An evaluation of the impact of changes to the General Practice educational programme within local Vocational Training Schemes

Report prepared for Health Education England

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Executive summary

Introduction

Primary care is at the forefront of service adaptation in the attempts to meet the needs of diverse communities and populations. The changing primary care workforce has become increasingly inter-professional with growing emphasis on orienting care towards community needs and local population health. The Royal College of General Practitioner's (RCGP) postgraduate curriculum for general practice (GP) trainees reflects this dynamic situation. It has included community orientation as one of its twelve competencies and trainees are required to show evidence of this engagement within their training portfolios. Habbick and Leeder (1996) summarise the rationale behind community-oriented medical education as, amongst other things, a mechanism to: deepen understanding of health, illness, and the workings of health and social services; deepen understanding of the contribution of social and environmental factors to the causation and prevention of illness; and increase recruitment into primary care and generalist specialities. It has been shown to lead to equal if not better acquisition of clinical skills in primary care when compared with hospital settings (Murray et al., 1997); and high rates of satisfaction with training (Howe, 2001; Lennox & Petersen, 1998).

Health Education England (HEE), who are responsible for general practice training, have implemented an innovative new scheme aiming to develop and deepen GP trainees' understanding of population health and community orientation. New networks – the Community Education Provider Networks (CEPNs) – bring together educational expertise and leadership across all primary care disciplines. Crucially, they involve patient engagement, and provide insight and guidance in leading educational reform. The purpose of this study was to evaluate phase 1 of a pilot scheme involving two CEPNs in London who have been working with Vocational Training Schemes (VTS) at two sites. Due to interruptions to both the training programmes and the research, the following research questions were investigated in order to gain an understanding of trainees' and stakeholders' perceptions of the following key concepts:

1. What were trainees' and stakeholders' perceptions about the following key areas at the start of the pilot:
   - Community orientation and population health;
   - Patient and CEPN involvement.
2. What were trainees' future plans at the start of the pilot?

Method

Educational programmes and interventions are inherently complex to evaluate**.** There are many confounding factors that influence the uptake and success of a particular programme – including its design, its members, and the context and environment that the intervention takes place in (Craig et al., 2008; Wong et al., 2012). There are also many confounding ways to measure its success – such as participants' reactions and responses to training, observable trainee behavioural changes, and demonstrable learning outcomes (Kirkpatrick, 1979, 1996; Kraiger & Ford, 1993). In recognition of this, and in adopting a Critical Realist theoretical position, we have utilised a realist evaluative framework (Pawson, 2013; Pawson et al., 2005). This framework incorporates a focus on four theoretically constructed and inter-related core questions: what works, for whom, in what circumstances, and how (Pawson, 2013; Pawson et al., 2005).

This was a mixed method study involving in-depth qualitative and quantitative data gathered from trainees and key stakeholders.

Ethical approval was granted by the UCL Research Ethics Committee, reference 10123/001.

Quantitative part

All GP trainees at the two sites involved in this study were invited to take part in the quantitative aspect of this research. Trainees were approached at their induction and training sessions which ran between August 2019 and October 2019. They were given the option of completing paper or digital questionnaires, which explored: (i) trainees' competencies in community orientation and holistic care; (ii) their attitudes towards health care teams; and (iii) their commitment to their occupation (measured in three dimensions: affective, normative, and continuance).

Qualitative part

Trainee questionnaires. The quantitative questionnaire described above also included free-text boxes which provided small amounts of qualitative data. Using open-ended questions, and given the ability to respond in their own words, trainees were asked about their expectations from the GP programme, thoughts on patient engagement, their preparedness to practice, and their likelihood of staying to practice in their training area.

Stakeholder Questionnaires. Stakeholders in the VTS training programmes from both sites were invited to take part in this study. They were sent a digital questionnaire between August 2019 and October 2019 which consisted of a number of open-ended questions. This included questions about the programmes' aims and objectives; about what they feel it is important to consider when developing a programme; about their level of involvement in the programme; as well as what (if any) changes were made as the programme developed, their thoughts on patient involvement in the programme's development, and their own knowledge of the local population.

Focus groups/interviews. Trainees attending the VTS training programme were invited to participate in focus groups which took place between October 2019 and December 2019. Participants discussed their experience of training generally, as well as their sense of community orientation, their knowledge of their local population health, and patient and CPEN involvement in their training.

Results

Quantitative part

Seventy-four trainees completed the questionnaire (paper and digital). The majority of trainees (48.6%) said they were neither prepared nor unprepared to work as GPs and 9.5% said they were not prepared at all. Preparedness differed between all training levels with ST1 being the least and ST3 the most prepared for practice. ST1 trainees were also less confident in community orientation competencies. The majority of trainees said that they were very likely to stay and practice in the same area as their training (66.2%).

Multiple regressions revealed that trainees who scored higher on community orientation (Beta = 0.362, p = 0.003) and holistic care capabilities (Beta = 0.381, p = 0.001) felt more prepared to work as GPs and trainees who expressed a higher commitment to their profession (affective, Beta = 0.250, p = 0.05 and normative, Beta = 0.301, p = 0.026) were more willing to stay and practice in the same area.

Qualitative part

Sixteen trainees from the two sites took part in a focus group or interview (three focus groups and one interview were held in total) and seventy-four trainees from the two sites completed the qualitative part of the questionnaire. Eight stakeholders completed the questionnaire and provided answers to the open-ended questions.

Trainees

Trainees' responses about community orientation and population health overlapped highlighting similar aspects, such as community services and systems.

Community orientation

Community orientation for trainees meant tailoring services for specific local needs, some calling this area "central" to primary care. Trainees highlighted networking with other health professionals as key to helping them navigate the various systems and implement any changes. Therefore, trainees valued sessions with people from secondary care.

Not all trainees felt they could engage with local services because of the limited time in each placement. Some trainees also expressed that community orientation is relevant not to all roles saying that at locum position, for example, it is less important.

Population health

Some trainees called population health "essential" for implementing changes. It was felt that population health contributes to better treatment of patients as well as to doctors' wellbeing. Some, however, felt that it is challenging due to difficulties involving colleagues or time limits.

Patient involvement

Trainees acknowledged the importance of patient voices for service improvement, helping them to manage patients' expectations and to engage with the local community. However, some trainees felt that developing competences was more important and that they had sufficient contact with patients through their training placements. Trainees also expressed uncertainty around the usefulness of patient involvement, some saying that patients might not have all the relevant information and that their contribution might be limited. They highlighted the need to carefully plan and manage patient involvement activities that would have educational benefits. It was also reported by trainees that patients' input into management or practice level issues would be more beneficial than input into trainees' learning.

CPEN involvement

Most trainees were not familiar with CPENs. Some had attended related training but they reported that the training's usefulness depended on the topic being taught. Some trainees also felt that they were discouraged from being involved in such training opportunities.

Trainees' future plans

Trainees' decisions around where to live and work after completing training were influenced by both work-related and personal factors. Family considerations were important, as participants were often guided by where their families were settled, or where they would like to settle themselves in the future; for some this was determined by where would be affordable to live, which London was perceived not to be. However, knowing the local health community and services and therefore feeling confident about using such services, was an influential factor for trainees planning to stay in the area. When asked about future career plans, trainees spoke about the flexibility of general practice being a key part of their decision to enter this training programme. Future plans included working part-time as a GP with some days spent developing interests in other specialties, or doing locum work rather than purely working as a salaried GP.

Stakeholders

Community orientation and population health

Stakeholders listed a number of benefits of community orientation in relation to GP training, such as increasing trainees' understanding of the services and the local community needs, and their sense of belonging. It was felt that these benefits might lead to trainees choosing to stay and practice in the area they are trained. Population health was also felt to be an important focus teaching trainees about the wider factors impacting patients' health and acknowledging the importance of preventive healthcare.

Stakeholders talked about various ways to increase engagement with the community and knowledge in population health, such as GP trainees' involvement in local events or in training sessions based in the community and meeting other health care professionals, connecting with community groups, shadowing in the community, or linking with local wellbeing boards.

Patient representation

Stakeholders felt that patient involvement is an important part of the GP training programme development as it helps to contextualise the training and teach about patient needs (for example, services and support). Stakeholders believed that patients could significantly contribute to the programme development; however, they also mentioned that such involvement needs to be well thought through (for example, to ensure fairness, proper engagement, and involvement in relevant areas of teaching such as consultation skills or service design).

Discussion

Trainees and stakeholders thought that community orientation and population health are key to general practice. Stakeholders mentioned that including these topics within GP training will teach trainees about wider population health and the broad services available, improve relationships with their community, and increase trainees' sense of belonging in the area. Trainees also talked about the value of knowing services and other healthcare colleagues in the community, and being familiar with referral systems. It motivated trainees to stay and practice in their training areas. Trainees, however, did not clearly distinguish between the two topics in relation to their training. Some also felt that it was challenging to contribute to some of these areas because of the limited time for consultations and placements on rotation.

Trainees had little knowledge of the CEPN and had an assumption that patients' involvement meant patients taking part in sessions. Generally, stakeholders and trainees recognised the importance of patient-centeredness in general practice and valued patients' voice. However, while stakeholders thought that patient involvement is a key part of the programme's development, trainees were more sceptical about how much input there should be from a lay-person, and in what areas this input should be. For example, some trainees thought that that service delivery might be a more useful area for patients to contribute than training development.

Considering the contexts in which trainees are training and working can help to see what works in developing their engagement with community orientation, population health, and patient and CEPN involvement.

Introduction

Background to the programme

Within primary care there has been a shift towards a more patient-centred, community-focused, and multi-professional way of working, with an increasing amount of work being conducted by health professionals who are not general practitioners (GPs). This is also being reflected in GP training, with community orientation now being a competence area in the GP curriculum, for which trainees need to demonstrate engagement in their training portfolios. This shift has the potential to lead to improved quality of care, patient and practitioner satisfaction, and increased retention of trainees upon qualification in the area where they trained.

In light of this aim, Health Education England (HEE) piloted some changes to two Vocational Training Schemes (VTS) in London (referred to hereafter as site 1 and site 2). These changes included the training programmes having more multi-disciplinary training and a multi-professional senior team, more engagement with patients and population health, and more community-based training. These changes were to be developed by Community Education Provider Networks (known as CEPNs or Training Hubs), as best placed to do so due their positions as education networks and leadership across all primary care disciplines. These changes would be most prominently seen in the dedicated teaching and learning time for trainees, taking place weekly or fortnightly during term-time, with some additional off-site residential sessions.

The teams leading the pilot in each site met regularly to plan the kinds of training session to include in the programme. One site shared minutes from their planning meetings with the research team. During their meetings a range of things relating to the sessions were discussed. In order to facilitate the wider involvement of patient and multi-professional voices in the development of the programme, a range of stakeholders in the programmes were included in the planning meetings. These included VTS programme leads and coordinators, VTS trainees, patient representatives, representatives from other specialties and disciplines. In the meetings sessions were planned on particular clinical topics, but with public health and secondary care perspectives in addition to that from primary care, and more of a community focus. Feedback from trainees about the sessions that had been run so far was good, and they appreciated having other professions and patients present, and when the sessions were interactive.

In order to evaluate the outcomes of this pilot on general practice training in the two selected sites, the research team planned a quantitative and qualitative study, including a questionnaire for both trainees and stakeholders at three time-points (at the start of the training year, at a mid-point, and at the end of the training year), focus groups with trainees at the start and end of the training year, and interviews with stakeholders at the end of the training year. However, with the advent of the global pandemic and the nation-wide lockdown measures that came in to effect in the United Kingdom (UK) in March 2020, we were unable to complete data collection at the second and third time-points; within our institution we were advised to cease data collection involving National Health Service (NHS) employees on ethical grounds, and within the two training programmes the training was postponed and altered to accommodate the restrictions. This meant that we were unable to evaluate the pilot as planned, both due to the pilot changing from its original form, and our restrictions on data collection.

In consultation with HEE, we decided to work with the data collected at time-point 1 to examine what trainees and stakeholders felt about the programme and the key elements of community orientation, population health, and patient involvement at the start of the pilot. This would allow us to gauge the

general understanding and perception of these topics, which will provide useful insights for future educational interventions and evaluations.

Research questions

In light of the restrictions and alterations to the programme due to the ongoing global pandemic, our research questions for this piece of work are:

1. What were trainees' and stakeholders' perceptions about the following key areas at the start of the pilot:
   - Community orientation and population health;
   - Patient and CEPN involvement.
2. What were trainees' future plans at the start of the pilot?

Before moving on to the methodology and results from the research, we give an overview of the key areas of community orientation, population health, and patient involvement in general practice training.

Community orientation

The Royal College of General Practitioners (RCGP) highlights the importance of caring for the whole person and the wider community (Royal College of General Practitioners, 2019) and includes community orientation as one of the core capabilities in the GP curriculum (Royal College of General Practitioners, 2016). This area of capabilities relates to the management of the health and social care of the local population. Royal College of General Practitioners (2019) notes that being a General Practitioner (GP) means being capable of understanding the health services and the GP's role within it, as well as building relationships with the community in which one works; explicitly outlining the need for GPs to be engaged with their community and to understand the importance of community-based interventions. It is highlighted in the curriculum that a GP should understand the make-up of the community, including socioeconomic and health features and how these various issues interrelate (Royal College of General Practitioners, 2019). The complexity of this area, however, is also acknowledged; they state that "the capabilities described in this theme are the most challenging to develop to a high level, as they can feel less tangible to the learner" (Royal College of General Practitioners, 2019; p. 84).

Population health

The RCGP also includes 'population health' as one of the clinical topics in the GP curriculum. They highlight the role of the GP in health improvement, protection and services (Royal College of General Practitioners, 2020), acknowledging that "[i]ncreasingly, GPs are required to consider how their work impacts at a community level, and how this aligns with the health system as a whole. Population health problems such as obesity, child health, mental health and comorbidity are highly complex and are increasing in number, putting a greater burden on health services" (Royal College of General Practitioners, 2019, p. 2). Researchers agree and highlight the important role of general practice in supporting preventive efforts and reveal positive outcomes of public health education activities (Ahluwalia et al., 2014; Davison et al., 2011; Wills et al., 2009). For example, a study by Ahluwalia et al. (2014) revealed that the population health programme for specialty trainees level 4 (ST4s) helped

trainees to develop an understanding of their role in considering a wider population, and the programme had a positive outcome for the practice as a whole: as a result practices made changes to their processes, systems and protocols. Nevertheless, it is not entirely clear how and why this outcome was achieved. Wills et al. (2009) study also showed that knowledge of public health and understanding of its links with primary care among trainees increased after having public health training attachments in public health departments. Interestingly, however, both studies found that trainees knew very little about public health to begin with and the interventions in the study were the first time trainees were exposed to information on population health. Davison et al. (2011) also noted that GP trainees rated their current knowledge of public health as insufficient. More specifically ST3 trainees mentioned the following gaps in their knowledge: services that could support them in their work, health improvement and influencing patients' habits, and GPs' responsibilities regarding public health. One of the suggestions ST3 trainees gave was public health input into VTS sessions which they thought would raise awareness about the need to understand public health and how to deal with issues related to that (Davison et al., 2011). It is clear that there is a need, a desire, and a benefit, to educating GP trainees; it is just not clear yet how and why that is.

Developing effective systems for educating GP trainees about public health, however, might be challenging. Wills et al. (2009) study evaluating public health attachments revealed that there might be a discrepancy between GP trainees and training providers (public health trainers and GP training programme directors) in their understanding of the educational value of public health, as the two groups identified different learning outcomes. For example, while training providers identified a changing perspective from healthcare provision to a more population health orientation, and undertaking health needs assessments as a value of the attachments, trainees reported increased awareness of health protection procedures and health promotion programmes as learning outcomes. Trainees also highlighted that self-motivation is important for how much trainees gain from the attachment (Wills et al., 2009).

