What is the General Practitioner's understanding of multidisciplinary teamwork?

AUTHORS:

John Neden^a MA MSc MB BS FRCGP Claire Parkin^b PhD DIC MSc BSc Hons FHEA Catherine Neden^a MA MSc BM BCh FRCP FRCGP

a. General Practitioner, East Cliff Medical Practice.

b. Lead for Scholarship, Kent and Medway Medical School

KEY WORDS

Healthcare teams, primary health care, primary care, general practitioner

ABBREVIATIONS

CC -	Clinical Commissioning Group
HEE KSS -	Health Education England Kent Surrey Sussex
GP -	General Practitioner
RCGP -	Royal College of General Practitioners

All author(s) made substantive intellectual contributions to this study by making substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; and giving final approval of the version to be published.

Accepted for publication: Sept 9th 2019

Address correspondence to: John Neden. East Cliff Medical Practice, Dumpton Park Drive, Ramsgate. CT11 8AD.

E-mail: john.neden@nhs.net

Chief Editor: Dr Claire Parkin^{PhD}. Current affiliation is: Centre for Professional Practice, University of Kent, M3-22 Medway Building, Chatham Maritime, Kent. ME4 4AG UK.

C.L.Parkin@kent.ac.uk AJPP@gmail.com https://journals.kent.ac.uk/index.php/ajpp/index

AJPP (ISSN Number: Online 2059-3198). Copyright © 2015 by the Centre for Professional Practice.

FINANCIAL DISCLOSURE: The authors have indicated that they have no financial relationships relevant to this article to disclose.

Funded by: None.

What this paper adds:

Current healthcare policy has encouraged the development of multidisciplinary healthcare team working. The perspectives of General Practitioners in this transition have not been extensively studied. This study highlights the challenges which arise from the need to increased supervision and delegation and the concerns which this poses for senior clinicians. Findings may be of interest to other professionals working in multidisciplinary groups.

Abstract

Background: The size and composition of multidisciplinary teams working in primary care has increased over the last twenty years. The views of General Practitioners about these changes have not been widely investigated. The aim of this project was to explore what general practitioners (GPs) understand by 'multidisciplinary, primary healthcare team working' in the current climate.

Methods: A descriptive qualitative case study, using semistructured interviews was undertaken to explore the views of six GPs. Transcribed interviews were thematically analysed.

Results: Analysis of the interviews identified six broad themes. These were: practice team structure and function, GPs' perceptions of their own role within the team, others' roles within the team, communication issues, constraints impacting upon change and lastly, relationships with external organisations.

Conclusions: Movement to multidisciplinary teams has meant that true personal continuity of care between individual patients and individual doctors is no longer possible, however, enabling the GP to let go of this idealised historical model of general practice is difficult. The extension of the team has implications for increasing the supervisory and leadership role of the GP, without GPs necessarily feeling that they have the skill set for extending that role. The transition from providing physician-only care to team care provision, is seen as inevitable, given the work force strictures on general practice, but this study suggests it is not universally welcomed.

© The Author(s). 2019 **Open Access** This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. Introduction: General Practice occupies a unique niche with most practices operating as independent contractors to the NHS. Complex relationships exist between GP employed staff and other staff attached to practices but line-managed by other organisations. Many younger general practitioners have chosen a salaried rather than a partner role. In a well-functioning healthcare system, primary healthcare provides the first point of contact for patients with the aim of producing comprehensive, coordinated and person-centred care, built on a relationship developed between the patient and their GPs. Indeed a aood relationship with the provider of healthcare is associated with better health outcomes (Starfield et al., 2005). Primary care in the early National Health Service was provided by independent GPs acting in isolation. Poor standards of care, bad working conditions and professional isolation was endemic. Collings (1950) recommended the development of group practice units. In response to central incentives such as the Quality and Outcomes Framework (NHS England, 2018), over the last twenty years, primary care has transformed into larger practices serving bigger populations.

Simultaneously, the complexity of disease management provided by primary care has increased. Reviews suggest that multidisciplinary teamwork can improve chronic disease outcomes for patients and is effective in the management of complex cases (RCGP, 2012; RCGP, 2016). However, declining primary care and community resources and a reduction in the attractiveness of general practice as a career, have led to an increasing demoralisation amongst general practitioners (Dale et al., 2015).

