owned primary care practices [103]. This again highlights the importance of aligning incentives

between primary and secondary care, to mitigate unintended consequences.

There is little evidence that integrated care initiatives, involving inter-organisational collaborations and mergers, have reduced the use of services or generated cost savings [54,56,95,97,104]. In some cases the opposite has happened. Economies of scale from larger organisations may not always outweigh diseconomies of scale which may emerge due to new more complex governance and management processes. The concept of 'integrated care' has been described as 'polymorphous' in nature and evidence indicates that it should not be assumed that the integration of services is a straightforward intervention which will improve cost-effectiveness or save money [104]. Rather it should be viewed as a range of complex interventions aiming to achieve long-term changes in the way health services are delivered. There are notable parallels here with large-scale general practice in England.

4. Discussion

4.1. What does this mean for the future of 'large-scale' general practice providers in England?

Over the past two decades, the time and resources required by GPs to provide adequate clinical care has increased as a result of an ageing population, the growing burden of chronic diseases, improved standards of care, higher public expectations of care and a shift of services from hospital based settings into primary care. In parallel, the number of GP responsibilities which do not involve direct patient care have also substantially increased. Examples include participation in CCG activities, Quality and Outcomes Framework targets, Care Quality Commission inspections, patient participation groups, appraisal and revalidation, collaboration with and supervision of multi-disciplinary general practice team members, as well as practice management and employer responsibilities. These clinical and non-clinical responsibilities inevitably reduce the time available for GPs to focus on changing organisational scale and structure. However, these challenges also make finding alternative ways of working more pressing, and they illustrate how much of what general practice is expected to deliver has changed in the past thirty years, when the traditional 'corner-shop' model of general practice prevailed.

In the current financially constrained NHS environment with well documented workforce shortages, achieving and demonstrating cost savings are the most frequently cited and ambitious of the expectations placed on large-scale general practice providers in England. However, robust evidence that large-scale general practice collaborations in England will achieve the expectations placed on them is limited [28], and evidence identified in this review from similar initiatives outside general practice suggests that achieving cost savings and better quality care through large-scale organisational change may not be easy. Initiatives which have brought GPs together for other reasons such as the commissioning of services and out-of-hours co-operatives emphasise that the strength of previous relationships between GPs and pre-existing collaborations in local areas will influence how and if new ways of working together are successful. Experience from other countries, including Divisions of General Practice in Australia and Integrated Managed Care organisations in the US, also indicate that to bring together separate primary care providers to collaborate effectively with one another and/or with secondary care providers can take decades, and may not always deliver the anticipated benefits.

The numbers of initiatives over the last 20 years that have aimed to 'transform' various parts of the English NHS are significant. The rapid succession of these initiatives may have lowered morale, hindered innovation and created confusion [45,56,65,80]. Mergers between provider organisations have often failed to deliver the anticipated benefits in terms of cost savings and improved quality of services, including patient satisfaction. They have also resulted in unintended consequences, including negative effects on the delivery of services because attention has been diverted during the merger process [56–58,105].

Box 1: Key messages to stakeholders.
Key considerations in scaling up general practice service delivery

- **Balance trade-offs in development**. There are trade-offs which need to be considered in terms of performance and organisational sustainability when 'scaling-up' general practice between: voluntary and mandated formation; larger- and smaller-scale collaborations; networks and single organisations; and different forms of ownership.
- **Have clear and realistic goals**. These are essential to guide direction and focus efforts for new inter-practice collaborations. Goals also need to align with those of the clinicians involved to secure their engagement.
- **Invest in local relationships**. Pre-existing relationships can make or break the development of a new collaboration. Significant time and effort are needed to establish and strengthen local relationships between GP practices.
- **Support leadership development**. Credible and competent leaders, particularly clinical-managerial hybrids, who are able to engage members within and outside the group are key. It is important to ensure support and succession planning for these pivotal roles.
- **Remember patient and public involvement**. Ongoing patient and public involvement is hard to do well. Sufficient resources and careful planning are needed to do this meaningfully. Not doing so may result in changes to services that will not meet local needs and expectations.
- **Apply appropriate evaluation methods**. Integration of different organisations takes time, often decades, to deliver benefits and these benefits are often hard to measure. Evaluations of large-scale general practice providers need to ensure adequate research methods are used to produce meaningful findings.
- **Consider all the risks**. Not all efforts to collaborate will be fruitful and not all stakeholders will benefit equally from efforts to collaborate. Therefore, careful consideration should be given to the opportunity costs involved in their development, potential unintended consequences and the compromises that will need to be made.

Examining the evidence from initiatives with parallels to the development and anticipated impact of large-scale general practice provision in England has identified a number of areas to carefully consider in the design of large-scale general practice provider collaborations. It has also identified potential challenges and unintended consequences. Key lessons from this evidence may help inform policymakers, general practitioners, the public, and other stakeholders. These are presented in Box 1.