Patient involvement

Studies report numerous positive outcomes from patient and public engagement: impact on health professionals' attitudes and beliefs about the value of user involvement, service planning and development, information development and dissemination (Mockford et al., 2012). The value of patient involvement has also been recognised in policy and practice. "Health and Social Care organisations have a statutory duty to involve the public and consult them in relation to their health and social care" (Department of Health, 2020). The Health and Social Care Reform Act 2009 specifies that health and social care organisations should "involve and consult patients, families, carers and local communities on the planning, delivery and evaluation of services".

Nevertheless, studying patient involvement is challenging and the literature review by Mockford et al. (2012) highlighted a number of limitations of studies exploring patient and public involvement (PPI); such as lack of conceptualisation as to the meaning of PPI, poor quality of reporting, absence of robust measures of impact and lack of details. Another challenge is defining patient involvement (Carman et al., 2013; Mockford et al., 2012). Patient involvement is a broad topic that can be understood and investigated in a variety of ways. Parsons et al. (2010) separated patient involvement and patient engagement and defines the two as:

- "Patient engagement means engagement in one's own health, care and treatment." (p. 4)
- "Patient involvement means involvement in the design, planning and delivery of health services" (p. 4)

Carman et al. (2013) used the term "patient engagement" more generally and suggest that it may occur at different levels (direct care, organisational design and governance, policy making) and in different forms (see Figure 1). In general practice more specifically, based on Parsons et al. (2010) report, involvement techniques used often include patient's feedback on one-off issue, which seem to represent a consultation form at the organisational level in the Figure 1.

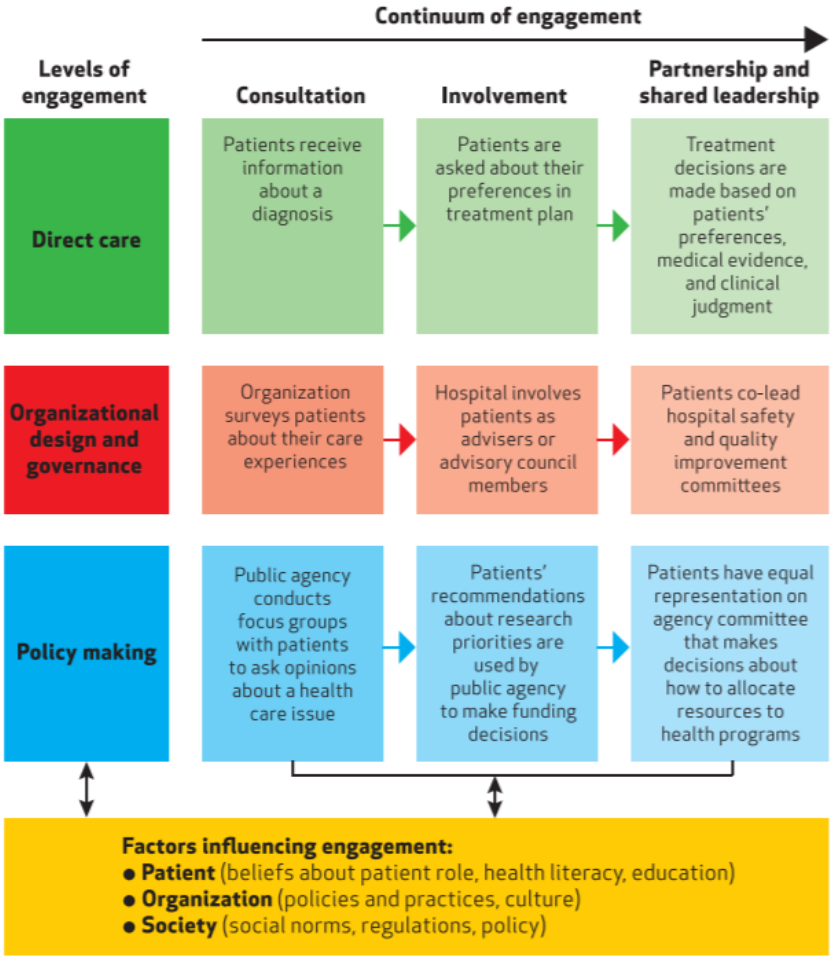

Figure 1. A framework for patient and family engagement in health and health care (Carman et al., 2013)

What this model, however, does not highlight specifically, is patients' involvement in health care education, with authors noting that "a clear strategy for developing and evaluating PPI [patient and public involvement] across the continuum of medical education remain lacking" (Regan de Bere & Nunn, 2016, p. 80). The importance of patient involvement in education, nevertheless, was highlighted as early as 1905 when Osler wrote about patient being the best health professional educator (Regan de Bere & Nunn, 2016; Rowland et al., 2019).

From the key stakeholders' perspectives patient involvement in education is valuable (Towle et al., 2010). Patients want to give something back to the community and their experience can be beneficial; health professionals involved in patient involvement are happy with the results and reflect on the valuable learning experiences trainees are receiving; learners report high satisfaction (Towle et al., 2010).

In the same way as patient involvement in health care delivery more generally or in policy, involvement in education can vary widely. The General Medical Council (GMC) produced guidelines on patient involvement in undergraduate medical education noting various areas of patient involvement (GMC, 2009): in the selection of medical students, in teaching, assessment and feedback, in the development of curricula and assessment, in quality processes, and in governance. In the postgraduate context, the GMC notes, "The deanery must ensure active and meaningful involvement and engagement of key stakeholders: trainees, trainers, patients, and the service or employer". Despite the variety of forms patient engagement can take patients as a subject or object of teaching activities is the most commonly investigated (Towle et al., 2010). It is important to note, however, that research into patient involvement in education has the same limitations as patient involvement studies in other areas (such as a limited focus of what patient involvement is when testing, the descriptive nature of studies, etc.) and is a problematic area (Regan de Bere & Nunn, 2016; Towle et al., 2010).

Methods

This was a mixed-methods study, using both quantitative and qualitative methods to gain an understanding of trainees' and stakeholders' understandings of the key concepts of community orientation, population health, and patient and CEPN involvement.

Two questionnaires were administered to participants at both training sites: one to trainee and one to stakeholders. Both contained a combination of scale-based questions for quantitative analysis, and open-text boxes for qualitative analysis.

In addition, three focus groups and one interview were carried out with trainees from both sites. In these participants were asked about their expectations of the training programme, their future career and location plans, and their perspectives on community orientation, population health, and patient and CEPN involvement.

Quantitative part

Questionnaire design

Trainees' questionnaire

The questionnaire measured:

1. Trainees' demographic characteristics (e.g. gender, training level, ethnicity);
2. Trainees' attitudes toward the programme and working as a GP;
3. Trainees' competencies regarding community orientation and practicing holistically (RCGP, 2020);
4. Trainees' attitudes towards team work and their occupational commitment.

All scales used for point 2, 3 and 4 are described in Table 1.

Questions for points 2 and 3 were developed specifically for this study and consisted of open-ended (presented below in the *qualitative part* section) and closed questions. To measure attitudes towards the programme and working as a GP (point 2) we have asked trainees about their preparedness to work as a GP and likelihood to stay and practice in the same area after the training (see Table 1).

Questions about trainees' competencies in two capability areas, community orientation and practicing holistically (point 3), were developed based on the Royal College of General Practitioners' curriculum and covered all three levels of each capability: basic understanding, competence, and excellence. Each level of the two capability areas (community orientation and practicing holistically) consisted of four competencies and for each measurable competence we have created at least one questionnaire item. For five competencies which covered more than one area, we created more than one item to avoid ambiguity of the question. For example, one of the community orientation basic competencies are: "*Demonstrates understanding of important characteristics of the local population, e.g. patient demography, ethnic minorities, socio-economic differences and disease prevalence, etc*."; the questionnaire item for this competence asked about each characteristic separately as trainees might, for example, know about disease prevalence but not be familiar with socio-economic differences. Fourth questionnaires items were create in total to measure trainees' competencies in two capability areas. Items about the community orientation were combined into a "Community orientation" scale;

items about holistic care area were combined into a "Practicing holistically" scale. Item level description of the two capabilities are presented in Appendix 1.

We have also asked three questions about how important trainees thought it was for them to be familiar with characteristics of, resources and services within their local population and other practitioners (See Table 1). These three questions were combined into "Importance of community orientation" scale.

We have used questionnaires that had been validated through previous research to measure trainees' attitudes towards team work and their occupational commitment (point 4). We used two inventories:

1. The subscale on quality of care from the "Attitudes toward health care teams scale" by Heinemann et al. (1999) to measure attitudes towards team work;
2. Three subscales from the "Three-Component Model of Commitment" scale by Meyer et al. (1993) to measure commitment:
    a. affective commitment (the degree to which trainees are positively emotionally attached to the profession);
    b. continuance commitment (the degree to which trainees believe that leaving the profession would be costly);
    c. normative commitment (the degree to which trainees believe that they ought it to their profession to continue working).

Table 1. Description of scales used in this study

Scale	No of items	Cronbach's α	Scoring	M (SD)	Example
Preparedness to work as a GP	1	na	1-5 ("not prepared at all" – "well prepared")	2.78 (0.90)	How prepared do you feel to work as a GP?
Willingness to stay in the same area	1	na	1-5 ("not likely at all" – "very likely")	3.92 (1.12)	How likely are you to stay and practice in the same area after your training
Importance of community orientation	3	0.868	1-5 ("not important at all" – "very important")	4.57 (0.52)	How important do you think it is for you to know these characteristics well? [e.g. Patient demography: ethnic minorities]
Community orientation	26	0.919	1-5 ("not at all" – "very familiar" or "strongly disagree" – "strongly agree")	3 (0.59)	I am confident in my ability to improve services through collaboration with patient-led organisations and voluntary sectors
Practicing holistically	14	0.893	1-5 ("strongly disagree" – "strongly agree")	3.74 (0.53)	I am confident in my ability to develop an understanding of the patient in relation to their socio-economic and cultural background
Team work	12	0.848	1-5 ("strongly disagree" – "strongly agree")	4.04 (0.53)	The team approach makes the delivery of care more efficient

Commitment to occupation					
Affective commitment	6	0.761	1-7 ("strongly disagree" – "strongly agree")	5.5 (0.82)	Being a general practitioner is important to my self-image
Continuance commitment	6	0.862	1-7 ("strongly disagree" – "strongly agree")	3.51 (1.51)	I have put too much into general practice training to consider changing now
Normative commitment	6	0.844	1-7 ("strongly disagree" – "strongly agree")	3.07 (1.27)	I am in general practice because of a sense of loyalty to it

Note. Cronbach's α higher than 0.7 is considered to show high internal consistency (measure of reliability). na – scales consists of 1 item.

Stakeholders' questionnaire

The questionnaire was developed specifically for this study and consisted of open-ended (presented below in the *qualitative part* section) and closed questions. The same questions as in trainees' questionnaire were used to measure demographic characteristics. Questions to measure stakeholders' opinions about the development of trainees' competencies in two capability areas (community orientation and practicing holistically) were the same questions trainees answered just instructions were different: stakeholders were asked how well they thought the programme helped trainees to develop these competencies.

Data analysis

Statistical analyses were performed with the Statistical Package for Social Sciences (SPSS v24). For all scales, the mean scores were calculated when combining scales. For each participant the mean scores of non-missing items were imputed to replace missing items. All scales were approximately normally distributed (skewness and kurtosis between -1 and 1; no extreme outliers).

Data was, first, analysed descriptively. Then, one way ANOVA was used to compare mean scores of all scales between three groups (training level: ST1, ST2, and ST3; Scheffe post hoc test) and Student's t-test to test differences between two groups (sites: 1 and 2; gender: male and female; ethnicity: white and BME). Multiple regression was used to identify what factors link to preparedness to practice as a GP and willingness to stay and practice in the training area.

Qualitative part

Qualitative questionnaire

Both trainees and stakeholders were asked to offer comments in free-text boxes in the questionnaires. Some questions were stand-alone, i.e. only requiring written comments on a topic, whereas others came after a selection of scale-based questions and invited participants to expand on any aspect of their answers if they wished. Stand-alone questions for trainees included questions about their expectations from the GP training programme, and their opinion about the importance of patient engagement in the training programme and service delivery. Stand-alone questions for stakeholders included questions about programmes' aims/objectives, what it is important to consider when

developing a programme, stakeholders' involvement in the programme, changes made, thoughts on patient involvement, and knowledge of the local population.

Focus groups

The focus group schedules were designed with a series of semi-structured questions and prompts. This ensured that the key topics were covered, and the facilitator could use the schedule to keep the conversation on course, but that trainees also could pursue relevant avenues in the discussion as they emerged.

The focus groups and interview were audio recorded and transcribed by a professional transcriber in preparation for analysis.

Analysis

Two analytic approaches were taken when examining the qualitative data. Thematic analysis was used to explore the broad themes around community orientation, population health, patient and CEPN involvement, and trainees' future plans. The findings from this are to be found in the Results section. A realistic evaluation approach was then applied to these findings to help explain the results. The outcomes from this are to be found in the Discussion section.

Thematic analysis

Thematic analysis is a qualitative method by which qualitative data is examined for the key themes which emerge across the data set (Braun & Clarke, 2006). The analyst reads through all the data to get a sense of what is covered, then goes through it all again, this time applying codes for aspects that recur through the data. Finally, codes that group together can be pulled out into overarching themes to describe how participants perceive the topics under discussion.

Realist evaluation

A critical realist framework (Pawson & Tilley, 1997) can be used to explore the efficacy of interventions, by considering what works, for whom, in what circumstances, and how (Pawson *et al.,* 2005; Pawson, 2013). It focuses on the intervention's design (how effectively it is delivered), why what works does (how it is experienced by trainees and stakeholders), and the outcome(s) of the intervention, including unintended ones.

The value of employing a critical realist evaluation is that by understanding what works (and why), causal relationships between the phenomena that are captured can be identified and understood. This is done by identifying the contexts in which an intervention takes place, the mechanisms by which the intervention's content is delivered, and the outcomes that result from these mechanisms within these contexts. The hallmark of critical realist inquiry is its distinctive understanding of causality – recognising the complicated and contextual nature of it.

This approach has been applied to the findings from the initial thematic analysis of the qualitative data. It allows an understanding of the trainee and stakeholder perceptions of community-oriented training and practice, population health, patient involvement, and commitment to the area and the role of GP.

Data collection

HEE put the research team in contact with the leads of the two VTSs taking part in this study. In consultation with them, we planned the recruitment strategy to include both emailing trainees and stakeholders about the research, and members of the research team attending training sessions to inform trainees about the project.

Trainees

Trainees' questionnaire data were collected via paper and online questionnaires between August 2019 and October 2019.

Members of the research team attended induction or training sessions at the start of the training year, during which we were given some time to explain the research to the trainees present and distribute paper information sheets, consent forms, and questionnaires for them to complete if they wished. Trainees were also informed about the focus groups and told to email the research team to find out more.

After this, invitation emails and information sheets were also sent to the VTS leads who in turn passed them on to the trainees in their programmes. The emails contained a link to complete the online questionnaire on *Online Survey*, which incorporated the consent form within the survey; this allowed trainees who were not present at the sessions that the research team attended to also have the opportunity to take part. Trainees were also invited to take part in focus groups in this email, for which they were asked to email the research team if they would like to find out more. Reminder emails offering trainees the chance to complete the questionnaire online were sent a further two times.

The VTS leads worked together with the research team to plan times and places for focus groups to take place. Trainees who expressed interest in taking part were then informed of the available dates and invited to join them. All the focus groups were held in the postgraduate education centres related to the two VTS sites. When trainees attended they were informed again about the research, and asked to complete a paper consent form before the focus group began.

Stakeholders

HEE VTS programme stakeholders from both sites were also invited to take part in this study by completing an online questionnaire. Emails with information sheets and a link to the questionnaire using *Online Survey* were sent to them by the VTS leads between September 2019 and October 2019.

Ethics

Ethical approval was granted by the UCL Research Ethics Committee, reference 10123/001.