GPs have responded in innovative ways in attempts to control their increasing workload, including delegating duties to other members of the practice team. According to Kuzel (2011), creating a high functioning team to ease the pressures of GPs makes financial sense and may in fact, create significant additional clinical capacity. Bodenheimer (2006), writing of primary care in the United States, where it is acknowledged that there may perhaps be different pressures, notes the increasing incompatibility between physician-delivered care and their workload. Bodenheimer suggests that it has become virtually impossible to complete all of the clinical demands placed on GPs within the working day, thus necessitating workload redistribution.

Williams and Sibbald (1999) note that not all general practitioners have welcomed such changes to working practices, expressing concern that the rapidity of the move to the extended role of the practice nurse with little time for reflection has created a culture of uncertainty. Bramwell *et al.* (2015) suggest that despite many attempts to integrate

GPs with other providers, notably community services, there still remains a considerable disconnect, apparently aggravated by continuing structural changes in the NHS.

Arksey, Snape and Watt (2007) highlight that new nursing roles, such as nurse practitioners, are blurring traditional boundaries, whilst the roles of managerial and reception staff are developing a more clinical focus without individual team members necessarily understanding how each other's roles function.

Gerada and Riley (2012) highlighted that GPs of the future would be working in multidisciplinary teams, developing generalist-led, integrated services. Indeed, NHS England (2014) in their Five Year Forward View, stated a commitment to increase the multidisciplinary team workforce in general practice.

The literature has identified areas that need to be considered to establish effective multidisciplinary team working in primary care. There are specific considerations when new members and roles are introduced into teams. A number of studies have considered the perceptions of different professional roles, particularly those of nurses and nurse practitioners (Vail et al., 2011; Matteliano and Street, 2012; Quinlan and Robertson, 2013; Stewart et al., 2015), but the perspective of GPs has been less widely reported (Mazzaglia G et al., 2009; Tierney et al., 2016).

What is less well described is the current view of General Practitioners working in England, some years since the publication of the Five Year Forward View (NHS England, 2014) with the stated intent to increase multidisciplinary working. This study sought to address this question in a deprived and under-doctored Clinical Commissioning Group area with an imperative to embrace diversification of the team composition.

Methods: For this study, a qualitative case study approach was taken to understand individuals' experiences and the subjective meanings which individuals attach to these.

A purposive sampling approach was adopted. Clinical Commissioning Group (CCG) practices were contacted by email with a written request to individual general practitioners to participate in the study. Sampling continued until theoretical saturation was reached and no new relevant information was emerging. Ethics approval was granted by the University of Kent.

Given the likely time constraints of participants as busy professionals, a pragmatic decision was taken to use telephone interviewing. A pre-determined set of openended question prompts was developed, utilising information obtained from the literature review. Interviews were professionally transcribed after the interviews had taken place and transcripts were checked by two researchers, to ensure data was an accurate representation of interview content.

A surface-level approach was taken to data analysis, staying close to the text rather than attempting to speculate further on intended meaning. This open data interpretation permitted reflexivity. Adopting Bengtsson's (2016) fourstage approach to thematic analysis, initial open coding took place after familiarisation with the content of the interviews.

To reduce the subjectivity of the analysis, a second researcher, with a background in medical education, independently reviewed and explored the interview transcripts, producing an alternative coding framework. These two coding frameworks were compared and combined for final compilation and interpretation of the data.

The author of this paper is a general practitioner practising in the same area as the participants and familiar with their working context which represents a socio-economically deprived Clinical Commissioning Group (CCG). Whilst attempting to avoid conscious bias and to be as neutral as possible, it has to be recognised that the insider status of the author must be acknowledged as a potential source of bias before considering the wider transferability of this study.

Results: Of twelve potential interviewees, six consented to be interviewed. Interviews lasted between 16 minutes and 29 minutes, with a mean duration of 24 minutes.

Five of the six interviewees were female. Nearly all fell in to the 40- to 50-year-old age band with one slightly younger than forty years old. Six practices were represented and there was an even distribution of salaried general practitioners and partners within each. The sample included those with primary medical qualifications from the UK, Indian subcontinent and Europe. Four of the general practitioners were practising in a language other than their mother tongue. This is broadly representative of the local population of GPs but may not be comparable to that in other CCG areas.