Ultimately, which organisational model(s) of general practice will dominate in England will depend on: the funding mechanisms and contractual opportunities made available by NHS England and CCGs; how financial risks and conflicts of interest are managed between commissioners and emerging large-scale provider groups; and how aligned stakeholders views are with the direction of NHS England policy.

4.2. Strengths and limitations of the review

The findings of this review are the result of a comprehensive search of a complex body of evidence. The review has attempted

to extract useful learning from the analysis of similar collaborative initiatives in England and elsewhere. It is therefore as comprehensive a literature review as was feasible, and provides a base to which further evidence could be added. This review cannot, however, be guaranteed to be exhaustive since the terminology used to describe different forms of inter-organisational healthcare collaborations is so varied.

Drawing on the literature from a range of other similar initiatives has strengths, but also limitations for application to large-scale general practice provider collaborations. For example, the majority of clinical networks which have been studied have been specialised, such as, focusing on elderly care or cardiac services. Other initiatives, such as the integrated care pilots, have depended on the participation of secondary care services. This may make them less relevant to the principal activities of large-scale general practice provider collaborations. Also, much of the evidence on collaboration between GP practices has focused on the involvement of general practice in official NHS commissioning organisations. By contrast, the majority of the currently emerging large-scale general practice collaborations have emerged organically, and are principally focused on the provision of general practice, albeit with an ambitious set of objectives for the contribution of at-scale general practice to the wider NHS. The majority of the literature that this review has been able to draw on is observational, often without comparison organisations or populations, and in a context of frequent policy changes. This limits the strength of findings. In addition, the literature in general, and thus this review, is notably biased towards English-speaking countries, but there are further opportunities to learn from other countries which have similarities to general practice in the UK [7,106,107].

Finally, it should be emphasised that this review does not aim to conclude that large-scale general practice collaborations cannot achieve the expectations placed on them; it illustrates the challenges that may be encountered. There are a significant number of contextual variables that may influence their success or otherwise, and many of these collaborations are still in their early stages, making their success or otherwise unpredictable.

4.3. The wider picture, developments since this review, and future research

Since this review was undertaken, the desired direction of travel for NHS England policymakers has been clearly stated as being towards the formation of 'Accountable Care' type provider organisations in which large-scale GP organisations, holding a registered patient list, would be the basic unit of service delivery [108]. NHS England has also continued to provide financial and in-kind support to new provider bodies that involve some form of collaboration between GP practices, as well as with other providers of health and social care [109]. In August 2018 a public consultation was launched on an 'Integrated Care Provider' contract through which service delivery would be organised around the registered lists of large-scale general practice organisations. This replaced the proposed 'Multispecialty Community Provider' contract referred to earlier in this review, and would allow commissioners to purchase services from a single integrated provider using an annual population-based budget covering all or most health services (general practice, community, hospital-based) and in some cases, public health and long-term care services [110]. It is still unclear however how willing commissioners and providers will be to use such new contracting approaches.

Future research should aim to systematically identify and synthesise new evidence on large-scale provider organisations with a focus on general practice, some of this work has already started [10,111–115]. In particular research into their impact on patient outcomes and costs is needed. Researchers should apply research methods appropriate for the evaluation of major and complex organisational change across different settings, with sufficient follow-up period (that is, more than the one to three years, which has been the case with most of the evaluations of pilots discussed in this paper). Comparisons with other countries where 'large-scale' general practice provider collaborations are the norm or have evolved in recent years would also be of value, in particular, with other countries in the UK, such as Scotland where there is a government mandate for the development general practice 'clusters', but with a narrower initial focus on quality improvement [116–120].

5. Conclusion

Expectations of what large-scale general practice provider collaborations in England may be able to achieve are significant. There is, however, little research into these new forms of collaborations to confirm or refute whether these expectations are realistic. At present, we must draw on evidence from other initiatives which offer parallels to the development and anticipated impacts of large-scale general practice provider collaborations.

National and international experience underlines that the engagement of GPs is essential to increase the likelihood of collaborations succeeding. For this, GPs must feel they have sufficient autonomy and influence over any new groupings. Yet such flexibility may result in failed attempts, duplicated efforts, undesirable variation in performance and clouded channels of accountability. Large-scale reorganisations of health services delivery have not always delivered the anticipated benefits, and can distract from maintaining high quality services.

How local and national contracting arrangements evolve, and how emerging GP groupings respond to these, may represent a tipping point for general practice away from the small partnership model in England. Whilst this may have the potential to improve the sustainability and quality of general practice in England, the full implications of this are not yet clear. This review has highlighted some of the potential risks. In view of these it would therefore be advisable for policymakers to move in this direction with caution and informed by ongoing evaluation.

Conflicts of Interest

None declared.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.healthpol.2018.10.017.

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