We stressed to all participants that our evaluation was independent of HEE. Participants were informed that their responses would remain confidential and be stored securely, and only accessible to members of the research team. Furthermore, if we were to use quotes from their questionnaire responses or focus group/interview contributions, then this would be done in such a way that they would not be identifiable from this. Focus group participants were asked to respect the confidentiality of the other focus group members, and to refrain from sharing what was discussed with others who were not present.

Results

Quantitative part

Trainees questionnaire results

Seventy-four trainees filled in the questionnaire: 79.7% female, 43.2% white, 91.9% UK graduates, 39.2% first year GP trainees (Table 2).

Table 2. Trainees' demographic characteristics

Characteristic		**% (n)**
VTS Location		
	Site 1	63.5% (47)
	Site 2	36.5% (27)
Gender		
	Male	20.3% (15)
	Female	79.7% (59)
Ethnicity		
	White	43.2% (32)
	BME	55.4% (41)
	Prefer not to say	1.4% (1)
PMQ		
	Europe-UK	91.9% (68)
	Europe-non-UK	4.1% (3)
	IMG	2.7% (2)
	Missing	1.4%(1)
Training level		
	ST1	39.2% (29)
	ST2	31.1% (23)
	ST3	29.7% (22)

Note. BME – Black and Minority Ethnic; IMG – International Medical Graduate

Descriptive analysis

Preparedness and willingness to stay in the same area

Trainees were asked how prepared they feel to work as GPs and how likely is that they stay and practice in the training area (Figure 2). The majority of trainees said they were neither prepared nor unprepared (48.6%) and 9.5% said they were not prepared at all. The majority of trainees said that they were very likely or likely to stay and practice in the same area (66.2% = 39.2% + 27%).

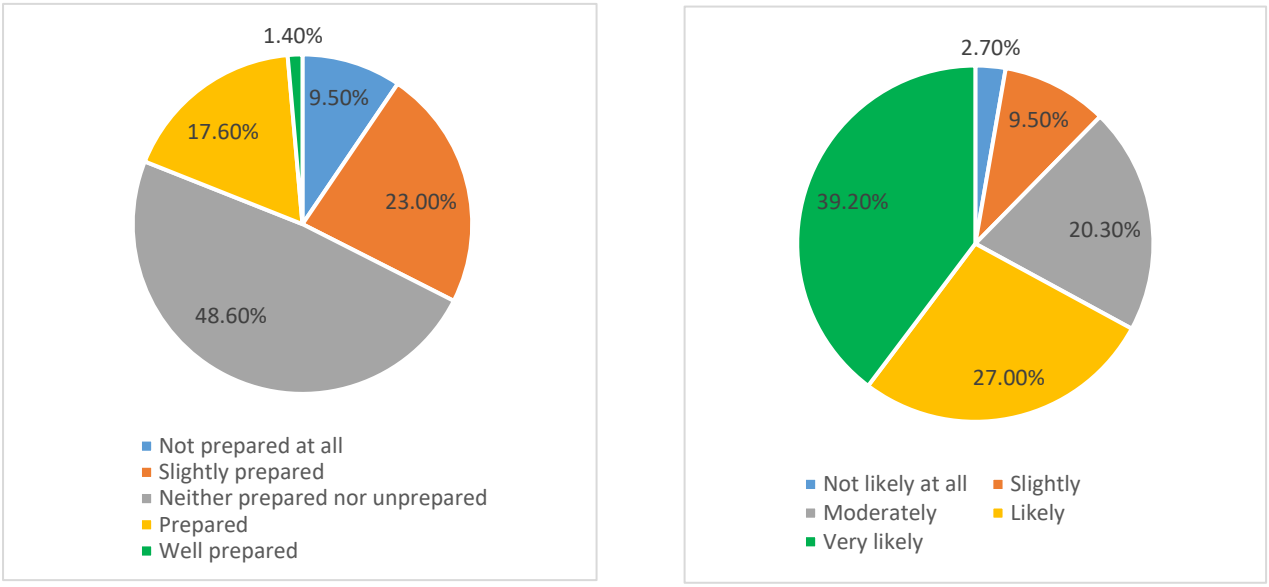

Figure 2. Preparedness to practice as a GP on the left; willingness to stay and practice in the training area on the right.

Group differences

We have compared responses to scales between groups of doctors (Table 3 and 4). Trainees from Site 1 were more willing to stay and practice in the same area and expressed stronger normative commitment (the degree to which trainees believe that they owed it to their profession to continue working) compared to Site 2 trainees. Site 2 trainees thought that it was more important for them to be familiar with community orientation elements. Female trainees had more positive attitudes towards teamwork and scored higher on practicing holistically competencies compared to male trainees. Black and Minority Ethnic (BME) trainees expressed stronger normative commitment than trainees from white ethnic background.

Most of the measures were significantly different depending on the role. Trainees at specialty training level 1 (ST1) felt less committed to their occupation (continuance commitment: the degree to which trainees believe that leaving the profession would be costly) compared to ST2 and ST3. ST1, however, they had more positive attitudes towards teamwork compared to ST3 trainees. Preparedness differed between all training levels (ST1 and ST2; ST2 and ST3; ST1 and ST3) with ST1 being the least and ST3 the most prepared for practice. Regarding competencies, ST1 trainees felt less confident in community orientation competencies compared to trainees in ST2 or ST3, and less confident in practicing holistically capability compared to ST2. ST3 trainees thought that being familiar with community orientation characteristics and resources was less important than ST2 or ST1.

Table 3. Differences between groups in preparedness to work as a GP, willingness to stay in the same area, competences, and evaluation of importance of knowing about community orientation elements.

Trainees characteristics		**N**	**Preparedness**		**N**	**Willingness to stay in the same area**		**N**	**Importance of community orientation**		**N**	**Community orientation**		**N**	**Practicing holistically**	
			M	**Statistics**		**M**	**Statistics**		**M**	**Statistics**		**M**	**Statistics**		**M**	**Statistics**
Site	Site 1	47	2.85	t(72)=-0.851, p=0.398	46	**4.22**	**t(71)=-3.181, p=0.002**	**45**	**4.45**	**t(68)=2.884, p=0.005**	47	2.98	t(72)=0.414, p=0.680	47	3.73	t(72)=0.242, p=0.809
	Site 2	27	2.67		27	**3.41**		**25**	**4.77**		27	3.04		27	3.76	
Gender	Male	15	2.60	t(72)=-0.889, p=0.377	15	3.67	t(71)=-0.987, p=0.331	15	4.44	t(68)=-1.025, p=0.309	15	2.80	t(72)=-1.481, p=0.143	15	**3.49**	**t(72)=-2.037, p=0.045**
	Female	59	2.83		58	3.98		55	4.60		59	3.05		59	**3.80**	
Ethnicity	White	32	2.81	t(71)= 0.383, p=0.703	32	3.75	t(70)=-1.231, p=0.223	30	4.50	t(67)=-0.904, p=0.369	32	3.09	t(71)=1.317, p=0.192	32	3.71	t(71)=-0.368, p=0.714
	BME	41	2.73		40	4.08		39	4.62		41	2.91		41	3.75	
Training level	ST1	29	**2.10**[a,b]	**F(2, 73)= 27.198, p < 0.001**	29	3.79	F(2, 72)= 1.646, p = 0.200	28	**4.77**[b]	**F(2, 69)= 9.576, p < 0.001**	29	**2.55**[a,b]	**F(2, 73)= 22.113, p < 0.001**	29	**3.51**[a]	**F(2, 73)= 5.772, p= 0.005**
	ST2	23	**2.96**[a,c]		22	3.73		20	**4.67**[c]		23	**3.27**[a]		23	**3.99**[a]	
	ST3	22	**3.50**[b,c]		22	4.27		22	**4.21**[b,c]		22	**3.31**[b]		22	**3.77**	

Note. [a,b,c] shows which groups differ (based on Scheffe post hoc test): [a] difference between ST1 and ST3, [b] difference between ST1 and ST3, [c] difference between ST2 and ST3

Table 4. Differences between groups in attitudes towards team work and the three commitment to the profession sub-scales.

Trainees characteristics		**N**	**Team work**		**N**	**Commitment: Affective**		**N**	**Commitment: Continuance**		**N**	**Commitment: Normative**	
			M	**Statistics**		**M**	**Statistics**		**M**	**Statistics**		**M**	**Statistics**
Site	**Site 1**	47	3.95	t(72)=1.800, p=0.076	47	5.40	t(72)=1.423, p=0.159	47	3.78	t(72)=-1.918, p=0.061	47	**3.50**	**t(72)=-4.317, p<0.001**
	Site 2	27	4.18		27	5.65		27	3.05		27	**2.31**	
Gender	**Male**	15	**3.76**	**t(72)=-2.374, p=0.020**	15	5.67	t(72)=0.907, p=0.367	15	3.46	t(72)=-0.195, p=0.847	15	2.73	t(72)=-1.151, p=0.253
	Female	59	**4.11**		59	5.45		59	3.53		59	3.15	
Ethnicity	**White**	32	4.08	t(71)=0.543, p=0.589	32	5.57	t(71)=0.751, p=0.455	32	3.44	t(71)=-0.419, p=0.677	32	**2.65**	**t(71)=-2.656, p=0.010**
	BME	41	4.01		41	5.43		41	3.59		41	**3.41**	
Training level	**ST1**	29	**4.29**[b]	**F(2, 73)= 7.224, p = 0.001**	29	5.45	F(2, 73)= 0.177, p = 0.838	29	**2.53**[a,b]	**F(2, 73)= 14.491, p < 0.001**	**29**	**2.71**	**F(2, 73)= 3.127, p = 0.05**
	ST2	23	**3.96**		23	5.58		23	**3.91**[a]		**23**	**3.03**	
	ST3	22	**3.78**[b]		22	5.47		22	**4.39**[b]		**22**	**3.58**	

Note. [a,b,c] shows which groups differ (based on Scheffe post hoc test): [a] difference between ST1 and ST3, [b] difference between ST1 and ST3, [c] difference between ST2 and ST3

Predicting preparedness and willingness to stay in the same area

Using multiple regression, we measured what factors increased trainees feeling of preparedness (Table 5). Trainees who scored higher on community orientation and holistic care capabilities felt more prepared to work as GPs. Importance of community orientation, commitment to being a GP and attitudes towards teamwork did not significantly change trainees' feeling of preparedness.

Table 5. Multiple regression results with preparedness to practice as a GP as an outcome

	B	**Std. Error**	**Beta**	**t**	***p***
Constant	0.519	1.088		0.477	0.635
Community orientation	**0.553**	**0.179**	**0.362**	**3.083**	**0.003**
Holistic care	**0.639**	**0.178**	**0.381**	**3.581**	**0.001**
Importance of community orientation	-0.355	0.210	-0.206	-1.692	0.096
Commitment: Affective	0.022	0.118	0.020	0.184	0.854
Commitment: Continuance	-0.060	0.077	-0.102	-0.787	0.434
Commitment: Normative	0.109	0.080	0.155	1.360	0.179
Team work	-0.100	0.207	-0.059	-0.485	0.630
Model statistics	$F(7, 69)=6.639$, $p < 0.001$ $R^2=0.428$				

Using multiple regression, we measured what factors link to trainees' willingness to stay and practice in the training area and analysed the impact of factors related to knowledge of the local area and commitment (Table 6). Trainees who expressed higher commitment to their profession (affective and normative) were more willing to stay and practice in the same area as their training. Competence scores, importance of knowing community orientation characteristics, and continuance commitment did not significantly change trainees' willingness to stay in the same area.

Table 6. Multiple regression results with staying to practice in the training area as an outcome

	B	**Std. Error**	**Beta**	**t**	***p***
Constant	2.199	1.465		1.500	0.139
Commitment: Affective	**0.341**	**0.170**	**0.250**	**2.000**	**0.050**
Commitment: Continuance	0.020	0.112	0.027	0.176	0.861
Commitment: Normative	**0.264**	**0.116**	**0.301**	**2.279**	**0.026**
Community orientation	-0.080	0.251	-0.042	-0.319	0.751
Importance of community orientation	-0.174	0.269	-0.081	-0.647	0.520
Model statistics	$F(5, 68)= 2.624$, $p = 0.032$ $R^2=0.172$				

Stakeholders' questionnaire results

Only eight stakeholders filled in the questionnaire and, therefore, only descriptive statistics were performed (presented in Appendix 2).

Qualitative part

Trainees: qualitative questionnaire responses and focus groups

Sixteen trainees from the two sites took part in three focus groups and one interview. The focus groups took place in October and November 2019, with one final interview taking place in December 2019. The focus groups and interview were held in the postgraduate education buildings used for the VTS training sessions at the two sites. Participants were asked about their experience of training generally, and about community orientation, population health, and patient and CPEN involvement specifically.

Table 7. Participants' characteristics

Characteristic		**Site 1 (focus groups 1 and 2)**	**Site 2 (focus group 3 and interview 1)**
Gender			
	Female	8	3
	Male	3	2
Training level			
	ST1	4	2
	ST2	4	3
	ST3	3	0
	Total	**11**	**5**

Seventy-four trainees from the two sites completed the qualitative part to the paper/online questionnaire. While most of the questions were answered by choosing from a scale, two were answered by filling out a free-text box; these concerned trainees' expectations from their programme, and their thoughts on patient engagement. Additionally, some scale-based questions had a free-text box at the end for any additional comments; these concerned trainees' preparedness to practice, their likelihood of staying in the geographical area, and expanding on their answers about community orientation and population health.

As we were only able to conduct focus groups at the start of the training year, and could not follow trainees up at the end of the year as planned due to the pandemic restrictions, the analysis focuses on this data using a combination of thematic analysis and a realist evaluation approach. The points regarding trainees' perspectives on community orientation, population health, and patient and CPEN involvement will be explored thematically, to uncover the broad themes that arose regarding these areas. The points raised about the training more generally will be examined using the realist evaluation approach, to investigate what the trainee participants felt worked, and how. The qualitative data from the trainee questionnaires will be included in the analysis with the focus group and interview data.

Community orientation and population health

Although these are separate concepts within the GP curriculum, trainees' responses to questions on these areas overlapped considerably, and the two terms were frequently conflated. This suggests a degree of questioning about what is defined by community.