Thematic analysis identified six broad themes:

- The practice team structure and function.
- GPs' perceptions of their role within the team.
- Others' roles within the team and relationships.
- Communication issues.

- Constraints affecting teamwork.
- Relationships with external organisations and context.

Theme 1: Practice team structure and function: Respondents identified a difference between the multidisciplinary team as it currently exists and what an ideal team might look like. Participants expressed a view on what an ideal team should look like:

'I would like a stable team, people I can rely on, a mix of people...who are primary clinicians...but also people who are interested in the organisation... interested in data...with a vision and leadership...I think when you have all these things in concert, then you have a practice that can really fly.' (GP2)

Theme 2: GPs' perceptions of their role within the team: All informants accepted the role of the general practitioner had changed and will continue to change. However, there was some concern about what has been lost in this change, particularly with respect to seeing patients face-to-face:

'I feel a bit sorry that the old style of consulting goes, I like seeing patients face-to-face but it's not going to happen anymore...we like to hold [on] to old habits.' (GP1)

All the informants suggested that their role within the primary healthcare team included supervision of other team members, acknowledging that this could be challenging:

'You want to know what's going on and we have to adapt the way we're working so that we have time...you are the train driver and you don't know who is getting on and off the train and which doors are open and closed.' (GP5)

The participants recognised that their changing role was causing additional stress, as well as placing more responsibility on the general practitioner:

'The team looks up to me to say what do you think is the right thing...the final call has to be mine.' (GP3)

Theme 3: Others' roles within the team and relationships: Informants mentioned their role within the

team and how they perceived it, particularly in relation to leadership. They all felt that their position within the team was as the leader:

'I think our training and the length of time we train and the intensity, gives us the broadest shoulders...when there's a problem in the team it comes back to the person who is able to deal with...and inevitably it's the GPs who are the linchpin to it all.' (GP2)

Equally, however, there was mention of learning from other team members:

"...being able to identify your own limitations and then knowing which member of the team can answer that best, may well be appropriate." (GP5)

Some informants mentioned issues of losing control as well as speaking of how they have had to adapt to accommodate change:

'Having to trust people that are seeing our patients and trusting that they've done the right thing and we've given them the opportunities for feedback and questions...slightly losing control.' (GP5)

'I think it's going to be the transitional period that's the tricky part and I suppose it's how you make that work, particularly with new people in the team.' (GP5)

However, informants shared their opinions on the benefits of team-working, with respect to sharing roles and delegating beyond the traditional team. Participants expressed the opinion that the diversification of the workforce has been beneficial to both patients and their practices:

'...the paramedic practitioner is a great help, especially on the on-call because she is able to do the home visits, she's got a lot of experience and I'm new to the area.' (GP6)

'I think that having a nurse practitioner is a great asset for the surgery, she is very experienced with the social side of things, she does the forms and spends time sorting out problems which we wouldn't have time to [do] otherwise, obviously she communicates with us too.' (GP1) **Theme 4: Communication issues:** The majority of informants commented on the multiplicity of connections between general practice and other service providers as well as the individuals within them. Communication was particularly challenging when multiple agencies were involved in the care of patients with complex needs:

'There were problems when instead of one person being involved in the care there were several people who got involved, district nurses, our team and the nurse practitioner as well as the duty doctor, it was a complicated affair...there was no outcome, a lot of communication was not going well because it all got a bit mixed up.' (GP3)

Theme 5: Constraints affecting teamwork: The majority of informants described their frustration with information technology and the lack of an integrated computer system:

'...it would be very helpful if they were on the same IT platform...it's a really outdated model...it would be much better for us and for other healthcare providers...you need a different clinical record, it's a barrier.' (GP1)

A number of the informants mentioned time pressures:

'...there's no time to think...yes, we could all do with the time to think...we are limited in the work that we do by the workload, you have to look at the natural limitations of the job.' (GP5)

Additionally, staff shortages and the mobility of staff between organisations challenged the system too:

"...lack of qualified staff because there's a shortage not only of GPs but also with nurses...the nurse coming, she used to be a district nurse so we're taking her from the district nursing team." (GP1)

