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Duijn, Stijn; Van Dijk-de Vries, Anneke; Scherpbier-de Haan, Nynke D.; Dolmans, Diana; Muris, Jean; van Bokhoven, Marloes

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Consensus about GP interprofessional competencies: A nominal group study

Authors

Stijn Duijn, MSc [AC]
Anneke van Dijk-de Vries, Phd [A]
Nynke Scherpbier-de Haan, MD, Prof [B]
Diana Dolmans, Prof [C],
Jean Muris, MD, Prof [A],
Loes van Bokhoven, MD, PhD [A]

Affiliations

A Maastricht University, Care and Public Health Research Institute (CAPHRI), Department of Family Medicine,
B University Medical Centre Groningen, Department of General Practice and Elderly Care Medicine
C Maastricht University, School of Health Professions Education (SHE), Department of Educational Development and Research

Authors' contribution

All authors contributed to the design of the study and revised the paper. Stijn Duijn, Anneke van Dijk-de Vries and Loes van Bokhoven were actively involved in collecting, analyzing and interpreting the data, and writing the draft of the manuscript.

Title

Consensus about GP interprofessional competencies: A nominal group study

Abstract

Background: Since the requirements for collaboration in primary care increase, effective interprofessional teamwork between general practitioners (GPs) and other primary care professionals is crucial. The need for more training in interprofessional collaborative competencies is widely recognised. However, existing competency frameworks do not sufficiently specify interprofessional collaboration to guide interprofessional competency development.

Aim: Consensus among GPs and other primary care professionals on interprofessional competencies that GP and GP-trainees should learn.

Design and Setting: Qualitative consensus study among Dutch GPs and other primary care professionals, all with expertise in primary care interprofessional collaborative practice.

Method: Three nominal group sessions were held, each resulting in its own group consensus on GP interprofessional collaborative competencies. The researchers conducted a content analysis to merge and thematise the prioritised competencies into one list. Participants prioritized this list of competencies. A pre-set cut-off point was applied to determine the overall consensus on core GP interprofessional competencies.

Results: Eighteen professionals from nine different disciplines participated. The content analysis resulted in 31 unique competencies of which fourteen competencies were prioritised in the final ranking into three main themes: 1. Professional identity development and role definition by the GP. (3 competencies); 2. Developing and executing shared care plans for individual patients (6); 3. Setting up and maintaining interprofessional collaborative partnerships (5).

Conclusion: An interprofessional group of experts reached consensus on 14 competencies within 3 themes. This framework provides a steppingstone for GPs to focus on their development regarding interprofessional collaboration.

Keywords: interprofessional collaboration, competency framework, nominal group, primary care

How this fits in

The need for more training in interprofessional collaborative competencies is widely recognised. Existing collaboration competency frameworks either focus at competencies that are similar to all professionals, regardless of their discipline, or specifically at GP competencies with limited attention to interprofessional teamwork. The framework presented in this paper integrates both perspectives. It shows which competencies a GP-trainee should develop to start working as a competent professional in collaborative care practice in primary care.

Introduction

In the 21st century, core values of General Practitioners (GPs) are to provide person centered, holistic and comprehensive care (1, 2). GPs face an increase in complexity of care demand in their practices due to substitution of care from secondary to primary care, and a growing aging population. Providing longitudinal, comprehensive patient care has become a matter of teamwork with professionals from various backgrounds and with complementary roles in the team (3).

In complex care settings, a care approach in which different health care professionals provide care in an independent and sequential way is not adequate (4). Instead, interprofessional care, defined as "multiple health professionals from different professional backgrounds work together with patients, families, carers, and communities to deliver the highest quality of care (5)" is recommended by the WHO and others (5-8). With the implementation of new ways for collaborative practice, programs need to pay attention to the interprofessional relationships between all health care providers to fulfil their maximum potential (9, 10).

Just like every other profession in primary care, GPs have a specific role within interprofessional collaboration. Both GPs and other primary care professionals allocate the GP a central role in collaboration within primary care (11, 12). Next to being a medical expert, the GP is the constant factor in longitudinal care for an individual patient, is equipped to take a helicopter view and often coordinates care (11, 12).

GPs and GP-trainees both express the need for more learning and development of interprofessional collaborative competencies. (12-14). The question arises: Which competencies should be learned by GP-trainees to fulfil their role in interprofessional collaboration in primary care?