There was some confusion about what these terms might mean. In relation to community orientation, this participation felt unclear about what this would entail in practice, what community was being referred to whether it was an NHS community or within the voluntary sector:

"So I think it's a great sound bite - I think the devil's in the detail right, what does it actually mean, how is it going to be introduced. So does it mean we're joining up with charity organisations, does it mean the hospital is coming out to the community, does it mean GPs are coming to, like what does it mean?" (Site 1)

Community orientation as understanding the local populace

Trainees described various understandings of what a community orientation might mean for work in general practice. This included knowing the local community and tailoring services for specifically local needs rather than for national needs:

"It's knowing your community and then kind of tailoring what you need to provide for them." (Site 1)

"Focussing on essentially local priorities more than kind of national priorities with us. So I think working with your area to figure out what the priorities are in your area, and how to work to make things easier and better. … I don't think there's a one size fits all approach to every area." (Site 1)

There was an aspect to community orientation that involved a more active role in the community, both for the trainees to make themselves known as healthcare professionals within the community, and to advocate for the community to other parts of society, such as with politicians. Knowing more about local services and even actively participating in some was suggested as a good way of deepening insights which could be used to motivate patients involved in these activities:

"I think there is much work to be done regarding that [promoting healthy lifestyles in schools], and sure we can lobby at the top, but imagine if your GP came along and was the known face, then if these children had any problems wouldn't they want to see their GP more?" (Site 2)

"It would be useful to know a bit more about the services, so like for example people that have diabetes and they're going off to do their, forget what it's called … Where they go and do Zumba and … I don't know what they do. So if I did know what they do or if I'd done it myself it would be much easier to be enthusiastic and sell it. And so actually maybe some of the training half days would be useful on an afternoon to go and sit in and see, and maybe even do it ourselves like, so you can actually say that you know it's actually good, like you're doing this and then, you know blah blah blah – it's much easier to sell it." (Site 2)

Indeed, for one participant, active engagement with the community and patients was an integral part of general practice:

"Most people don't even live in the community where they serve anymore, and I think that's a real shame. I would love to do informal visits on people, like be invited over and invite people over for dinners – and that is not what the GMC recommends. But I'm a people person, like I would struggle to live my life if I didn't have people around me, and I would struggle to serve if I didn't know the people beyond the context of a GP consultation room. That would diminish I think what the speciality offers if we weren't able to do a little bit beyond the scope of the room that we work in." (Site 2)

Community orientation as understanding local health services and systems

When asked about community orientation most participants focused more on the local health community, rather than on the local patient community. It was described as important that trainees get to know the various health services and referral pathways in the area that they work. It was suggested that networking is a good way to learn about this, and that knowing other healthcare colleagues could help trainees to navigate the various systems:

> *"Yeah I think networking within the community is really important actually, because I think that's probably how most of us will probably learn about different services, different types of specialists or different types of community, things that can be offered. I think if we aim to have like a very strong network and a good like communication between each other that would be good." (Site 1)*

> *"Sometimes like even if there are like referrals forms we can fill out, but it's also quite nice to drop like so and so an email to say like what do you think about this, do you think can he be seen quicker – things like that, so like you know the community specialists, that you know who they are and [unclear] things like that." (Site 1)*

Networks were also seen as key to implementing change; conversely without knowing people in the area it would be more difficult to put ideas into practice:

> *"I guess again it's the strength of networks right, so if we all left [location], and then worked in [location], we all knew each other, it would probably be easier to do something. If you don't know anyone then…" (Site 1)*

One way to develop local health community relations with other healthcare providers was through training sessions with people from secondary care, as sessions that this participant had attended so far were "really really good":

> *"But I think it just gives them a little bit of perspective as well, you know everything they see is like 95% pathology, whereas everything we see is 95% probably not – benign. And actually I think it's both realising you know where it meets in the middle, and like we can't refer everyone in for an MRI head, you know it's just not possible. It's just useful like having a name to a face, you know it's a little bit of networking, and that rapid access." (Site 2)*

Community as central to general practice

Community orientation was generally felt to be "central" to primary care (site 1), with a large percentage of GP work "nothing to do with medical stuff" but rather "coordinating lots of resources and like knowing what resources are out there, like support systems there for patients" (site 1). Trainees expected to develop knowledge during the programme from a community perspective, stating "non pharmacological ways to help patients" (questionnaire response) and "understand more about the local area" (questionnaire response) as expected outcomes:

> *"Social prescribing and lifestyle approach is key way to begin to tackle some of our giants of chronic disease, ↓mental health, CVD, T2DM, obesity" (Questionnaire response)*

It was suggested that sessions on "cultural teaching" would be useful, to help trainees understand the expectations of different groups in the community (site 2):

> *"And I think that because primary care is so much about not just like you said pathology, it's about social issues etc. etc. I think you need to work hand in hand with the community. I think we can't presume opinions, we can't assume that they're going to listen to us and we need to frame everything in a way that's culturally appropriate." (Site 2)*

However, some trainees did not feel able to contribute much to developing local services or even engaging with community services, in part due to the limited time they spend in each placement on rotation and a sense of not fully belonging:

> *"Sometimes difficult to feel empowered/motivated to get involved/initiate development of services as a trainee whose role in a particular practice setting is often transient (4 month rotations)" (Questionnaire response)*

Community orientation only useful for certain roles

However, the idea of community and local population was only significant for doctors in certain roles. It was suggested that a focus on community is less important for trainees planning on doing locum work, and who are therefore less tied to a specific location:

> *"I guess if we're all thinking that we're not going to be a community GP because we're going to be a locum, that's a part time locum floating doing, maybe not that useful or not that relevant to us." (Site 1)*

Conversely, knowing about the local services and referral systems could help trainees to decide to remain in the area after completing their training. For example, this participant said that they were very likely to stay in the same area, saying that it is "easier that learning new referral systems etc." (questionnaire response).

Population health

Population health was deemed to be "essential" for implementing change (site 1):

> *"Cos I think GPs are pretty central to kind of leading on systemic change, because you're not going to, even if you're a hospital consultant and you come up with some great idea, if you can't involve your local GP, it's never going to get done, because how are they going to do it? Whereas we have more of a reach into day to day, like we see patients – they're not in the hospital, they're at home, and we can actually do, we can implement a change." (Site 1)*

Knowing about the local population health was important not only for patient treatment, but also for the wellbeing of doctors. Some participants felt that working with patients with many co-morbidities, or in communities with complex population health issues, can lead to burn-out more quickly than if they had a balance of simpler cases along with the complex. Yet if doctors are aware of the various issues that can impact treatment of a health problem, this can help them to manage their own feelings about negative outcomes:

"Cos I think it can then prevent burnout in the way that you know that there are so many like external factors influencing how this patient's going to be managed and you don't think I've failed because my patient's forty and has got renal failure from diabetes – it's not that we've failed our treatment, it's because there's all these other things kind of coming in." (Site 2)

However, not all trainees were confident about being able to use population health knowledge in their day-to-day work. One participant was concerned about being able to convince colleagues to engage with them:

"Challenges in engaging fellow GPs in health promotion e.g. smoking cessation + lifestyle discussion" (Questionnaire response)

Furthermore, the time limitations of a ten minute consultation were also perceived to make it difficult to effect real change with patients:

"Difficult to challenge unhelpful health beliefs/behaviours in an appointment that is only ten minutes long, but I will try as I believe prevention is far better than cure." (Questionnaire response)

One participant felt that life in London itself made this aspect of healthcare difficult: although a patient might be registered in one area, if they work long hours in central London it is unlikely that they can easily access the services where they are registered; therefore knowing about other services in other areas for issues such as sexual health and directing patients there instead is an important way to help them from a population health perspective (Site 1).

Knowledge of community and population health influencing staying in the area

Several trainees indicated that one of the reasons they would be likely to remain in the area where they trained was having developed a good working knowledge of the local population and their health, and the community services available. For example, staying in the local area would be easier than moving somewhere when they would then have to learn about new services and referral systems (questionnaire response).

Overall there was some confusion about what these concepts meant, but the majority of participants appeared to feel that community involvement and population health were important for delivering effective care in general practice.

Patient involvement

Trainees listed a range of reasons why having patient input into their training would be beneficial, for both trainees and patients. However, there was some hesitation about how much input patients should have, and a feeling that their contributions would be more useful for practice and service management rather than for determining what is covered in training. Furthermore, when asked about patient involvement the main assumption was that this was at the level of patients taking part in sessions, rather than having input at the level of programme development.

Benefits of patient involvement

Many trainees felt that it was important to have patients involved due to their central role in general practice work:

> *"Yes as patients are the main area of contact for GPs clinically and their demands and expectations have a direct impact on working as a GP." (Questionnaire response)*

> *"Patients are very important, without them there is no GP." (Questionnaire response)*

> *"Patients are the centre of primary care and are therefore the most important part of GP training" (Questionnaire response)*

> *"Absolutely as this will be a life long career, you will need to have an understanding of the service you provide and the users of the service" (Questionnaire response)*

As general practice work is patient-centred it was felt to be important to listen to what patients have to say about future GPs' learning:

> *"Our role is patient-centred and our training affects them, so I think it is important that we listen to their input + address any concerns etc." (Questionnaire response)*

> *"CURRICULUM MATCHED TO PATIENT NEEDS HELPS W/ DEVELOPMENT OF PATIENT-LED DECISION MAKING." (Questionnaire response)*

> *"Yes → The work of a GP should be patient orientated. The GMC mentions our care should be patient centred so it makes sense patients should be involved in GP training." (Questionnaire response)*

It was suggested that input from patients would also help trainees to understand and manage their patients' expectations:

> *"If we have their input we then know what their expectations are of GPs. What they would go to a GP for & what they'd expect management wise." (Questionnaire response)*

Having input from patients could also help trainees and their colleagues to improve services generally, allowing patients to contribute to shaping the services that they use:

> *"This can be beneficial in showing patient experiences and can focus on elements of care we might have otherwise overlooked." (Questionnaire response)*

> *"Absolutely – patients can give feedback about what is important to them, and about their experiences with trainee GPs; this can be used to improve the programme which will benefit both doctors and patients in the long term." (Questionnaire response)*

> *"Absolutely. Service design & implementation should reflect the needs of the local population. This may vary from place to place, & can be informed by soliciting*

info & opinion from patients. Likewise patients are stakeholders who will have views about what they want from future clinicians" (Questionnaire response)

Having patients involved in the programme could also help trainees to engage with the local community, which in turn can have an effect on retention of trainees in the area:

"Very important, enables you learn interactively, get appropriate involvement in your local community. Helps you to decide whether you want to continue working in this area." (Questionnaire response)

There is a potentially useful connection between patient involvement and engaging with the community, whereby representatives from the community can help inform trainees' understanding about cultural expectations within different groups:

"And I think that if you had, you know I don't know how easy it would be to engage and to bring in people from the community, the ones you're trying to reach to have them you know involved in those sorts of discussions, I think that's something that probably just comes up in every single speciality and would be quite useful to have." (Site 2)

It was suggested by participants that patient involvement could also be beneficial for the patients taking part, as it can allow them to better understand trainees and their learning needs, and how training might impact on the services patients use:

"Yes – helpful to get patients on board with the process so they have greater understanding of the role/experience of trainees they meet and re: need for questionnaires, observes consultations etc." (Questionnaire response)

"Yes – patients need to understand about training GPs in their practice, need more time, may need to ask their seniors" (Questionnaire response)

Concerns about patient involvement

Some trainees felt, however, that while patient involvement was important, it was less important than focusing on the development of the necessary competencies:

"not as important as becoming a competent G.P" (Questionnaire response)

Others also thought that they had sufficient contact from patients just through their GP placements, and that they already learned a great deal from this:

"Because we get, especially when you're in general practice you get so much face to face contact with your patients and you're learning so much from your patients, cos it's you and the patient, and then you're debriefing with your supervisor straight after, so like I've never thought oh I'm just not getting a patient's view." (Site 1)

Although patient involvement was perceived as an important thing, trainees were not always convinced about how useful it would be. When describing a session where lay person had attended, one participant felt that having a lay person there did not bring any new ideas to what they were learning (Site 1,). There was also a suggestion that having patients involved could be perceived as

somewhat patronising, implying that the trainees do not know what they need to be learning in their sessions:

> *"It just comes across really patriarchal doesn't it? As doctors like we know that we need to learn in our VTS sessions, we don't need the patient involved." (Site 1)*

> *"No, the trainers and practicing GPs should help with this as they are preparing us for real life" (Questionnaire response)*

> *"I mixed on this. I think it's important but that patients may not necessarily have all relevant information and ability to prioritise this" (Questionnaire response)*

> *"Yes, to get the patient perspective but with recognition that they may not be aware of wider issues so contribution is limited" (Questionnaire response)*

Some participants expressed concern that patient involvement would need to be carefully managed to ensure that it does not detract from the key things that they should be learning:

> *"My concern is if unstructured then this will focus too much on specific areas and lose sight of the wider curriculum needs" (Questionnaire response)*

> *"However, important it is important that these patient agendas do not overtake training needs." (Questionnaire response)*

> *"yes but needs to be a controlled amount as too much may also be detrimental as patients may not be as aware of all of our learning needs" (Questionnaire response)*

There was also a perception that having patient representatives would only be useful if that was representative of patients more generally, rather than just of specific conditions and experiences:

> *"So whereas the patients, their experience is just really personal to themselves so it's difficult for them to be saying like what the doctor is lacking." (Site 1)*

> *"A patient will always have a bias towards whatever they have." (Site 1)*

> *"I think it's a good idea, but I would hesitate to say that they should like, any patient should be at the very top levels of developing a GP training course. I think it would be really good to have the different specific patient groups be consulted when an education programme has been developed, or has been hashed out initially to say we're going to be talking about heart disease and heart problems – take lots of different people from different heart condition groups and then say you have an opportunity now to kind of say what is it that you want a GP to know, or GP to feel about, or GP to be aware of when they see somebody with your condition – and then they can have a large amount of input to say in that. But at the very top levels of designing an entire course we can't have a patient representative of every illness or disease because there would be thousands of people, and that would be a bit difficult." (Site 2)*

There was a feeling that patients would need to be "vetted" to make sure that their experience would be of educational benefit for the trainees (site 2).

It was felt that contributions from patients would be most useful for inputting into management or practice level issues, rather than for determining trainees' learning:

> *"They're quite useful for like you said … let's say if you want to like improve like the management or the system or the practice, then obviously that's because the patients are the focus in that case. But like learning … but I don't think they would contribute very much to our learning programme, to shape how our learning should be." (Site 1)*

There was also a concern that having patients involved in sessions could potentially detract from the "safe space" that trainees have as part of their training sessions, where they are able to discuss any problems that they have experienced with colleagues or patients, which they might not feel able to air with patients present (site 2).

Participants appeared to appreciate the value of patient involvement in theory, but were concerned about how deep this involvement might be in practice. There was also an emphasis on patient involvement at the level of participating in sessions, rather than at the level of programme development.

CEPN involvement

When trainees were asked about what they thought about there being CPEN involvement in the programme, most were unsure what this was, with very few recognising the acronym or the full name of the scheme (Community Provider Education Network):

> *"I've heard the acronym being bandied around but I don't actually know what it means." (Site 2)*

When they were told a little bit about the scheme by the interviewer, most were still unclear about it and what it meant for their training.

Those who did have some idea about the scheme, and had attended some related training, said that how useful it was depended on the topic being taught (site 1). For this participant, the multidisciplinary nature of the sessions attended made it difficult for some participants to appreciate, due to the different levels of knowledge in the room:

> *"It's really difficult for them because they have to pitch it at so many different levels because there's consultants in that room as well as like nursing students, you know health care assistants, so when you're pitching it and aiming something at so many different people, obviously it's going to be very difficult to get it right." (Site 1)*

However, another participant found that the sessions were informative for understanding local services:

> *"And then they also brought in people that talked about the service and how it interlinks and connects. You know then people were sort of raising points about like, and I found this as well, you know you try to get in touch with the social worker and you can't get in touch with them, and then the person from that side of things explaining the change in the service and all these sorts of things. So actually it is really useful and I think they do work. (Site 2)*

In another group, when asked if they were aware of other training opportunities, they felt that they were discouraged from doing so:

"We are not encouraged to do that, and the opportunity is not presented, it's open to us – as far as I'm aware." (Site 1)

Overall, then, participants had little knowledge of the CEPN scheme, but those who did appeared to appreciate the opportunities from it.

Trainees' future plans

Participants spoke about their future plans, and what might influence the decisions that they make about this. For plans about where they plan to live and work, both work and personal factors were important. For plans about how they view their future career, the major theme to emerge was the desire for a flexible and varied work-life.

Plans to stay in or leave the local area

Reasons given for potentially staying in the area or leaving centred around personal commitments and aspirations, and knowledge of the local health services community.