Theme 6: Relationships with external organisations and context: Two informants also mentioned the reluctance of primary care to change from traditional methods of working:

'...a reluctance to see change happening has a lot to do with it because of the way our practices are structured.' (GP2)

Another participant was very fearful for the future because of the increasing demands placed on GPs and the service as a whole: 'I don't think we're going to meet our demands...increasing demands for GPs, even with different physician associates in different categories and roles in professionalisation...it's just the workforce side of things, the patients are older and more complicated...there are housing problems and employment problems...that can't be resolved...there is not the infrastructure.' (GP2)

Discussion: This study set out to explore GPs' understanding of their role and their relationship with other members of the multidisciplinary primary healthcare team, using a qualitative case study approach with semistructured telephone interviews. It identified six themes.

Policymakers build multidisciplinary, team-based care through systems, structures and guidelines. Naccarella (2009) argues that these initiatives will fail unless underpinned by the relational mechanisms of competence, accessibility, goodwill and honesty. Jarusevidene (2013) in a Lithuanian study, suggested that a strong biomedical approach predominates despite the formal framework (described as hardware) for teamwork. Structures are necessary in the early stages of developing teams, but subsequently rather more fragile software (intrinsic and behavioural factors) play a role in multidisciplinary behaviours. Both studies are concordant with this investigation in suggesting that the necessary interpersonal interactions for team-building are not prioritised by 'management' but rather that teams are expected to deliver immediately after their inception.

The concept of the team as described by the informants here was a very loose structure. Multiple teams co-exist, with the general practitioner a member of each of these, with all the informants seeing themselves as central to the functioning of the team. In many cases, these teams appeared to meet Brown and Duguid's description of '*noncanonical*' teams, lacking official sanction, but existing to expedite patient care (Brown and Duguid, 1991).

The suggestion that an oversized team might not be helpful, concurs with Grumbach and Bodenheimer (2004) who noted that increasing organisational complexity and associated communication challenges might outweigh any benefits of teamwork and erode professional satisfaction in providing personal care.

The informants in this study were convinced of the benefits of interdisciplinary primary healthcare working and saw this as a positive way of overcoming some of the challenges of a limited workforce coping with what Croxson *et al.* (2017) describe as the 'undo-ability of their role'. Croxson and colleagues (2017) reported that one of the most enjoyable aspects of the job was interacting with patients, which was seen by informants as diminishing just as roles such as overseeing staff and dealing with complex processes appeared to be increasing.

Shaw *et al.* (2012) noted how little attention was given to human factors, such as relationships and teamwork, when changes were introduced that required staff to work differently. The rapid pace of change in teams as described by the informants here, does not allow teams to stabilise and led to challenges to negotiate new and existing tensions in trying to establish positions. Since this process is dependent on goodwill and trust, which is built over time and tends to be person-dependent, it fades quickly if key professionals leave (Bidwell and Thompson, 2015).

Mazzaglia (2009) commented that when GPs worked in teams, despite having more job stress, their job satisfaction levels were higher related to the support network that the teams had developed. In the same way, respondents in this study described being supported by other team members as well as offering leadership to the extended team. The role of the GP as part of the team and their assumed (or claimed) leadership reported by Pullon (2008) commenting that as multidisciplinary teams have become more widespread, doctors have asserted their right to be team leaders, justifying this because of superior knowledge, broad experience and continuing legal responsibility. Respondents in this study were concerned to be retaining accountability and responsibility, but at the same time acknowledging a loss of control.

The value of and the challenges associated with developing and maintaining professional relationships reported here is in accord with Macdonald *et al.* (2010) who recognised the need for professionals to understand each other's roles. The finding that inter-professional trust will develop by demonstrating competence, mutual respect and resilience chime with the view of study informants that better working is greatly facilitated by previously well-established relationships.

The themes identified here resonate with the work of Harrod *et al.* (2016), recognising the importance of team interactions, team goals and the need for continuous review. The goals expressed in this study were almost exclusively patient-centric, rather than organisation-centred, consistent with the literature. The transition of the role of the general practitioner, from a solitary professional, to a team member with responsibilities extending to the oversight and supervision of other team members, was recognised here, in accordance with Irvine *et al.* (2002). Likewise, Irvine noted the same challenges of the lack of time and capacity found here.