In GP-specific competency frameworks from the Netherlands, UK, Australia, and Canada, interprofessional competencies have not been specified (15-18). The frameworks are mainly composed by and for physicians, and therefore describe collaboration from the uni-professional perspective of the GP or only describe those competencies that are similar to all collaborative partners and not specific for GPs or GPs in training (7, 19, 20).

There is no framework describing the interprofessional competencies for GPs specifically. The aim of this study is therefore to develop a competency framework for GPs with regard to interprofessional collaboration within primary care, based on consensus between GPs and other primary care professionals.

Methods

Study design

Nominal group technique (NGT) was used to reach consensus about competencies of GPs regarding interprofessional collaboration with primary care health professionals. NGT is a structured method for generating a group consensus with equal contribution of every participant (21). Qualitative idea generation and group discussion are integral parts of NGT. It enables consensus building based on ideas from different perspectives, an interprofessional discussion and equal input and voting rights for all participants. The nominal group technique as described by McMillan was modified to facilitate multiple separate groups by adding a content analysis and a final ranking among all participates (see figure 1) (21).

Participant sampling

We organized three group meetings to include a heterogeneous sample of primary care health professionals from different regions in the Netherlands (Maastricht, Nijmegen and Utrecht).
To gain input from people with a broad expertise in learning interprofessional collaboration competencies, we purposefully invited health care professionals who combined their daily clinical practice with a function as teacher, interprofessional care researcher or policy-maker. We aimed to invite a minimum of seven experts per group, including at least two experts with a background as a GP. Given our focus on interprofessional competencies, the other participants came from a broad variety of professional backgrounds in primary care, including a psychologist, physiotherapist, dietician, occupational therapist, district nurse, pharmacist and social worker (see table 1).
Participants were invited via e-mail. Participation in this study was voluntary. Written informed consent was obtained from all participants. All data were anonymized and stored on an encrypted server at Maastricht University. There was a monetary reward of €25 in gift cards for all participants.

Data collection

Nominal group meetings

The NGT facilitated the development of a bottom-up consensus about a framework of competencies. Three nominal group meetings were organised from March through May 2019. The duration of the group meetings ranged from 105 to 141 minutes. One independent moderator, with a background as a GP and educationalist, chaired all groups. Two researchers were present to assist the group discussion and to take field notes. The group meetings were audio-recorded and transcribed verbatim.

The meetings followed a standardised procedure, according to McMillan (see figure 1) (21). One of the researchers (SD, a GP-trainee and PhD-student) started with an introduction to ensure mutual understanding of the definitions of competencies and the NGT procedure. Then, participants were asked the following question: "What are the crucial competencies for a general practitioner regarding interprofessional collaboration within primary care?" Each participant generated a list of competencies in silence (step 1).

Next, the participants compiled a preliminary list of competencies, by taking turns stating one of their written competencies at the time. This continued until all participants had stated all of their written down competencies.

The group discussed this list and could decide to change or merge competencies (step 2). After the discussion, participants each ranked the five most important competencies in a vote, from one to five with the highest number valued the most (step 3). Qualtrics (https://www.qualtrics.com) was used to vote and tally. The results of the first voting round were presented on screen.

A second discussion and consensus voting round followed in the same way as the first one, but now the participants voted on all competencies that achieved at least one point in the first round (steps 4 and 5). This voting round resulted in an individual group consensus for each group. All competencies that received at least one vote during the last voting round of the NGT sessions were taken into account in the content analysis.

Content analysis

The three nominal group sessions were followed by a content analysis of the three individual group consensus statements by three researchers, SD, AvD a post-doc researcher and health scientist, and MvB an associate professor and GP. First, two researchers (SD, AvD) analysed the group consensuses and transcripts independently from each other. During this phase, it became clear that the third nominal group meeting did not reveal new major themes, so no additional meetings were needed. Second, three researchers merged competencies that were mentioned more than once. Other competencies were rephrased into single measurable behaviours. Some competencies contained multiple elements and were therefore split into two or three competencies. This resulted in 31 unique competencies.

The researchers grouped the competencies into three emerging main themes, to facilitate reading and voting. Transcripts of the meetings helped to understand the context and formulation of different competencies. After the first analysis, the three researchers themed the competencies into a voting longlist. The entire research group finalized the thematisation and the longlist for ranking.

Final ranking

The longlist was sent to all participants for a final round of ranking, using Qualtrics. The order in which competencies were presented was randomised for each participant. Using the 100-points method, participants were asked to distribute 100 points freely among all competencies of each of the three themes.