Being aware of the health services in the area was a major factor in participants' decisions to stay:

"Innovative area, good systems and services, good location for me" (Questionnaire response)

"Good feedback regarding many GP surgeries in [location]. Will have made connections with more senior trainees who will also likely be in local surgeries." (Questionnaire response)

"Understanding of local pathways + services" (Questionnaire response)

When trainees had already settled in the local area, or had family settled there, they were more likely to say that would probably stay and work in the area where they were training:

"I have a mortgage and children in local schools" (Questionnaire response)

However, personal commitments in other areas appeared to take precedence over work factors in trainees' decisions to stay or leave:

"It would be easiest if I did it in the place I trained, because you know the systems, you know what's available and how people work. And that would be the easiest solution. It might be the solution that I might choose, but I think it also depends on other factors. That wouldn't be the main deciding factor, it would be other factors that would decide where and when I work. … such as family." (Site 2)

"Wife in another city" (Questionnaire response)

"Unlikely due to family commitments & wishes for children's education." (Questionnaire response)

Personal aspirations were also a key factor for deciding to leave, in particular the fact that London is an expensive place to live:

"Cost of living too high." (Questionnaire response)

"Unsure. I will likely move out of London after finishing my training as "greener", better value for money." (Questionnaire response)

There was also an element of wishing to maintain a healthy work-life balance, with one participant preferring to not work in the same place that they lived, to allow a certain amount of distance between work and personal life:

"Like you want to draw a line where you're living and the people around, because you will just see them all the time, and people don't keep those boundaries. Cos they're just so excited to see you sometimes, but really like you know you want to keep that boundary for yourself. (Site 1)

Career plans

A key theme that came out of the focus groups and interview was flexibility: being able to work flexibly, and incorporate some other aspects of medicine was a major incentive for participants to opt for general practice originally:

"Whereas now, yeah my overall sense is that of all the medical specialities yes, GP probably gives the most variety. You can do pretty much anything with it, you can structure your week however you want, you can locum some of it, work nights, weekends, whatever you want – and it also gives you, you know you can do teaching, research, go into public health." (Site 2)

Some were keen to work part time in general practice, and use the rest of their time to pursue other interests:

"Yeah I think, I don't have as much experience, so I can't say, but I definitely don't want, I was thinking three days would kind of be, and then I have an interest in [specialty] and I do [specialty] locums. So I may over the next three years sort of pursue that a little bit and get a bit of a specialist interest in that, but not necessarily do it as a GP, do it as like in hospital clinics and stuff." (Site 2)

There was a suggestion that working in this way would also be beneficial for doctors' mental health and wellbeing:

"But I mean I haven't done any GP work in [location], I don't know exactly what it's like, I'm sure it's very challenging and it is very kind of disposed to a burnout, but I would work part time and I've got an interest in [specialty], so perhaps do some [specialty] work outside, do some [specialty] clinics." (Site 2)

It seemed that trainees were well aware of the flexibility of general practice before beginning training, and that their plans to not work full time in this specialty were made right at the start:

"I think the reason people choose GP is the flexibility. So like I don't think they get to the end of ST3, go into GP and think 'Oh this is too much I'm going to do less than full time, do part time' – I think people know from the moment they start the

GP training that they're not going to be doing it full time anyway because they've got other plans." (Site 1)

This implies that even if trainees opt to stay in the local area, they may still only work part-time in the role of a GP.

Stakeholders: qualitative questionnaire responses

Eight stakeholders completed the questionnaire at time 1, four from each site. Demographic characteristics are presented in Table 8.

Table 8. Stakeholders' demographic characteristics

Characteristic		**% (n)**
Gender		
	Male	25% (55)
	Female	75% (100)
Ethnicity		
	White	87.5% (7)
	BME	12.5% (1)
Are you a General Practitioner?		
	Yes	50% (4)
	No	50% (4)
VTS Location		
	Site 1	50% (4)
	Site 2	50% (4)

Text boxes were provided for fourteen questions about various aspects of the programme and its development; eight of these were stand-alone, and six were part of the quantitatively rated questions to allow participants to explain their answers if they wished. Their responses are summarised below.

Participants were asked about their involvement in developing the programme so far. Respondents ranged from being new to the scheme, to having been involved in some way for a number of years. They included senior leads, recent graduates, patient representatives, and those with clinical input. Their input so far also varied, from a great deal of planning to not much at the point of the questionnaire.

Aims and considerations for the new programme

The key point to emerge from the stakeholders was the importance of community orientation in the scheme's GP training. A range of potential benefits to come out of this focus were suggested, including a greater understanding of the services available for patients, exposure to opportunities in the community, and increasing a sense of belonging that might translate into trainees remaining in the area after completing their training. Related to this was the importance of ensuring that the training was reflective of the local community's needs. There was also a focus on population health, which would allow trainees a broader understanding of the wider determinants of health in addition to the

clinical aspects that are already covered. Opportunities via the training hub were also mentioned as an aim.

Participants highlighted the need to include a range of stakeholder voices when planning the programme, including patients and public health, and having some multi- or interdisciplinary learning to ensure a greater awareness of other health and social care professionals who will also be working with trainees' patients. However, it was also key to involve the "right" stakeholders, ensuring that there is proper engagement to get relevant thoughts on training priorities, and that the involvement of other disciplines is not tokenistic. Related to this was a suggestion that patients be better incorporated into the training, and that trainees need an understanding of how ailments can impact patients' everyday lives.

There were some areas where participants expressed some wariness about the programme development. One was a concern not to lose the features in the previous iteration of the programme, that were valued and of good quality. Another was the need to make sure that having patient voices and multidisciplinary involvement does not detract from the trainees' learning needs, suggesting that the trainees' needs should be paramount in how the programme is planned. Moreover, one participant said that trainees need to be supported and feel valued.

From a broader perspective, one participant mentioned taking NHS long-term plan into account when developing the programme.

Changes from the previous iteration of the programme

Stakeholders were asked to comment on what had changed from the programme as run in previous years, and how these changes might impact the programme.

Some participants felt less able to comment, being relatively new to the scheme, but others listed several changes with some anticipated benefits.

The main change given concerned the addition of key stakeholders in the programme planning, including patients, people from public health, and trainees. These new relationships were to be developed while also maintaining existing ones. It was hoped that having these additional voices will lead to discovering areas of learning that had not yet been thought of. Having greater patient representation may also result in trainees developing a better understanding of health and disease in the local community. Furthermore, a better understanding of the local population's health may lead to improved retention of trainees in the area.

A further change was to include more multi-disciplinary learning, and to develop the training hub. One participant hoped that these changes would lead to an improved uptake of the programme.

As the questionnaire was administered at the start of the training year, participants were not sure just how the programme would help trainees. It was felt that there was a lot of ground to cover, not all of which would be covered in just one year as it is a three-year programme. One participant suggested exploring other means of teaching other than face-to-face. Furthermore, some aspects would be gained during trainees' GP placements, which are not part of the pilot project.

Patient involvement

Having patient representation as part of the programme's development was considered to be important or integral by nearly all participants. Having this would allow trainees to understand the

needs of the population generally, and see what services and support are needed from the patient's perspective, allowing new GPs to be able to respond to patient needs. This would also ensure that the training is contextualised. If there are any areas not thought of before by the programme developers, patients might be able to bring these to the fore.

However, it was felt that this representation needs to be fair and not tokenistic. Furthermore, that the amount of involvement should be dependent on the topics being taught and the focus of the teaching, so that input would be on areas such as consultation skills, service design, and integrated care, rather than clinical elements.

Community orientation and engagement

Participants spoke favourably about this objective. It was felt to be beneficial for giving trainees an awareness and understanding of their local communities, and an awareness of the local services available for patients. This would also contribute to increasing the sense of belonging among trainees that might lead to improved retention of trainees in the local area.

Participants suggested some ways of increasing engagement with the community. To engage with the local population, trainees could hold stands at local events and run little games to aid interaction. To engage with local health and social care services, trainees could attend training based in community settings, or training via the training hub in order to meet other members of the local health workforce. They could also shadow colleagues or community organisations, and connect with voluntary groups, schools, charities, and community groups.

Knowledge of population health

This was also felt to be important for trainees, as GPs and the wider health workforce are being encouraged to take a population health view when providing care for their patients, in line with NHS policy. This was also felt to be important for preventative rather than just reactive healthcare.

Suggestions for incorporating this into the programme included adding a population health perspective to teaching sessions and involving public health in sessions. Opportunities in the local community were also raised in relation to this topic, including shadowing in the community, attending community groups and clinics, and linking with local wellbeing boards.

Discussion

In the discussion that follows, we outline the key findings from our results, and then go through some of the implications using a realist evaluation framework.

Community orientation and population health

The RCGP 2019 curricula defines community orientation as an ability to understand the health and social care needs of the local population taking into account sociocultural demographics and any health inequalities. In order to demonstrate community orientation a GP trainee will adapt their practice mindful of their context, capitalise on community-based resources and seek opportunities to tailor service delivery in a way responsive to local need. GP trainees also need to demonstrate the ability to balance the sometimes challenging equipoise between looking after individual patients and being responsive to the wider community that they serve. Community orientation is also described as extending into an ethical, political dimension whereby GPs become local advocates for maintaining or advancing local services. Community orientation includes a range of practices that demonstrate:

- understanding the range of services available;
- appropriate referral and prescribing using local guidelines;
- understanding of local resources and services, including those outside the NHS;
- and active involvement in developing services, including collaboration with private and charity organisations.

Based on this definition it can be seen that there is a divide between community orientation and population health, with population health being an understanding of the illness demographic within the community (a clinical topic), and community orientation concerning the understanding and development of locally appropriate services (a capability area). As seen in the data, however, this divide was not always clear for the trainees taking part in this study.

The trainee participants were aware that community orientation involved understanding local needs and tailoring health services, and in some instances they were happy to become actively involved in a broader range of community services. There was some confusion, however, around the term ‘community’, and whether that related to healthcare networks or to community-based resources.

One participant identified the rationale for this 12th competence, by describing how GPs do not necessarily live within the community they serve, and therefore need to make additional efforts to understand how best to support their patients. Willingness to understand community was considered important to the trainees interviewed in this study; it was regarded as essential in order to provide holistic care and draw on non-medical resources and social structures. However, willingness to develop services in the area sometimes related to whether the GP trainees had a strong sense of belonging to that community or not. Trainees on short primary care placements or for those who imagined GP locum work as their future anticipated less active community engagement. Generally the healthcare community was prioritised over the patient community, as gaining insights into this was seen as an important area for GP trainees to become competent in.

Generally, trainees recognised the importance of community orientation and population health for their future practice. Trainees called population health essential for implementing change and for effective patient treatment and community orientation as “central” for primary care. Trainees also mentioned that knowing health services and other healthcare colleagues could help them to navigate

various systems, and being familiar with population health might affect their wellbeing (knowledge about this might help to manage their feelings about negative outcomes if working in a community with complex population health issues).

Understanding the local population and its health, and knowing about the community services available and the referral systems also motivated trainees to stay and work in the training area. The quantitative part of the study also found that trainees who were more confident in community orientation, felt more prepared to work as GPs. It also revealed, not surprisingly, that the confidence in this topic increased with training level, that is ST1 were less confident compared to ST2 or ST3.

Despite the benefits, trainees seem to require some clarity on what these topics mean in relation to the course as responses to questions about the two areas (community orientation and population health) overlapped considerably. Some trainees also felt they were not able to contribute to these areas (such as service change or engagement with community services) due to a limited time for consultations (difficult to influence real change), or limited time spent in each placement on rotation. Trainees also felt that community orientation topics were less relevant for trainees planning on doing locum work as they felt less tied to a specific location. Interestingly, the quantitative analysis showed that the perceived importance of being familiar with community orientation aspects (for example being familiar with the characteristics of the local population, the locally available resources and services, and other practitioners) was lower at ST3 level compared to ST2 or ST1.

Stakeholders identified a number of benefits of covering community orientation and population health topics in the GP training: a greater understanding of the wider population health and services available for patients, exposure to opportunities in the community, and an increasing sense of belonging which stakeholders thought might translate into trainees remaining to practice in their training area. Indeed, the quantitative part of the study revealed that trainees who were more committed to their occupation were more willing to stay in the same area, specifically for those trainees who expressed higher affective (feeling emotionally attached to the profession) and normative (believing that they owe it to their profession to continue working) commitment. Even though statistical analysis did not reveal a significant link between trainees' confidence in the community care area and plans to stay and practice in their training area, this link, as mentioned by stakeholders, might have been mediated by trainees' commitment.

In order to increase engagement with the community and local services, stakeholders suggested various additional activities, such as trainees holding stands at local events and running interactive activities, attending training based in community settings or via the training hub, shadowing colleagues or community organisations, and connecting with voluntary groups, schools, charities, and community groups.

Patient and CPEN involvement

Trainees reported patients being central to their education and clinical practice. Trainees stated that patient-centeredness was at the core of being a general practitioner, both in terms of identifying patient needs but also in involving patients in making decisions about their care. Hearing what patients had to say allowed trainees a greater understanding of their patients and in that regard was helpful when working with them to formulate their management. Patients were also recognised to have important insights regarding service delivery and improvement, being able to provide unique first-hand experiences of healthcare. This collaborative relationship not only was reported to benefit the GPs' provision of care but also had important benefits for patients including greater understanding of

the circumstances in which primary care operates. Learning from and with patients was reported to be an important element affecting decisions to stay in particular geographical locations.

However, there were some trainees who felt that patient involvement shouldn't detract from the more clinical competences. It was also felt that because general practice was all about patient contact that it was not necessary to have any more involvement in curriculum design.

Other trainees were also more sceptical about patient involvement in curriculum development, stating negative examples of patient involvement and a lack of impact on their own learning. Having a clear curriculum empowered GP trainees to understand their own learning outcomes and therefore a more fundamental involvement through patient involvement was deemed unnecessary. Scepticism was further reinforced through their understanding that the patient perspective could be partial, unaware of the bigger issues and complexity of practice. There was a strong notion of having to "control" patient involvement so as not to derail GP trainees learning; trainees learning needs should not be overwhelmed by the patient's agenda, their unique experience of illness. The patients' unique experience of illness was also raised in the context of patients not being able to provide more generic or representative matters that faced a wider patient population. Patients were often siloed because while they had unique expertise about their own medical conditions and whilst this was valuable it meant that their input into curricular and training was to some degree marginalised by this, that they would be biased towards their own condition and experience. The final issue that was presented as a barrier to patient involvement was that their presence would interrupt the "safe space" that existed during vocational training sessions. Trainees felt that service delivery might be a more useful area for patients to contribute to than training development.

There is a normative view of patient involvement in the accounts of GP trainees, one that appears compatible with a lower level of participation in medical education. Levels of engagement in patient involvement/participation are described by the ladder of participation (Arnstein, 2007), which has been adapted for patient and public involvement in the NHS. There are three main stages to this ladder. The first stage is "doing to" and involves coercing, educating and informing. The second stage is "doing for" and involves consultation and engagement. The final and most sophisticated stage of patient involvement is "doing with" and involves co-producing and co-designing services. The results of this research show that most GP trainees are considering patient participation at the lower end the participatory ladder in terms of how they suggest that patient involvement should influence their curricular development.

Stakeholders believed that a range of people (including patients) should be involved in planning the GP training programme but, similarly to the trainees, highlighted the need to involve the "right" stakeholders. This was important in order to receive relevant input and do not detract from the trainees' learning needs. Stakeholders felt that patient involvement is an integral part of the programme's development as it helps to contextualise training showing the needs of the population. However, they also discussed the areas of involvement highlighting involvement in consultation skills or service design rather than clinical elements.

Patient involvement is a highly problematic area in curriculum development. Part of the problem is that patient involvement can happen at so many different ways as identified by GP trainees in this research. Rowland et al. (2019) identifies the complexity of patient involvement in medical education and the issues that can become apparent which include "problems of identity, rights and expertise. We also see problems of assessment and of fair decision making for students. Foundational to all of this, we see problems of power, problems of influence and the changing relationships between patients, publics, health professionals, researchers and governments." There is also the problem of

'solutionism' whereby patient involvement is seen to solve or ameliorate particular issue before the concept and its mechanisms of action have been fully understood (Rowland et al., 2019).

Trainees had very little knowledge of the CEPNs. Indeed, most of the trainees were not sure what the CPEN was. The ones who had attended some related training sessions said that how useful they were depended on the topic being taught. Some trainees felt that they were discouraged from such training opportunities. When talking about patient involvement trainees' assumptions were that such an input was at the level of the session (patient taking part in sessions) rather than at the level of the programme development.

Implications for training programmes

In this final section, we show how the points considered in the discussion above can be explained using a realist evaluation framework, by seeing how they link together: what may or may not be helpful for encouraging trainees to engage with community orientation, population health, and patient involvement in their training and practice. Further examples from the qualitative data will be outlined incorporating the context in which they occur, the mechanism by which they occur, and what the perceived outcome is or may be, according to the participants we spoke to. This will highlight what was working at the start of the pilot scheme, for who, and in what circumstances.