The difficulties of understanding the professional roles of others in the multidisciplinary team has been reported by Lawn *et al.* (2014) who stressed the importance of knowing and valuing the competence of other professionals. Failing to understand the breadth of another's skills will either lead to duplication, or the gaps described in this study. Both Lawn *et al.* (2014) and Soubhi *et al.* (2010) suggest that professionals cultivate relationships through regular contact, agreeing common goals and recognising skill sets.

This study also emphasised the importance of collaboration around complex and challenging patients, who were described as those who do not easily fit agreed protocols, procedures and tick boxes.

The current pace of change within the NHS, associated with the challenges of a diminishing clinical workforce and an increasing patient workload, has led to the introduction of new team members into the primary healthcare team, as well as to an extension of the roles of existing team members. Whilst the literature identified lack of 'readiness for change' as an inhibitory factor in the development of multidisciplinary teamwork, this does not appear to be a constraint identified by the informants in this study. The study population might be atypical here in having already accepted the inevitability of change. The informants discussed the inherent instability of the process of multidisciplinary teamwork and the burden it placed on them in their perceived role as team leaders. Stability and clarity as to the function and form of the primary healthcare team was needed whilst accepting that as a consequence of multidisciplinary teamwork, their future role would be less hands-on and more that of a clinical supervisor and overseer. However, they expressed concerns about delegating whilst retaining responsibility and accountability for the actions of others.

The literature identified lack of co-location as a negative factor. In this study, greater concerns were expressed about poor communication and information transfer than physical connectivity. In a workforce already challenged by shortages and re-structuring, these developments were seen as 'change for the sake of change' that added to the informants' frustration. The informants recognised that they were in a stage of transition but were uncertain as to whether the benefits of the new working practices outweighed the disadvantages to them as individuals. It is difficult to know whether this represents an inherent dislike of change in the general practitioner population or a lack of insight into the changing role of the GP. If this is the new role, then these new skills (of supervision and delegation) will need to be acquired. Letting go of direct patient contact was not necessarily viewed as desirable, even if it was inevitable.

Study limitations: The decision to interview fellow GPs working in the same geographical area as the researchers, meant that there was a commonality of understanding, but this also increased the risk of collusion and the potential for important perspectives to be omitted. Equally, the decision to approach GPs only, meant that the perspectives of other team members were not considered. The work of Vail et al. (2011) and Gray, Harrison and Hung (2016) identified issues relating to social hierarchies when they interviewed unregistered healthcare team members. Previous work, such as that by Tierney et al. (2016) and Vegesna et al. (2016), showed that GPs tend to have more negative attitudes towards multidisciplinary team working than other colleagues. Although the number of informants was small, they provided a significant volume of data and there were no new themes emerged in the later interviews. The purposive sample of informants represented the diversity of the general practitioner population within the CCG area, with regard to both sex and primary medical qualification.

This study did not explicitly consider differences between the views of partners and salaried GPs nor how long they had been in this role. Both of these factors may influence attitudes and would be the subject for further research.

Conclusions: The description of the concept of the team offered by the informants in this study, was that of teamwork, centred on relationships between individuals, rather than team-based care, which is delivered through structured processes and protocols.

GPs felt themselves to be the lynchpin on which primary care rested and saw this part of their role continuing. However, they were concerned that the workload was becoming unsustainable and that additional members of staff were not necessarily working towards the same goals as themselves. The informants all accepted that their role in the future would be different, but the uncertainties of that future role and equally of the constitution of the team were worrying. One informant described the team as a train with individuals boarding and leaving as they pleased, and outside of the GP's control. Despite being the lynchpin, informants expressed concern that they also had very little control over both the speed and direction of change, with an associated reduction in their ability to self-direct.

Informants recognised the benefits of having different healthcare professionals in their practice teams but were struggling to come to terms with the implications of this for their individual working practices. The informants did not necessarily feel that they had the requisite skills as team leaders and some questioned whether they had the managerial and administrative support available to them to enact the necessary changes.

The rapid evolution of a less doctor-centred primary healthcare team, without affording the time necessary to build an understanding of the team's roles and determining the team's direction and processes, has implications for establishing interprofessional trust, which in turn could pose a considerable risk to the quality of patient care.