Synthesis into a competency framework

Given the goal of developing a comprehensive competency framework that is feasible at the workplace, we wanted to include 4 - 6 competencies for each theme. Therefore, the authors chose a cut-off of at least 10% of the available points within a theme in advance, to include an individual competency in the framework. This percentage was chosen, as it resembles the mean score when all 31 competencies resulting from the analysis would receive an equal number of points.

Results

Nominal group sessions

Eighteen professionals participated in the group sessions (5-7 per group). Characteristics of the three different groups are summarised in table 1. Groups one, two, and three, respectively, generated a list of 12, 8, and 8 competencies in the consensus voting round (step 5).

Content analysis

During the subsequent content analysis of the 28 competencies from the NGT sessions, 15 competencies were merged, 6 competencies were split into two competencies, and 2 competencies were split into three competencies. During the content analysis, the researchers grouped the prioritized competencies into three themes (see table 2). The analysis resulted in a voting list for the final ranking, consisting of three themes with, in total, 31 competencies (9, 11 and 11 competencies allotted to each theme, respectively).

Final ranking

Response rate on the final ranking round was 17/18 participants. In the first theme, 3 out of 6 competencies reached the cut-off, in the second theme 6 out of 11 competencies, and in the third theme 5 out of 11 competencies. The themes and competencies that reached the cut-off are presented in table 2. The full table with all competencies included in the list sent to participants is presented in appendix 1.

Themes

The three themes that emerged from the content analysis included: 1. Professional identity development and role definition by the GP; 2. Developing and executing shared care plans for individual patients; and 3. Initiating and maintaining interprofessional collaborative partnerships. The following are the characteristics of these themes.

Professional identity development and role definition by the GP

The first theme is about the GP developing a professional identity and role definition. Competencies within this theme revolved around GPs knowing their own expertise and processes, what their role is in collaboration, and what they would like to achieve for their patients. Important in developing their own identity and role definition is comparing themselves to other professionals in their health landscape. Another competency in this theme, therefore, is knowing the professionals who could provide care for shared patients, knowing what to expect from them, including what they could contribute to care and their boundaries of expertise and responsibilities.

Developing and executing shared care plans for individual patients

The second theme is about providing collaborative care to the individual patient. First, the experts agreed that a GP needs to be able to recognize situations where collaboration can be an asset, and to initiate the collaboration with the right other primary care professionals. The GP should, in conjunction with the patient, their families, carers, and other necessary health care professionals, facilitate the team to set joint care goals. When setting the care goals, the GP adds unique value through the longitudinal aspect of care provided and their knowledge about the patient and his or her context over time. The experts agreed that GPs should proactively inform other collaborating health care professionals about new developments, while care is ongoing. The experts pointed out that, despite medical care ultimately being the GP's responsibility. The, GP needs to be open for other health care professionals who might be better equipped in taking the lead in some care situations. This requires the trust to be consulted by the other professionals when necessary.

Initiating and maintaining interprofessional collaborative relationships with other primary care professionals.

The third theme is about initiating and maintaining collaborative partnerships with professionals from other primary care disciplines by the GP. According to the expert group, GPs need to be able to

enter into agreements with other primary care professionals regarding roles, responsibilities, possibilities for upscaling care, and feedback moments. The experts emphasized the importance of GPs building a network of other primary care professionals, and maintaining this network proactively. In arranging this network with other primary care professionals, a GP should bring parties together to develop a clear collective vision on the care that they want to provide as an interprofessional team. The experts would prefer that the GP guides the group, for example by being inspiring and creative, because they view the GP as the natural leader. Within this leader role, the GP should direct, negotiate, delegate, and resolve conflicts, if any. When needed, a GP should be decisive and helpful in maintaining structure in meetings. The GP is best suited to oversee the group as well as to oversee the care process as a whole. GPs should thus be able to initiate collective evaluation moments, where feedback from and to all members is possible, with the aim of providing even better care.

Discussion

Summary

An interprofessional panel of primary care professionals with expertise in interprofessional collaboration reached consensus on 14 core competencies for GP interprofessional collaboration. These core competencies are divided into three main themes: Professional identity development and role definition by the GP; developing and executing shared care plans for individual patients; and initiating and maintaining interprofessional collaborative partnerships.