One aspect of the community orientation and patient involvement focus that came through concerned training within a more holistic programme:

> *"It's certainly been far more holistic than I ever expected it to be. … I think that's a good thing. It reminds us that we are not just doctors, we're also humans, and I think that's possibly one of the better ways to start a consultation with a patient from a human point of view. It's nice to be reminded of that." (Site 2)*

In this participant's response, we can see within the **context** of a more holistic training programme, which has a more humanistic and not purely medical focus, and through the **mechanism** of individual trainees who share this more holistic outlook, there is the potential for the **outcome** of a developed sense of importance of patient perspectives among trainees.

There is also a potential advantage of an increased focus on community orientation on trainees' attitudes towards a community oriented approach in primary care:

> *"Because I feel like 60, 70% of GP work is nothing to do with medical stuff. It's about, okay maybe not that much, but just about like, it's like coordinating lots of resources and like knowing what resources are out there, like support systems out there for patients. Specially when it comes to like mental health and even like palliative care, yeah nursing [inaudible] and stuff, I think it's all like very much community stuff … like diabetes management as well. … So all community stuff." (Site 1)*

Within this example, we can see within the **context** of a course that includes exposing trainees to the wider healthcare community, and through the **mechanism** of individuals who believe that the role of the general practitioner largely includes gatekeeping to other services, there is the potential for the **outcome** of a developed sense of importance about having a community oriented approach in general practice.

The importance of community and population health can also be highlighted for trainees through the placements they are on and the populations they work with:

> *"I live in [location], and when I lived in [location] I definitely wasn't the standard person who was within that community. Obviously the community is diverse but, and when I had GP placements within this area, because I trained in this area, in med school, yeah we would have sessions where you wouldn't see a single person who wasn't sort of second general immigrant Muslim families, and so it's very, how am I supposed to know what cultural influences they have, how am I supposed to know what religious factors influence them etc. etc. And I think that because primary care is so much about not just like you said pathology, it's about social issues etc. etc. I think you need to work hand in hand with the community. I think we can't presume opinions, we can't assume that they're going to listen to us and we need to frame everything in a way that's culturally appropriate." (Site 2)*

In this example we can have a trainee illustrating that within a **context** of a deprived area with cultural differences to consider when providing care, and through the **mechanism** of being aware of the community population's health needs, the **outcome** of trainees gaining a heightened sense of the importance of knowing the community population can occur.

Working out in the community and not just in surgery can also lead to positive outcomes in trainee attitudes towards community orientation and population health:

> *"I think also with like, I mean you only learn this on home visits I think, but you know the overcrowding I guess in the way people live. I guess when we're doing primary care, it depends where you are, but you learn it and you go to see these sort of housings, but the people, the ST1s that haven't – it's really useful just to put like, I guess you know cos like chronic pain is also a really big thing here, and there's a lot of rheumatoid arthritis one way or another. You know and framing physical activity in the way that people can relate to, especially for the elderly that like, I don't know, that only have one room for so many people and, you know them getting about – it's so difficult. Yeah you want a session on that, because we do get taught to say you have to, you know we know that people aren't going to have the same attitude towards people of our like, like class, you know how eager we are to exercise, but I think it's framing it in like the practical circumstances that I think it's just useful to have like a formal session in you know. Again people sharing their experiences, but it then makes it easier when you're consulting and talking about like physical activity and chronic pain." (Site 2)*

Within the **context** of working in an area with complex social, cultural, and health needs beyond those of the practitioners, through the **mechanism** of being exposed to the local community through their training, for example by carrying out home visits, can lead to an **outcome** of trainees being willing to work flexibly in the community and collaboratively with other services.

However, there are some factors that could impede trainees' engagement with community orientation, which are more related to factors external to the trainees themselves, and more to do with the services within they work:

"Also are we going to work in the same practice on a day to day basis? I mean some people are going around locuming you know – if you're working in South London one week and then Surrey the next, and then Watford the next. … And just anecdotally, from working in one place for six months, some of the GPs there didn't know some of the services, because they were changing. So how people would, there's obviously a high proportion is mental health patients and how people would refer the mental health patients. First of all you would refer to IAPT, the counselling service, but then the [local service] came into play, and so people would then sometimes refer to them. So actually even in those six months that I was there, things were changing and you were teaching other GPs stuff that they should potentially know." (Site 1)

Within this example, we can see that when there is a **context** of a lack of knowledge or confusion about the management of care services, together with the **mechanism** of a perception that red tape will prevent trainees feeling able to provide a community oriented approach, this can lead to an **outcome** of trainees not being committed to pursuing community oriented approach. When the added context of working in an unfamiliar area because of moving around to different areas for work, this can compound the outcome of being less committed to a community oriented approach.

Related to the previous context of confusion around services, is the time limitations that trainees have to do their work with patients:

"I think it's like, so I've just started my ST2 placement of GP before going to ST3 and just do it sort of all the time, and obviously having been a graduate six years and this was obviously the first time that I'd actually gone into a GP practice and done it – because I'd done core medical training before, so it was, like on my first day I was honestly shaking. Like because I'd had an induction of three weeks which was great, and you sat in with patients, and none of it was sort of 'Oh my goodness, I don't know what I would do' but when you're sat there on your own it can be really sort of like nerve-racking. And then when I got through it was fine, but then, so for example gone from 30 minutes to 20 minutes, because the trainers felt that I could do it, and I felt that I could do it – but you feel it, you feel that extra pressure because you're actually, your screen is sort of then cut in half and obviously like you said twice as many patients – how do you then deal with the home visits, the calls, the duty doctors, it's just, it feels a bit overwhelming possibly." (Site 1)

This trainee talks about the **context** of time constraints, and having a decreasing amount of time to spend in consultations with patients as their training progresses, together with the **mechanism** of an increased awareness of what the 'real' workload will be in general practice. This can lead to the **outcome** of trainees worrying about their ability to work flexibly and in the community.

There is a potential for trainees' future plans to be influenced by the context in which they are training and working:

"And I do think that the way that it's going with squeezing in the healthy into the tele-medicine and keeping the chronic to be seen by us is probably more efficient – I think it's probably a better way of planning a service, but I do think that it does lead to burnout, because actually especially where we are you know we've got the extra like dimension of you know such poverty, deprivation, language barrier,

you know cultural discrepancies, so not only have you got the complex elderly, well other people have, we also have like the young complex because you know of the genetic risks you have here. So you can sometimes just feel like you're in a hole because everybody has got things you can't solve. You can't solve their housing, you can't solve this, you can't solve their benefits, you know so you desperately want that kind of simple thing. But now because people are so in demand for appointments, they obviously want the tele-medicine, want the quick fix. So yeah you're right, it is an interesting time to go into it. It doesn't put you, I think this is a nice area to work in, it doesn't put you off, but it definitely does just make you think about how long you can do clinical, like purely clinical for." (Site 2)

The participant here describes working in a **context** where increasingly younger and healthier patients use tele-medicine, meaning that patients coming into surgery are more likely to have co-morbidities and social complexities that are harder to manage. This within a **mechanism** of feeling helpless and therefore demotivated due to not being able to 'fix' all the issues presented by a patient can lead to an **outcome** of a reduced commitment to stay the area and the clinical role in the long term.

Similarly, in the **context** of training in a densely populated area with significant social deprivation issues, where by the **mechanism** of trainees having personal aspirations for their quality of life wellbeing, a similar **outcome** of being less committed to the area and role can arise.

From these examples, it can be suggested that training programmes should:

1. Include an emphasis on the humanistic side to being a GP, acknowledging that "We're not just doctors, we're also humans" who can then relate to patients as other humans, with equally important views and experiences. This will help trainees to **develop a sense of importance of patience perspectives**.
2. Highlight the 'gatekeeping' responsibility that GPs have to access other health services. Exposure to the wider local healthcare community helps trainees to know what support is available to patients, meaning that they are then able to direct them to it. Exposure to the local population outside of the surgery also expands their understanding of their local community as well as its needs, and highlights the importance of a community oriented approach. This will help trainees to **develop a sense of importance about having a community oriented approach in general practice**.
3. Emphasise the achievability of community oriented approaches. Fostering a sense of the importance of community oriented approaches will be hindered if it is perceived to be too complicated and challenging to implement, so details about how to go about this are helpful for trainees. This will help trainees to **increase the likelihood of *acting* on enhanced understanding of the importance of these things**.

Conclusion

The Royal College of General Practitioners (2019) notes that community orientation includes "understanding the health service and your role within it" and "building relationships with the communities in which you work". The current study has identified two similar aspects emerging from conversations with trainees and stakeholders: community at the level of professional contacts and networking, and community at the level of a patient. Interestingly stakeholders more often referred to the second aspect, mentioning the importance of understanding the communities in which the

trainees train and work, while trainees focused slightly more on the connections with colleagues in other health and social care locations, for example for referrals to hospital. Clarification among all parties around these topics and the role in the GP programme, therefore, might be beneficial.

Generally, the majority of participants agreed that community orientation and population health topics, and patient involvement are important for GP training, but these activities need to be appropriately organised to receive the most positive results.

Taking into account the contexts in which the training takes place, and the mechanisms which can aid positive outcomes to occur, can help in both implementing and continuing with educational interventions that promote community orientation, population health, and patient and other educational scheme involvement.

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Appendices

Appendix 1

Descriptive data of two capability areas, *community orientation* and *practicing holistically*: Trainees' responses.

Table 1 presents mean scores and standard deviations of each item from the community orientation and practicing holistically scales; as well as minimum and maximum scores and the number of participants answering each item. This description gives an overview of which competencies were scored higher or lower. For example, from the range of answers (maximum scores) and means/standard deviations we can see that items on the familiarity with the characteristics of the local population (M≥3.22) were scored higher than items on the familiarity with the resources and services (M≥1.78). We present the distribution of answers to each item below.

Table 1. Item level description of two capabilities scales: community orientation and practicing holistically

	N	Minimum	Maximum	Mean	Std. Deviation
Familiarity with the characteristics of the local population	74	1	5	3.44	0.87
Patient demography: age	74	1	5	3.53	1.04
Patient demography: gender	74	1	5	3.27	1.09
Patient demography: ethnic minorities	74	1	5	3.65	0.97
Patient demography: socio-economic differences	73	1	5	3.55	1.04
Disease prevalence	74	1	5	3.22	1.01
Familiarity with the resources and services within the local community	74	1	4	2.31	0.78
The availability of various medication	74	1	4	2.46	0.92
Counselling/psychotherapy	74	1	5	2.86	1.15
Child support services	74	1	4	2.27	0.90
School nurses	73	1	4	2.00	0.85
Funeral directors	74	1	4	1.78	0.88
Child protection	74	1	5	2.59	1.13
Patient participation groups	74	1	5	2.18	1.01
Familiarity with the health and social care practitioners	74	1	5	3.11	0.95
Nursing associates	73	1	5	2.77	1.21
Community nurses	74	1	5	3.26	1.10
Paramedics	72	1	5	3.19	1.16
Physician associates	74	1	5	2.55	1.14
Pharmacists	74	1	5	3.57	1.07
Physiotherapists	74	1	5	3.34	1.20
Other community orientation capability items	73	1.5	4.25	3.27	0.58
I understand how the characteristics of the local population shapes the provision of care	74	1	5	3.65	0.96
I am confident in my ability to take an active part in developing services in my workplace or locality that are relevant to the local population	74	1	5	3.07	0.78

I know the range of services available for my patients in my local community	74	1	5	2.85	0.92
When appropriate, I always refer my patients to local services or direct them to other local resources	70	1	5	3.44	0.93
I understand how local processes shape service delivery	73	1	5	3.11	0.98
I often reflect on the requirement to balance the needs of individual patients, the health needs of the local community and the available resources	73	1	5	3.21	0.93
I do not use local resources to enhance patient care (R)	71	2	5	4.08	0.82
I am confident in my ability to improve services through collaboration with patient-led organisations and voluntary sectors	74	1	5	2.72	0.85
Practicing holistically items	74	2.43	4.86	3.74	0.53
I always enquire into the physical, psychological and social aspects of the patient's problem	74	2	5	3.97	0.78
I am confident in my ability to develop an understanding of the patient in relation to their socio-economic and cultural background	74	2	5	3.78	0.76
I am confident in my ability to use information about the patient's background to inform discussion	74	2	5	3.78	0.83
I lack confidence in my ability to use information about the patient's background to generate practical suggestions for the management of the patient (R)	74	1	5	3.42	1.06
I lack confidence in my ability to access information about the patient's psycho-social history in a fluent and non-judgemental manner that puts the patient at ease (R)	74	1	5	3.76	1.02
I recognise the impact of the problem on the patient	74	2	5	3.99	0.67
I recognise the impact of the problem on the patient's family and/or carers	74	2	5	4.01	0.65
I understand the limits of my ability to intervene in the holistic care of the patient	74	2	5	3.78	0.73
I offer treatment and support for the physical, psychological and social aspects of the patient's problem	73	2	5	3.75	0.78
lack confidence in my ability to utilise appropriate support agencies (including primary health care team members) targeted to the needs of the patient and/or their family and carers (R)	73	1	5	3.48	0.90
I am confident in facilitating appropriate long term support for patients, their families and carers that is realistic and avoids doctor dependence	73	1	5	3.07	0.84
The GP plays an important role in health promotion	74	2	5	4.58	0.68
I am confident in my ability to identify and challenge unhelpful health beliefs or behaviours, whilst maintaining a continuing and productive relationship	74	2	5	3.55	0.86
I lack confidence in using tools in health promotion, such as decision aids, to improve health understanding (R)	74	1	5	3.36	0.93

Community orientation

Figures 1-4 present the distribution of trainees' answers to questions on various aspects of community orientation. First, trainees were asked how familiar they were with the characteristics of their local population (Figure 1). Trainees were the most familiar (based on % of "very well") with the following two characteristics of the local population: ethnic minorities and socio-economic status (mean scores were also the highest for these two items: 3.65 and 3.55 respectively, Table 1). Trainees were also asked how important it was for them to know these characteristics (five characteristics listed for this question): 60.8% (45) said that it was very important, 32.4% - moderate important and 4.1% (3) picked a neutral answer.

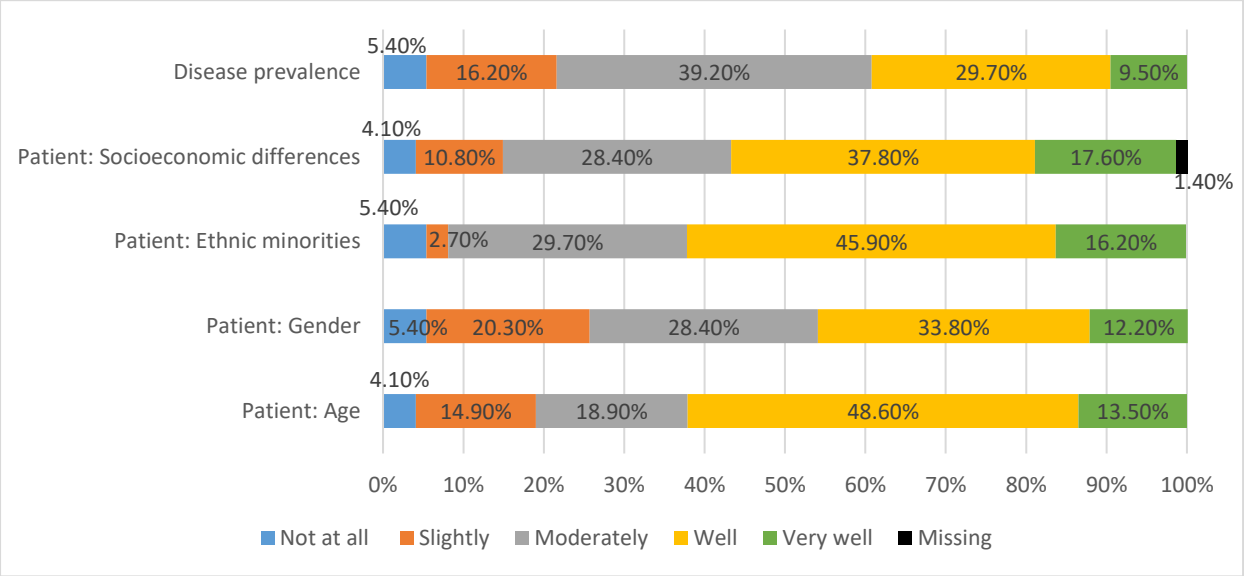

Figure 1. Trainees' familiarity with various characteristics of their local population.

