Exploring The Provision of Preventative Health Services in Primary Care Through the Experiences of Healthcare Professionals: A Systematic Narrative Review of UK Evidence.

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Background: Prevention is a central tenant of the NHS Long Term Plan and will therefore be a prominent feature within primary care over the coming years. While GPs have long played a role in preventing disease and in the promotion of health and well-being, the introduction of Primary Care Networks presents an opportunity to take a more proactive role in prevention and anticipatory care. With this in mind, a systematic narrative review of preventative health services delivered in primary care was conducted, with a focus on the experiences of the staff delivering these services.

Methods: A systematic search strategy was completed, and after removing all papers which did not meet the inclusion criteria, 21 peer-reviewed articles were included in the review. Grey literature was not included within the systematic search strategy, but is reflected upon throughout the paper for context.

Results: This systematic narrative review found themes relating to the facilitators and barriers experienced by healthcare professionals. A small snapshot of the themes include: attitudes to prevention; concerns around the evidence base; multi-disciplinary team-working; lack of resources; health inequalities and integrated care. These themes, and more, are presented in the review using a framework which considers the structural levels within the healthcare system; individual factors (micro), organisational factors (meso) and wider system factors (macro).

Implications: It is clear there are a considerable number of barriers faced by frontline staff who are enacting the policies/prevention programmes in primary care, and these should be addressed. This review will consider the themes through the lens of Lipsky's Theory of Street Level Bureaucrats, and reflect on how healthcare professionals respond to the policies/procedures imposed upon them. The findings would benefit healthcare professionals at the micro, meso and macro system levels.

How Does the Practitioner Composition of General Practice Teams Affect Outcomes in Primary Care?

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Background: General practice in the UK is currently under pressure due to the convergence of rising healthcare requirements for an ageing population and a relative decline in the number of GPs in the workforce. In England, policy changes aim to address the shortfall of GPs by increasing the employment of a variety of allied health professionals to deliver direct patient care, including clinical pharmacists, advanced practitioners and physician associates. However, little is known about how practitioner composition affects healthcare provision and costs. We have estimated these relationships using national administrative datasets.

Methods: We estimated multivariable econometric models of the relationships between organisational factors, inputs, outputs and costs. We examined how workforce composition affects the volume and quality of healthcare provided to patients and the costs of the practice (in terms of payments to practices, prescribing costs and tariffed hospital activity) to the NHS using national datasets on over 7,000 practices between 2015 and 2019. We related levels of input of different types of staff (measured as numbers of full-time equivalent staff (FTEs) per 1000 registered patients) to patient satisfaction and frequency of consultations from the GP Patient Survey, GP job satisfaction and hours worked from the GP Worklife Survey, prescribing quality and volume, and utilisation of planned and unplanned hospital services from Hospital Episode Statistics. We controlled for a wide range of organisational and environmental variables that also may affect outputs, outcomes and costs.

Results: Higher FTE of GPs per 1000 patients was associated with higher patient satisfaction with their experience of making an appointment and higher overall satisfaction with their GP practice. Conversely, higher FTEs of nurses and other direct patient care practitioners was associated with lower satisfaction on both measures. In terms of clinical quality, higher FTEs of GPs, nurses and other direct patient care practitioners were all associated with achievement of a higher percentage of QOF points, with the highest level associated with a higher FTE of GPs. We found that a higher FTE of clinical pharmacists per 1000 patients was associated with higher prescribing quality (as measured by percentage of broad to narrow antibiotics prescribed), with no change associated with higher FTE of GPs, nurses or other direct patient care practitioners. A higher FTE of GPs per 1000 patients was not associated with any difference in numbers of items prescribed per weighted population, whereas a higher FTE per 1000 patients of both nurses and other direct patient care practitioners (excluding clinical pharmacists) was associated with prescription of a higher number of items. A higher FTE of clinical pharmacists per 1000 patients was associated with a lower volume of prescribed items. In terms of NHS costs, higher FTEs of all types of practitioners increased costs, but this increase was relatively larger for nurses and other direct patient care practitioners than for GPs. Analysis of the consequences of changes over a four-year period produced very similar results to the cross-sectional associations.