Strengths and limitations

This study has strengths and weaknesses. A strength is that the developed framework not only describes generic interprofessional competencies but also the competencies required for the unique role of the GP in an interprofessional setting. Our sample and methodology provided a sound basis to define the significant interprofessional collaborative competencies of GPs. A review on the nominal group technique describes that samples between two and fourteen participants have been used and a number of about seven participants is recommended (21). To improve robustness, we repeated the NGT procedure in three different regions of the country. Moreover, we did not limit the environment to GPs alone but included primary care collaborating professionals from other disciplines as well. To avoid misinterpretations, we did a member check among all participants. We realize this was in the context of Dutch primary care, which does not necessarily mean that it is applicable everywhere.

However, in comparable primary care settings, like in many countries in Europe, the results could be applied.

The exclusion of patients may have resulted in insufficient attention to person-centeredness of care. However, theme two, on developing shared care plans, explicitly mentioned patient-centeredness in shared decision making and knowledge of the patient's context. We chose also to exclude GP-trainees, which could imply that the framework is less applicable in the setting of GP training. However, GP-supervisors and educators were represented. Moreover, GP-trainees may have a blind spot regarding the required competencies. Another limitation of this study is that a consensus procedure by voting requires authors to pre-define a rather arbitrary 10% cut-off. However, after voting, this cut-off indeed led to the intended manageable number of competencies per theme.

Comparison with existing literature

Professionals in primary care need both generic competencies (applicable to all health professionals) and profession specific competencies (to fulfill the unique role of their discipline). Existing competency frameworks do not sufficiently cover generic and profession specific interprofessional collaborative competencies. GP frameworks describe GP specific competencies, but do not provide much detail regarding the generic interprofessional competencies, such as knowing your own expertise or being available for consultations (15-18). On the other hand, interprofessional frameworks describe the generic interprofessional competencies, but do not give attention to profession specific competencies (7, 19, 20). The framework as presented in this study seems to cover both types of competencies.

The leadership role that was assigned to GPs in interprofessional teamwork may be misinterpreted as GPs being seen as superior to other team members. According to our competency framework, GPs both need to be able to see who can take the lead in an individual care plan, and to delegate. This is in line with Varpio and Teunissen, who argue that all members of an interprofessional healthcare team need to be able to act as both leaders and followers, changing roles as the situation requires (22). Furthermore, the participants in our study, both GPs and other primary care professionals, prioritize initiating and maintaining collaborative partnerships (theme 3) as a GP interprofessional competency. Other studies also conclude that primary care professionals attribute this kind of leadership role to GPs in the care for frail elderly. They state that GPs are medical experts who are a constant factor in care. Furthermore, GPs are equipped to 'see the bigger picture' and are capable of networking with relevant partners at a strategic level (11, 23). Whether other professionals who have settled in a community for a long time and see the bigger health picture could perform this role as well is beyond the scope of our study.

Our framework shows which competencies a GP should develop to start working as a competent professional in collaborative care practice in primary care. One may question where GPs need to develop these competencies. Do they need an interprofessional practice-based setting? Paradis and Whitehead argue that not all education regarding interprofessional care practice should take place in interaction with other professionals (24). In our framework, this could be the case for some of the interprofessional competencies in theme 1, mainly regarding GP trainees getting to know their own roles and the tasks of other health professionals. Frenk et al. argue however that collaboration in a workplace setting is always necessary in interprofessional competency development (25). This may be the case for a number of competencies in our framework, for example the competencies of theme 2 regarding direct collaborative patient care. Improving these elements of interprofessional teamwork is a cyclic process and therefore needs to take place in practice (25, 26). The focus in theme 3 is on long-term collaboration. Long-term collaborative partnerships require trust and shared experiences among different professionals that take time to develop (27-29). Full development of theme 3 could starts during a GP-training, but it calls for a lifelong learning process.

The three themes of the framework may suggest that there is a specific order in the development of all competencies. There is no clear answer to this. Research of Van Dongen et al. suggests there is at least some hierarchy in developing interprofessional competencies since knowing yourself and the expertise of other professionals has been put forward as a requirement to engage in interprofessional practice. Besides, it underlines that long-term collaboration requires trust and shared experiences (30).

Next to the issues regarding where and when to be trained in interprofessional practice, one may also question how GPs could develop their interprofessional collaboration competencies. Previous studies provide some suggestions. For example, Elwyn et al. describe the 'Three talk model' as a useful guide for interprofessional shared decision making (31). The framework as described by Van Dongen et al. facilitates a team evaluation in order to improve long-term collaboration (26, 27). The latter may be helpful for the competencies in the third theme. However, for most of the competencies of our framework, this question is still unanswered.