Acknowledgements: This project was undertaken as part of a programme supported by HEE KSS GP School.

References:

Arksey, H., Snape, C. and Watt, I. (2007) 'Roles and expectations of a primary care team', *Journal of Interprofessional Care,* 21, pp. 217–219. https://doi.org/10.1080/13561820601076867

Bengtsson M. How to plan and perform a qualitative study using content analysis. Nursing Plus Open. 2016 Jan 1;2:8–14.

Bidwell, S. and Thompson, L. (2015) 'GPs, community pharmacists and shifting professional boundaries', *New Zealand Medical Journal.* Available at: https://www.nzma.org.nz/journal/read-the-journal/allissues/2010-2019/2015/vol-128-no-1414-15-may-2015/6533 (Accessed: 14th May 2017).

Bodenheimer, T. (2006) 'Primary Care — Will It Survive?', *New England Journal of Medicine*, 355, pp. 861–864. https://doi.org/10.1056/NEJMp068155.

Bramwell, D., Peckham, S., Allen, P. and Checkland, K. (2015) 'How can GPs and community health services work more effectively together?', *British Journal of General Practice*, 65, pp. 374–375.

Brown, J.S. and Duguid, P. (1991) 'Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation', *Organization science*, 2, pp. 40–57.

Collings, J. (1950) 'The Collings Report', The Lancet, 255, pp. 547–549. https://doi.org/10.1016/S0140-6736(50)90462-4.

Croxson, C.H., Ashdown, H.F. and Hobbs, F.R. (2017) 'GPs' perceptions of workload in England: a qualitative interview study', *British Journal of General Practice*, 67, e138–e147. https://doi.org/10.3399/bjgp17X688849. Dale, J., Potter, R., Owen, K., Parsons, N., Realpe, A. and Leach, J. (2015) 'Retaining the general practitioner workforce in England: what matters to GPs? A crosssectional study', *BMC Family Practice*, 16, pp. 140. https://doi.org/10.1186/s12875-015-0363-1.

Gerada, C. and Riley, B. (2012) 'The 2022 GP: our profession, our patients, our future', *British Journal of General Practice*, 62, pp. 566–567. https://doi.org/10.3399/bjgp12X657053.

Gray, C.P., Harrison, M.I. and Hung, D. (2016) 'Medical Assistants as Flow Managers in Primary Care: Challenges and Recommendations', *Journal of Healthcare Management*, 61, pp. 181–191.

Grumbach, K. and Bodenheimer, T. (2004) 'Can Health Care Teams Improve Primary Care Practice?', *JAMA*, 291, pp. 1246–1251. https://doi.org/10.1001/jama.291.10.1246.

Harrod, M., Weston, L.E., Robinson, C., Tremblay, A., Greenstone, C.L. and Forman, J. (2016) ' "It goes beyond good camaraderie": A qualitative study of the process of becoming an interprofessional healthcare "teamlet" ', *Journal of Interprofessional Care*, 30, pp. 295–300. https://doi.org/10.3109/13561820.2015.1130028.

Irvine, R., Kerridge, I., McPhee, J. and Freeman, S. (2002) 'Interprofessionalism and ethics: consensus or clash of cultures?', Journal of Interprofessional Care, 16, pp. 199– 210. https://doi.org/10.1080/13561820220146649.

Jaruseviciene, L., Liseckiene, I., Valius, L., Kontrimiene, A., Jarusevicius, G. and Lapão, L.V. (2013) 'Teamwork in primary care: perspectives of general practitioners and community nurses in Lithuania', *BMC Fam Pract,* 14, pp. 118. https://doi.org/10.1186/1471-2296-14-118.

Kuzel, A.J. (2011) 'Keys to high-functioning office teams', *Family practice management*, 18, pp. 15–18.

Lawn, S., Lloyd, A., King, A., Sweet, L. and Gum, L. (2014) 'Integration of primary health services: being put together does not mean they will work together', *BMC Res Notes*, 7, pp. 66. https://doi.org/10.1186/1756-0500-7-66.

Macdonald, M.B., Bally, J.M., Ferguson, L.M., Lee Murray, B., Fowler-Kerry, S.E. and Anonson, J.M.S. (2010) 'Knowledge of the professional role of others: a key interprofessional competency', *Nurse Educ Pract*, 10, pp. 238–242. https://doi.org/10.1016/j.nepr.2009.11.012.