Second, trainees were asked how familiar they were with the resources and services within the local community (Figure 2). The resources/services trainees were the least familiar with (based on % of "not at all"): the funeral director (47.3%), school nurses (32.4%), and patient participation groups (31.1%) (mean scores were also the lowest for these items: 1.78, 2, and 2.18 respectively, Table 1). Trainees were also asked how important it was for them to understand the resources and services listed: 51.4% (38) said that it was very important, 40.5% (30) - moderate important and 4.1% (3) picked a neutral answer.

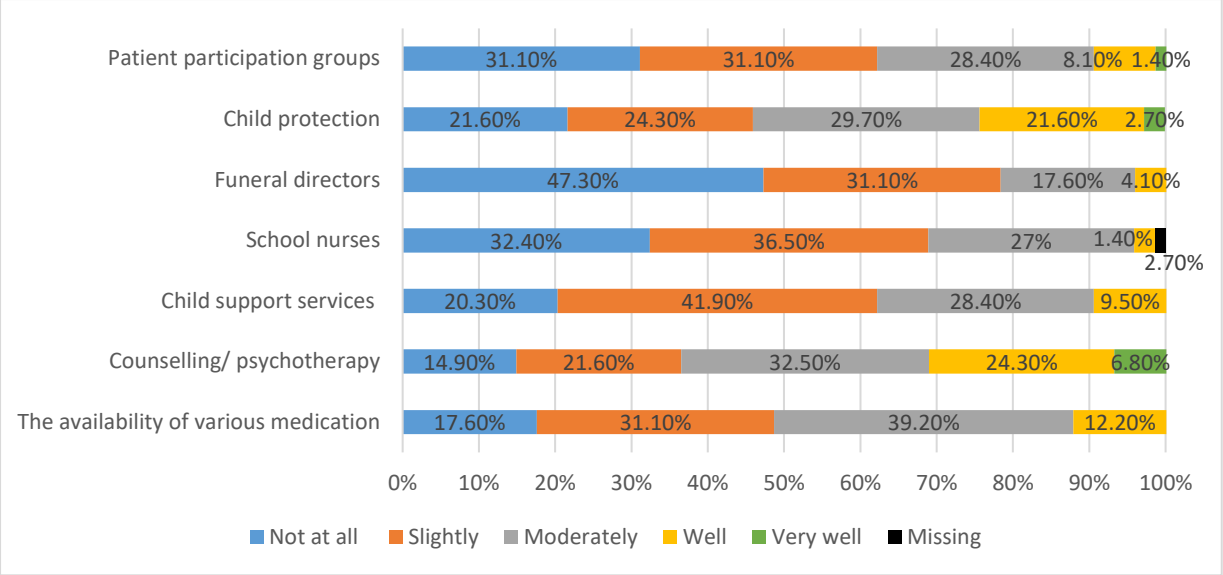

Figure 2. Trainees' familiarity with various resources and services of their local population.

Third, trainees were asked how familiar they were with the health and social care practitioners (Figure 3). Trainees said they were the most familiar (based on % of "very well") with pharmacists (16.2%), physiotherapist (13.5%), and paramedic (13.5%) (mean scores were also one of the lowest for these items: 3.57, 3.34, and 3.19 respectively; Table 1). Trainees were also asked how important it was for them to understand the roles of other health and social care practitioners: 66.2% (49) said that it was very important, 28.4% (21) - moderate important and 5.4% (4) picked a neutral answer.

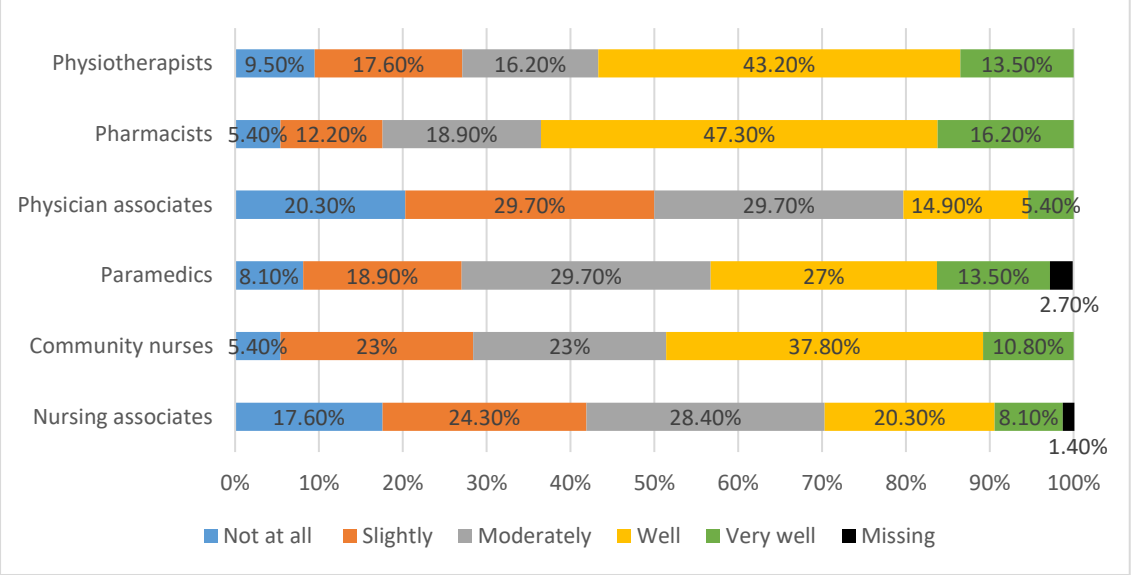

Figure 3. Trainees' familiarity with various health and social care practitioners.

Fourth, trainees were also asked about other competencies related to community orientation (Figure 4). Trainees indicated they felt the most competent (based on % of "strongly agree" and mean scores) in using local resources to enhance patient care (M=4.08), understanding how the characteristics of the local population shaped the provision of care (M=3.65), and referring patients to local services or directing them to other local resources (M=3.44).

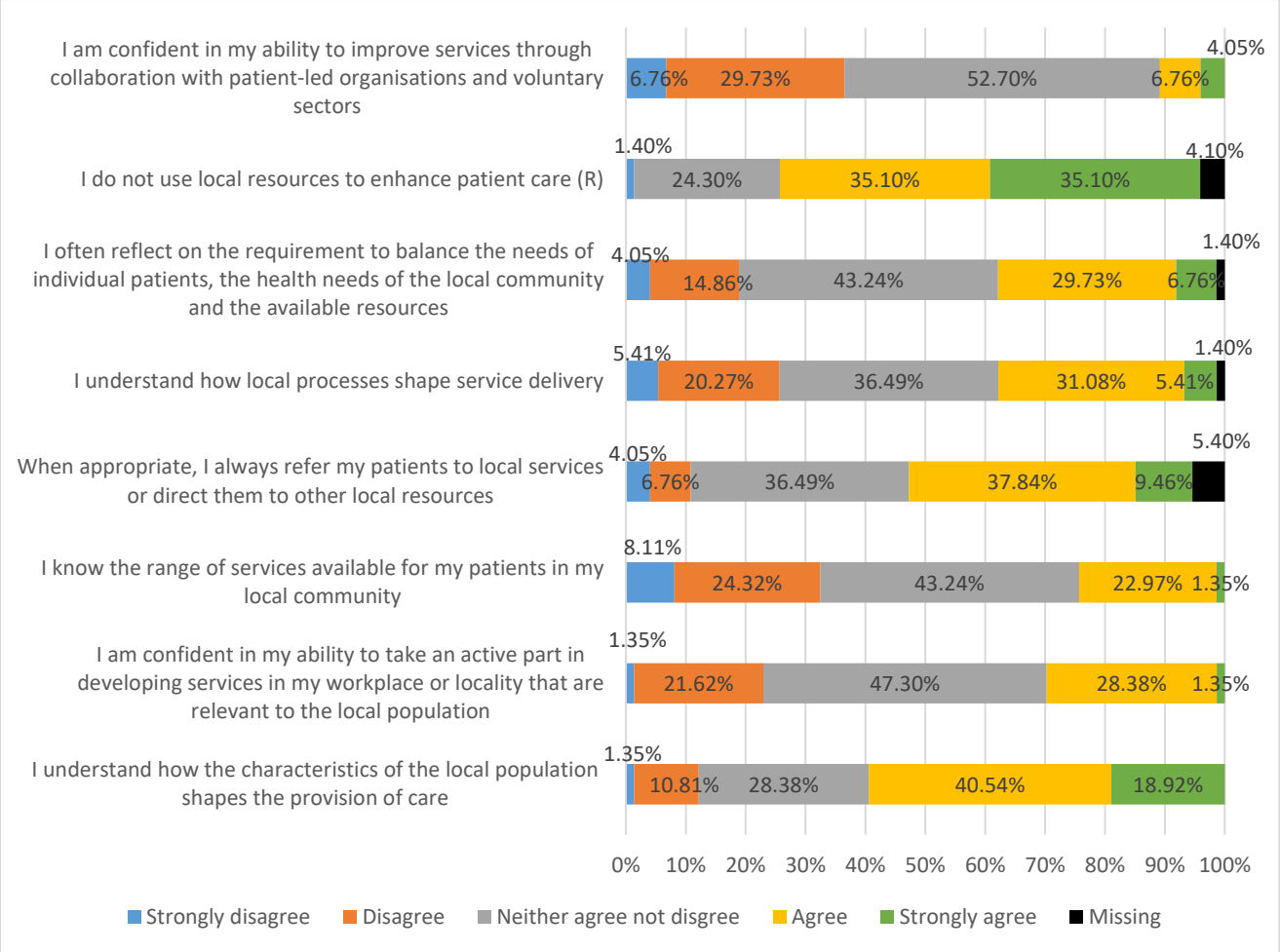

Figure 4. Trainees' competencies in the community orientation capability. R – reversed items (higher scores represent higher competence).

Practicing holistically

Trainees were asked a series of questions about the capability of practicing holistically (Figure 5). The majority of trainees strongly agreed that the GP played an important role in health promotion (67.6%) but trainees also scored high (based on % of "strongly agree" and "agree") to all other competencies. The lowest percentage of trainees "strongly agreed" or "agreed" (28.4%) with being confident in facilitating appropriate long term support for patients, their families and carers that was realistic and avoided doctor dependence (mean score was also the lowest for this item: 3.07, Table 1).

Figure 5. Trainees' competencies in the practicing holistically capability. R – reversed items (higher scores represent higher competence).

Appendix 2

Descriptive data of two capability areas, *community orientation* and *practicing holistically*: Stakeholders' responses.

Table 1 presents mean scores and standard deviations of each item from the community orientation and practicing holistically scales; as well as minimum and maximum scores and the number of participants answering each item. This description gives an overview of which competencies stakeholders felt the programme helped to develop the most/least. For example, from the range of answers (maximum scores) and means/standard deviations we can see that items on practicing holistically were scored the highest (overall M=4.13) and familiarity with the health and social care practitioners the lowest (overall M=3.04) by stakeholders. We present the distribution of answers to each item below. However, these descriptions should be interpreted with caution because of the small number of stakeholders who took part in this study.

Table 1. Item level description of two capabilities: community orientation and practicing holistically

	N	Minimum	Maximum	Mean	Std. Deviation
Familiarity with the characteristics of the local population	8	3	4	3.53	0.38
Patient demography: age	8	3	4	3.38	0.52
Patient demography: gender	8	2	4	3.00	0.76
Patient demography: ethnic minorities	8	3	4	3.75	0.46
Patient demography: socio-economic differences	8	3	4	3.75	0.46
Disease prevalence	8	3	4	3.75	0.46
Familiarity with the health and social care practitioners	8	2	4	3.04	0.66
Nursing associates	8	1	4	2.50	1.07
Community nurses	8	3	5	3.63	0.74
Paramedics	8	2	4	3.00	0.93
Physician associates	8	2	4	2.88	0.83
Pharmacists	8	3	5	3.50	0.76
Physiotherapists	8	2	4	3.13	0.83
Familiarity with the resources and services within the local community	8	2.33	4	3.10	0.64
The availability of various medications	8	2	4	2.88	0.83
Counselling/psychotherapy	8	2	4	3.00	0.76
Child support services	8	2	4	3.25	0.89
School nurses	8	2	4	3.13	0.83
Funeral directors	8	1	4	2.00	1.07
Child protection	8	2	5	3.88	0.99
Patient participation groups	8	2	4	3.13	0.83
Other community orientation capability items	8	3.25	4.75	3.90	0.51
Understanding how the characteristics of the local population shapes the provision of care	8	3	5	4.13	0.64
Ability to take an active part in developing services in the workplace or locality that are relevant to the local population	8	3	4	3.50	0.53
Knowing the range of services available for the patients in the local community	8	3	5	4.13	0.83

When appropriate, referring patients to local services or directing them to other local resources	8	3	5	4.25	0.71
Understanding how local processes shape service delivery	8	2	4	3.50	0.76
Reflecting on the requirement to balance the needs of individual patients, the health needs of the local community and the available resources	8	2	5	3.75	0.89
Using local resources to enhance patient care	8	3	5	4.00	0.76
Ability to improve services through collaboration with patient-led organisations and voluntary sectors	8	3	5	4.00	0.76
Practicing holistically items	8	3.71	5	4.13	0.39
Enquiring into the physical, psychological and social aspects of the patient's problem.	8	3	5	4.25	0.71
Ability to develop an understanding of the patient in relation to their socio-economic and cultural background.	8	3	5	4.13	0.64
Ability to use information about the patient's background to inform discussion.	8	4	5	4.13	0.35
Ability to use information about the patient's background to generate practical suggestions for the management of the patient.	8	4	5	4.13	0.35
Ability to access information about the patient's psycho-social history in a fluent and non-judgemental manner that puts the patient at ease.	8	4	5	4.13	0.35
Recognising the impact of the problem on the patient.	8	4	5	4.25	0.46
Recognising the impact of the problem on the patient's family and/or carers.	8	4	5	4.25	0.46
Understanding the limits of the doctor's ability to intervene in the holistic care of the patient.	8	4	5	4.13	0.35
Ability to offer treatment and support for the physical, psychological and social aspects of the patient's problem.	8	4	5	4.13	0.35
Ability to utilise appropriate support agencies (including primary health care team members) targeted to the needs of the patient and/or their family and carers.	8	3	5	4.00	0.53
Facilitating appropriate long term support for patients, their families and carers that is realistic and avoids doctor dependence	8	1	5	3.75	1.16
Recognising importance of the role of the GP in health promotion.	8	4	5	4.38	0.52
Ability to identify and challenge unhelpful health beliefs or behaviours, whilst maintaining a continuing and productive relationship.	8	3	5	4.13	0.64
Using tools in health promotion, such as decision aids, to improve health understanding.	8	3	5	4.00	0.53

Community orientation

Figures 1-5 present the distribution of stakeholders' answers to questions on how well they felt the programme supported trainees in developing the competencies related to community orientation and practicing holistically.

First, stakeholders were asked how well they felt the programme helped trainees to better understand the characteristics of their local population (Figure 1). The largest percentage of stakeholders said that the programme helped trainees to better understand the following characteristics well (based on % of "well"): disease prevalence, patient socioeconomic differences and ethnic minorities (all 75%; mean scores were also the highest for these items: all 3.75, Table 1). Stakeholders were also asked how important they thought it was for GP trainees to know these characteristics well; 50% (4) of stakeholders said that it was very important, 37.5% (3) - moderately important, and 12.5% (1) were neutral.