Implications for research and/or practice

This study has provided a deeper understanding of what GPs should learn to become effective interprofessional collaborators in primary care. The training of GP-trainees consists largely of working in clinical practice, which is an effective learning environment. This particularly applies to developing competencies with regard to interprofessional teamwork. However, explicit attention to the development of collaborative skills is not self-evident, since the focus of GP-trainees is on their

clinical tasks and communication skills in patient consultations. The framework presented in this study is intended to be used by GP-trainees to set learning goals that help them reflect on and shape their further professional development with regard to collaboration. This appeals to supervisors to create explicit interprofessional learning situations at the workplace. A question for further research is what both GP and GP-trainees need to facilitate the GP-trainees' learning of interprofessional competencies at the workplace.

Research suggests that GP-trainees should be challenged to seek reliable and valid external feedback in addition to their self-assessment to enrich the learning process (32). This raises the question if other primary care professionals could play a role in the learning process of the GP-trainee. If yes, what would they need, in order to provide meaningful feedback to GP-trainees regarding their interprofessional competencies? This is also a topic for further research.

Additional information

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Ethical approval: The study design was presented to the ethics review board of MUMC+, Maastricht. The need for ethical approval was waived (ref: METC 2019-0996) on basis of the 'Medical Research Involving Human Subjects Act' (WMO).

Competing interests: All authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

1. WONCA Europe. The European Deffinition of Gerneral Practice / Family Medicine. In: Mola E, Eriksson T, editors. 2011.
2. Van Der Horst HE, De Wit N. Redefining the core values and tasks of GPs in the Netherlands (Woudschoten 2019). Br J Gen Pract. 2020;70(690):38-9.
3. Barr H. Competent to collaborate: Towards a competency-based model for interprofessional education. J Interprof Care. 1998;12(2):181-7.
4. Tsakitzidis G, Van Royen P. Leren interprofessioneel samenwerken in de gezondheidszorg. Antwerpen: Standaard Uitgeverij; 2012.
5. World Health Organization. Framework for Action on Interprofessional Education & Collaborative Practice. Geneva: World Health Organization, Department of Human Resources for Health; 2010.
6. Reeves S, Pelone F, Harrison R, et al. Interprofessional collaboration to improve professional practice and healthcare outcomes. Cochrane Database Syst Rev. 2017;22(6).
7. Gilbert JHV. A National Interprofessional Competency Framework. Vancouver: College of Health Disciplines; 2010. Report No.: 978-1-926819-07-5.
8. Commissie Innovatie Zorgberoepen & Opleidingen. Anders kijken, anders leren, anders doen. Diemen: : Zorginstituut Nederland; 2016.