Matteliano, M.A. and Street, D. (2012) 'Nurse practitioners' contributions to cultural competence in primary care settings', *Journal of the American Academy of Nurse*

Practitioners, 24, pp. 425–435. https://doi.org/10.1111/j.1745-7599.2012.00701.x

Mazzaglia, G, Lapi, F, Silvestri, C, Roti, L, Giustini, S.E. and Buiatti, E. (2009) 'Association between satisfaction and stress with aspects of job and practice management among primary care physicians', *Quality in Primary Care*, 17, pp. 215–223.

Naccarella, L. (2009) 'General practitioner networks matter in primary health care team service provision', *Aust. J. Prim. Health*, 15, pp. 312–318.

NHSEngland, 2014. Five Year Forward View. NHSE, London.

NHS England, 2018 Report of the Review of the Quality and Outcomes Framework in England ,NHSE London

Pullon, S. (2008) 'Competence, respect and trust: key features of successful interprofessional nurse-doctor relationships', *J Interprof Care*, 22, pp. 133–147. https://doi.org/10.1080/13561820701795069.

Quinlan, E. and Robertson, S. (2013) 'The communicative power of nurse practitioners in multidisciplinary primary healthcare teams', *J Am Acad Nurse Pract*, 25, pp. 91–102. https://doi.org/10.1111/j.1745-7599.2012.00768.x

RCGP (2012) General Practice and the Integration of Care. RCGP, London.

RCGP (2016) The future of GP collaborative working. RCGP, London.

Shaw, E.K., Howard, J., Etz, R.S., Hudson, S.V. and Crabtree, B.F. (2012) 'How Team-Based Reflection Affects Quality Improvement Implementation: A Qualitative Study', *Qual Manag Health Care*, 21, pp. 104–113. https://doi.org/10.1097/QMH.0b013e31824d4984.

Soubhi, H., Bayliss, E.A., Fortin, M., Hudon, C., van den Akker, M., Thivierge, R., Posel, N. and Fleiszer, D. (2010) 'Learning and Caring in Communities of Practice: Using Relationships and Collective Learning to Improve Primary Care for Patients with Multimorbidity', *Ann Fam Med*, 8, pp. 170–177. https://doi.org/10.1370/afm.1056.

Starfield, B., Shi, L. and Macinko, J. (2005) 'Contribution of Primary Care to Health Systems and Health', *Milbank Q*, 83, pp. 457–502. https://doi.org/10.1111/j.1468-0009.2005.00409.x

Stewart, K.R., Stewart, G.L., Lampman, M., Wakefield, B., Rosenthal, G. and Solimeo, S.L. (2015) 'Implications of the Patient-Centered Medical Home for Nursing Practice', *Journal of Nursing Administration*, 45, pp. 569–574. https://doi.org/10.1097/NNA.000000000000265.

Tierney, E., O'Sullivan, M., Hickey, L., Hannigan, A., May, C., Cullen, W., Kennedy, N., Kineen, L. and MacFarlane, A. (2016) 'Do primary care professionals agree about progress with implementation of primary care teams: Results from a cross sectional study', *BMC Fam Pract*, 17. pp 163-172. https://doi.org/10.1186/s12875-016-0541-9.

Vail, L., Bosley, S., Petrova, M. and Dale, J. (2011) 'Healthcare assistants in general practice: a qualitative study of their experiences', *Prim Health Care Res Dev*, 12, pp. 29–41.

Vegesna, A., Coschignano, C., Hegarty, S.E., Karagiannis, T., Polenzani, L., Messina, E., Zoli, R. and Maio, V. (2016) 'Attitudes towards physician-nurse collaboration in a primary care team-based setting: Survey-based research conducted in the chronic care units of the Tuscany region of Italy', *J. Interprof Care*, 30, pp. 65–70. https://doi.org/10.3109/13561820.2015.1081878

Williams, A. and Sibbald, B. (1999) 'Changing roles and identities in primary health care: exploring a culture of uncertainty', *Journal of Advanced Nursing*, 29, pp. 737–745. https://doi.org/10.1046/j.1365-2648.1999.00946.x