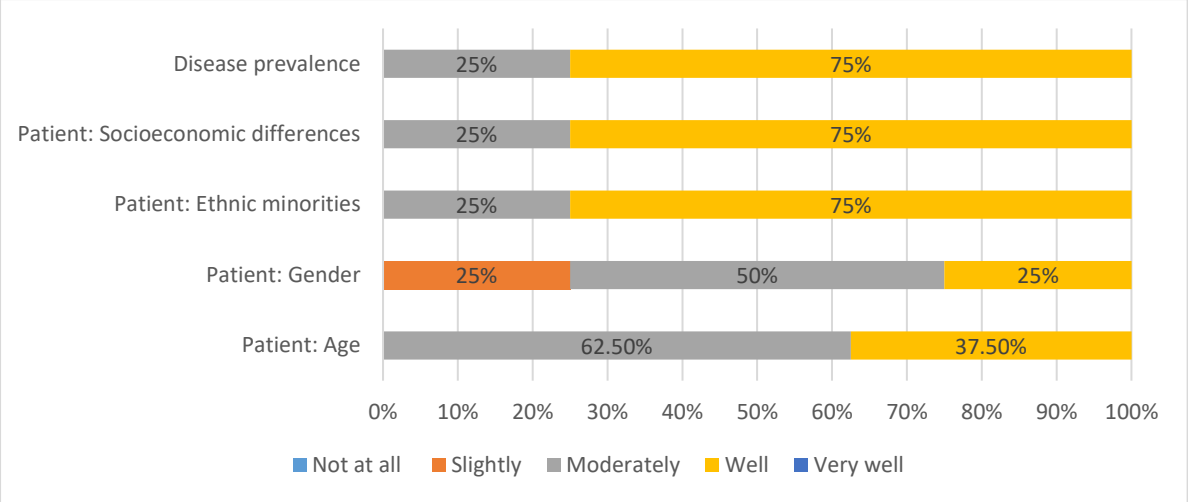

Figure 1. Stakeholders' views on how well the programme helps trainees to better understand characteristics of their local population.

Second, stakeholders were asked how well they felt the programme helped trainees to better understand the role of the health and social care practitioners (Figure 2). 25% of the stakeholders felt that the programme did not help trainees at all to understand the role of the nurse associate (mean score was also the lowest for this item: 2.50, Table 1). Stakeholders were also asked how important they thought it was for GP trainees to know these characteristics well; 62.5% (1) of stakeholders said that it was very important, 25% (2) - moderately important, and 12.5% (1) were neutral.

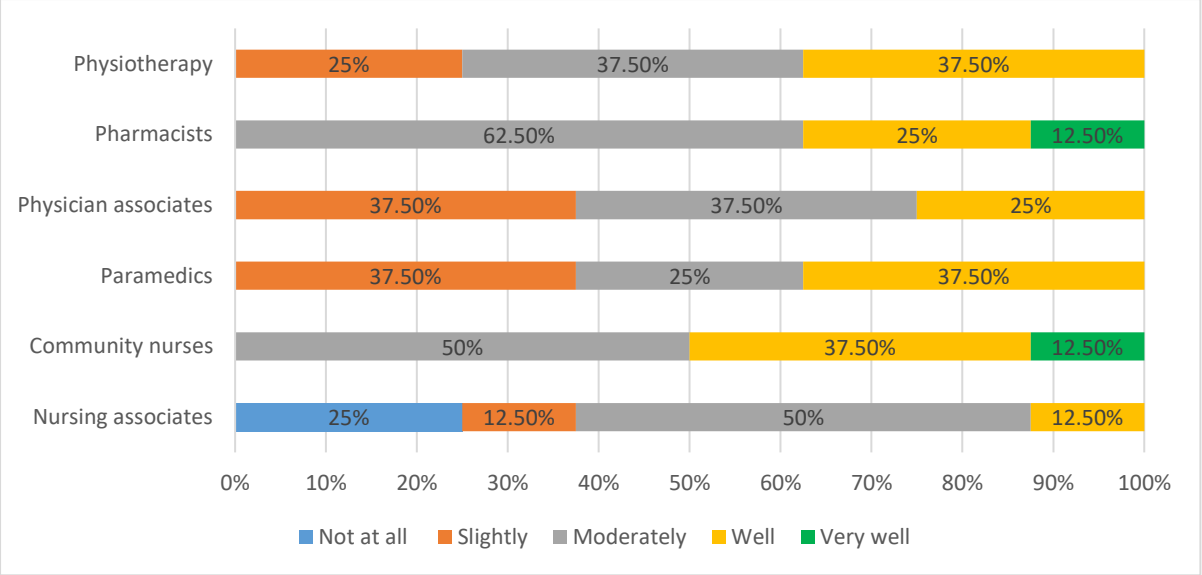

Figure 2. Stakeholders' views on how well the programme helps trainees to better understand the role of the health and social care practitioners in primary care.

Third, stakeholders were asked how well they felt the programme helped trainees to better understand different resources and services within the local community (Figure 3). Child protection was the most positively rated (25% thought that programme supported trainees understand this aspect very well; M=3.88) and funeral director the least positive (37.5% thought that the programme did not support trainees to understand this aspect; M=2). Stakeholders were also asked how important they thought it was for GP trainees to know these characteristics well; 50% (1) of stakeholders said that it was very important, 37.5% (2) - moderately important, and 12.5% (1) were neutral.

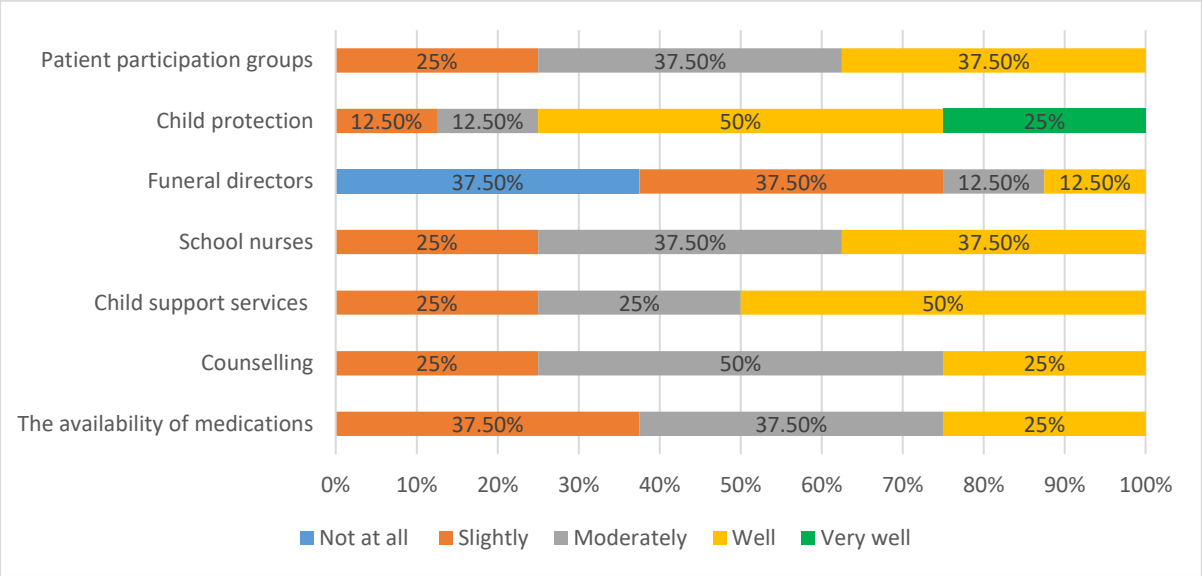

Figure 3. Stakeholders' views on how well the programme helps trainees to better understand different resources and services within the local community.

Fourth, stakeholders were asked how strongly they agreed that the programme supported trainees in developing the other competences related to community orientation capability (Figure 4). Just a few

stakeholders (12.5%) identified a couple of the competencies which, in their opinion, the programme was not helping to develop (see Figure 4).

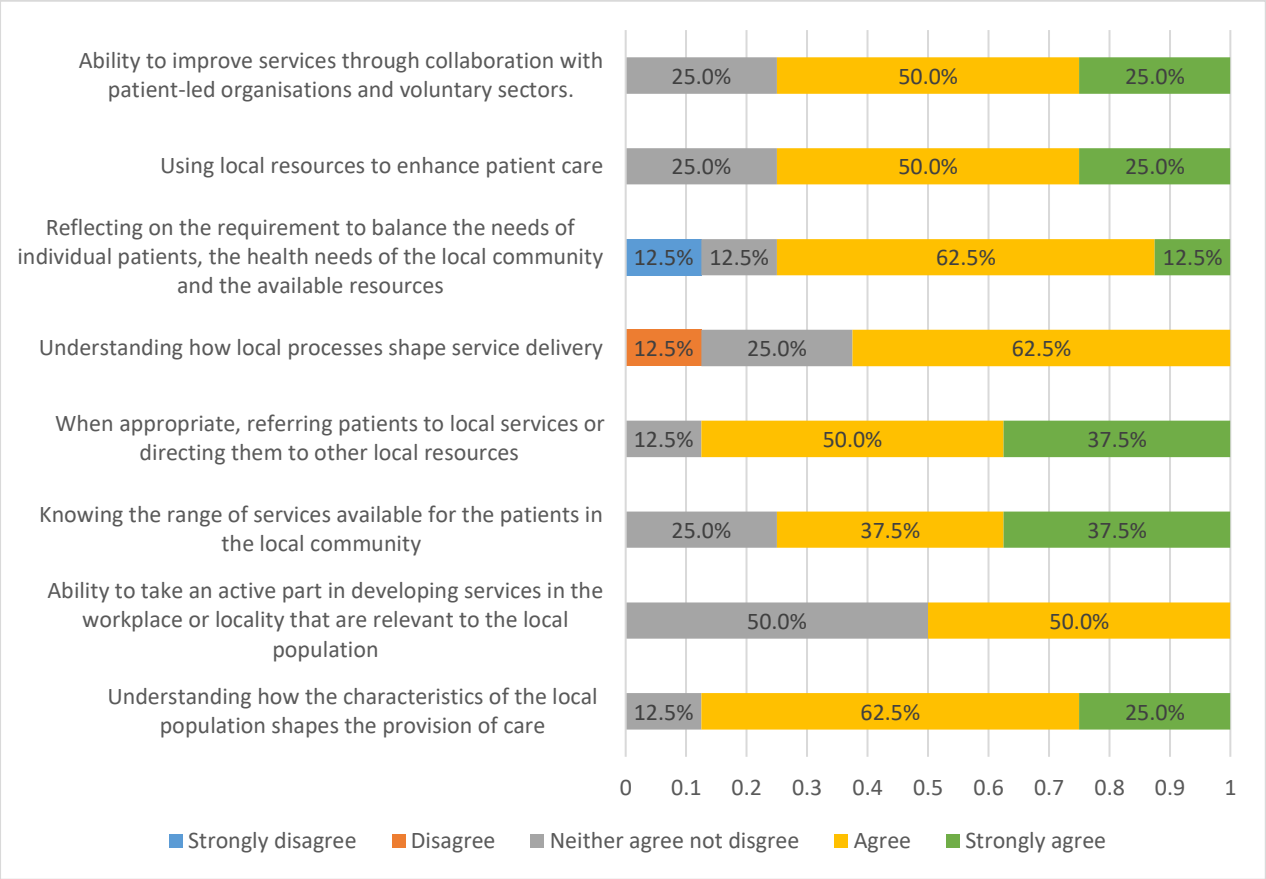

Figure 4. Stakeholders' views on how well the programme supported trainees in developing the community orientation competences.

Practicing holistically

Fourth, stakeholders were asked how strongly they agreed that the programme supported trainees in developing the competences related to practicing holistically (Figure 5). Stakeholders thought that the programme supports trainees developing the majority of the competencies (based on % of "agree" or "strongly agree"). Just 12.5% of stakeholders thought that the programme does not support trainees developing the competence of "facilitating appropriate long term support for patients, their families and carers that is realistic and avoids doctor dependence" (mean score was also the lowest for this item: 3.75, Table 1).

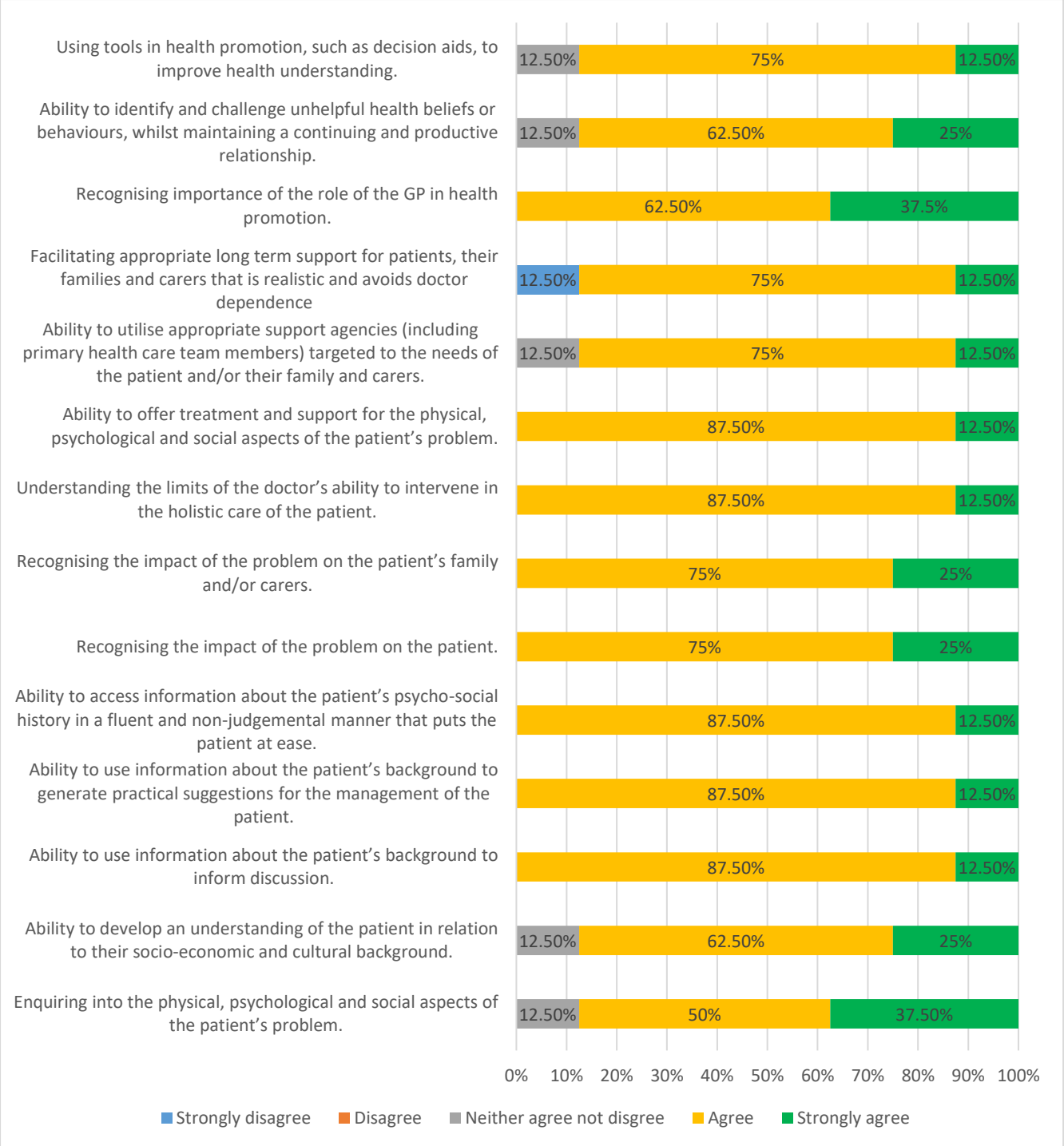

Figure 5. Stakeholders' views on how well the programme supports trainees in developing the practicing holistically competences