Implications: Current policy in England is encouraging additional employment of a wide range of practitioners through funding available to Primary Care Networks. Our study suggests that, whilst previous research has shown that such practitioners can provide safe and effective services, their employment may be associated with lower patient satisfaction and prescribing volumes and overall costs may be higher. These findings indicate that the current redistribution of general practice work may be associated with substantial changes in health care activity, patient outcomes and costs.

The Scale and Scope of Locum Use in The English Primary Care.

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Background: The use of locum doctors in the NHS has grown substantially over the last decade, however, empirical evidence on the scale and scope of the locum workforce in primary care is sparse. We aimed to identify characteristics and geographical patterns of locum doctor use, and their changes over time using for the whole Primary Care population of England.

Methods: We extracted quarterly data on general practice workforce from December 2017 to September 2020 from NHS Digital. We conducted descriptive analyses of locum use data for all general practices in England to determine the volume of locum work in primary care and to examine the characteristics of the locum workforce compared to other GP types, and over time. We used spatial maps to visualise the geographical distribution of locum doctors and investigate between and within regional variation in locum use. We explored the relationships between locum use and general practice and population characteristics including age and gender composition of patient population, general practice performance (QOF), patient satisfaction, chronic morbidity burden, rural/urban location and local area deprivation. We used Pearson's correlation coefficient and regression analysis methods.

Results: Locum doctors were on average a small proportion of total GP FTE (3.3%) and this remained stable over time. The majority of locum GPs were men with a median age of 40, who had qualified in the UK and worked in long-term locum positions, although we identified an increase in the numbers of infrequent locums over the study period. During the first UK lockdown, long-term locum use remained stable and infrequent locum use was reduced by 47%. In 2019, locum use varied substantially between regions, from 3.1% in the North East and Yorkshire to 7.9% in London. Locum use was weakly correlated with deprivation (Pearson's Rho = 0.085), practice list size (Pearson's Rho = -0.128) and rurality (Pearson's Rho = -0.047).

Implications: Despite expectations that locum numbers had been increasing in primary care, the volume of GP locum use remained stable in the first two years of our analysis, followed by a small reduction in 2020. The substantial geographical variation of locum use and the concentration of locums in more densely populated locations, mainly cities, suggests a non-uniform distribution of the locum workforce, which has implications for the organisation of the general practice workforce. Regression based analysis of practice and population characteristics associated with locum use is on-going.

Rates Of Turnover Among General Practitioners in England Between 2007-2019: A Retrospective Study

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Background: The general practitioner (GP) workforce in England is in crisis with an increasing number of staff intending to leave their practice within 5 years. GP turnover has a negative effect on a practice and patients' quality of care, but studies on turnover rates among GPs are scarce. The study aims to quantify (GPs) turnover in England between 2007-2019, describe trends over time, regional differences and associations with social deprivation or other practice characteristics.

Methods: The GP workforce datasets (2007-2019) and the GPs-by-general practices data (historical data), were used to calculate turnover rates combined for GP partners and salaried GPs. Turnover was defined as the proportion of GPs who leave a practice out of the average number of GPs in that practice for a defined time-period. Rates and their median, 25th and 75th percentiles were calculated for every year and by region. The proportion of practices with persistent high turnover (>10%) over consecutive years were also calculated across the time-window. A negative binomial regression model assessed the association between turnover and social deprivation or other practice characteristics.

Results: Turnover rates increased over time. In particular, the 75th percentile in 2009 corresponded to 11.1% and increased to 14.3% in 2019.However, the highest peak was in 2013-2014 when 25% of the practices recorded a turnover rate equal or above 18.2%. Over time, the proportion of practices with high turnover (10%-40%) increased from 13.7% (95% CI: 12.9%-14.4%) in 2007 to 27.4% (95% CI: 26.3%-28.5%) in 2019. These increases also varied across English regions. A rise in the number of practices with persistent high turnover (>10%) for at least 5 consecutive years was also observed, from 0.7% (95% CI: 0.6%-0.9%) in 2007 to 2.1% (95% CI: 1.2%-1.8%) in 2013. Practice-area deprivation was moderately associated with turnover rate, with practices in the most deprived area having higher turnover rates compared to practices in the least deprived areas (IRR 1.09, 95% CI: 1.06-1.13).

Implications: GP turnover has increased in the last decade nationally, with regional variability. Greater attention to physician turnover is needed above all in the most deprived areas, in which GPs often need to deal with more complex health needs. There is a large cost associated with GP turnover and practices with very high persistent turnover need to be further examined, and the causes behind this identified, to allow support strategies and policies to be developed.

Managing The Work of Practitioners from Different Disciplines in General Practice Settings

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Background: Following health policy initiatives to address a recruitment and retention crisis in general practice, composition of the workforce delivering care in general practice continues to evolve. The introduction of practitioners from different disciplinary backgrounds and a growth in the number of practitioners employed by GP practices and others funded by the Additional Roles Reimbursement Scheme (ARRS) through Primary Care Networks, brings new opportunities in that practices can organise work differently, for example by distributing work effectively to improve services for patients. However, there are significant challenges in working out how to gain most benefit from the wide variety of practitioners' skills and experience when dealing with innumerable, varied and often complex problems brought by patients.

Method: As part of a comprehensive study of the scale, scope and impact of *skill mix* in primary care, we conducted case studies of a purposive sample of five different GP practices to observe and interview clinical and administrative staff and capture patients' views through a survey and focus groups. We adopted a broadly interpretivist approach to analysis of how work was organised and how services were delivered and experienced. Findings from the qualitative arm of this study were triangulated with an analysis of large scale and national datasets that looked at associations between workforce composition and outcomes in terms of quality markers, practitioner and patient satisfaction, and utilisation of hospital services and costs.

Results: With the arrival of practitioners from a wider range of disciplinary backgrounds, GP practices found it necessary to develop new approaches to how work was distributed across these more diverse teams. Mechanisms were put in place to enable reception staff to allocate work to different practitioners using processes of categorisation of both the patients' problems and of practitioners' skills and experience to achieve an acceptable level of matching between an undifferentiated caseload and practitioners' competencies. However, our analysis of interview and observational data confirmed several factors that mitigated against the success of these processes. For example, incomplete or flawed articulation of patients' problems or other misunderstanding of their healthcare needs contributed to sub-optimal matching. Variation in the skills and experience of individual practitioners who nominally held the same qualifications or role meant that non-clinical reception staff needed access to detailed information about individual role holders' competencies. Furthermore, this information had to be revised when practitioners' competencies increased due to additional training and experience. Difficulties also arose when a matching appointment was not available and patients were allocated a 'best available' alternative. GP practices in our study sample noted where and why difficulties occurred and adjusted their processes and patterns of work. These included self-developed and regularly revised documents that provided details of tasks that can be allocated to practitioners (skills matrices) and adjustments to the duties allocated to clinicians with higher levels of expertise that ensured they had time and space to support and advise less experienced colleagues. Trust and confidence between practitioners was also enhanced through working closely together.

Implications: The implementation of increasingly diverse skill mix employment in general practice is not a straightforward continuation of traditional ways of working. Our study shows that significant background work is needed to usefully categorise the undifferentiated work and diverse competencies of practitioners and build in flexibility. While these tasks are achievable for practices with a stable workforce, it is unclear how effectively or efficiently practices can distribute work when a rising proportion of their workforce is employed under the PCN ARRS and simultaneously working across several different practices.