9. Mahmood-Yousuf K, Munday D, King N, Dale J. Interprofessional relationships and communication in primary palliative care: impact of the Gold Standards Framework. Br J Gen Pract. 2008;58(549):256-63.
10. Abrams R, Wong G, Mahtani KR, et al. Delegating home visits in general practice: a realist review on the impact on GP workload and patient care. Br J Gen Pract. 2020;70(695):e412-e20.
11. Grol SM, Molleman GRM, Kuijpers A, et al. The role of the general practitioner in multidisciplinary teams: a qualitative study in elderly care. BMC Fam Pract. 2018;19(1):40.
12. Szafran O, Torti JMI, Kennett SL, et al. Family physicians' perspectives on interprofessional teamwork: Findings from a qualitative study. J Interprof Care. 2018;32(2):169-77.
13. De Jonge Specialist, LOSGIO, LOVAH, et al. Gezamenlijk standpunt aios-verenigingen interprofessioneel opleiden: De Jonge Specialist; 2019 [Available from: https://dejongespecialist.nl/2019/gezamenlijk-standpunt-aios-verenigingen-interprofessioneel-opleiden/].
14. Goldman J, Meuser J, Rogers J, et al. Interprofessional collaboration in family health teams: An Ontario-based study. Can Fam Physician. 2010;56(10):e368-e74.
15. Shaw E, Oandasan I, Fowler N, eds. CanMEDS-FM 2017: A competency framework for family physicians across the continuum. Mississauga, ON: The College of Family Physicians of Canada; 2017.
16. Huisartsopleiding Nederland. Competentieprofiel van de Huisarts. Utrecht: Huisartsopleiding Nederland; 2016.
17. Royal Australian College of General Practioners. Competency profile of the Australian general practitioner at the point of Fellowship. East Melbourne: Victoria: RACGP Council; 2016.
18. Royal College of General Practitioners. The RCGP Curriculum: Core Curriculum Statement. London: Royal College of General Practitioners; 2015.
19. O'Keefe M, Henderson A, Chick R. Defining a set of common interprofessional learning competencies for health profession students. Med Teach. 2017;39(5):463-8.
20. Zuyd Hogeschool. Interprofessional competence model and interprofessional building blocks. 2016.
21. McMillan SS, King M, Tully MP. How to use the nominal group and Delphi techniques. Int J Clin Pharm. 2016;38(3):655-62.
22. Varpio L, Teunissen P. Leadership in interprofessional healthcare teams: Empowering knotworking with followership. Med Teach 2021;43(1):32-7.
23. Nieuwboer MS, van der Sande R, van der Marck MA, Olde Rikkert MGM, Perry M. Clinical leadership and integrated primary care: A systematic literature review. Eur J Gen Pract. 2019;25(1):7-18.
24. Paradis E, Whitehead CR. Beyond the Lamppost: A Proposal for a Fourth Wave of Education for Collaboration. Acad Med. 2018;93(10):1457-63.
25. Frenk J, Chen L, Bhutta ZA, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. The Lancet. 2010;376(9756):1923-58.
26. Van Dongen JJ, Van Bokhoven MA, Goossens WMA, et al. Development of a Customizable Programme for Improving Interprofessional Team Meetings: An Action Research Approach. Int J Integr Care. 2018;18(1).
27. van Dongen JJ, Lenzen SA, van Bokhoven MA, et al. Interprofessional collaboration regarding patients' care plans in primary care: a focus group study into influential factors. BMC Fam Pract. 2016;17:58.
28. Harris M, Advocat J, Crabtree B, et al. Interprofessional teamwork innovations for primary health care practices and practitioners: evidence from a comparison of reform in three countries. Journal of Multidisciplinary Healthcare. 2016:35.
29. Xyrichis A, Lowton K. What fosters or prevents interprofessional teamworking in primary and community care? A literature review. Int J Nurs Stud. 2008;45(1):140-53.

30. van Dongen JJ, van Bokhoven MA, Daniels R, et al. Interprofessional primary care team meetings: a qualitative approach comparing observations with personal opinions. Fam Pract. 2017;34(1):98-106.
31. Elwyn G, Durand MA, Song J, et al. A three-talk model for shared decision making: multistage consultation process. BMJ. 2017:j4891.
32. Sagasser M, Kramer AWM, van der Vleuten CP. How do postgraduate GP trainees regulate their learning and what helps and hinders them? A qualitative study. BMC Med Educ 2012;12(67).

Figure 1: Schematic overview of the study design

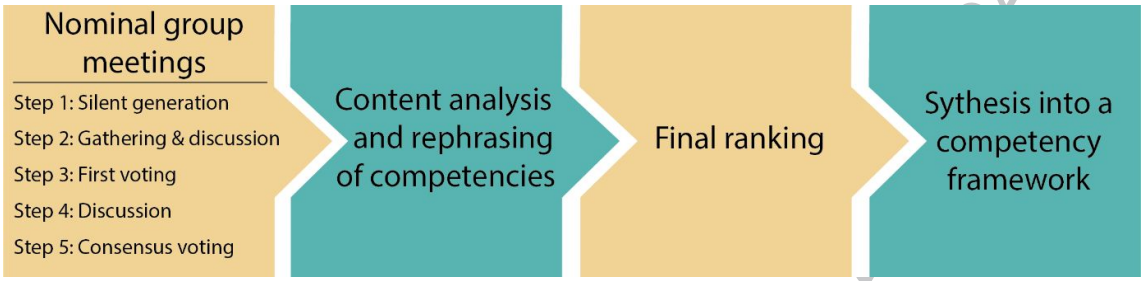

Table 1: Participant characteristics and group characteristics

Professional background	Group 1 (n=7)		Group 2 (n=6)		Group 3 (n=5)	
General practitioner	2		2		2	
Psychologist	2		-		2	
Physiotherapist	1		1		-	
Dietician	1		-		-	
Occupational therapist	1		-		-	
District nurse	-		1		-	
Pharmacist	-		1		-	
Social worker	-		1		-	
Educationalist	-		-		1	
Gender (# female)	5		5		2	
	Mean	*Range*	*Mean*	*Range*	*Mean*	*Range*
Age in years	46,71	35 – 56	50,00	33 – 62	52,75	45 – 64
Years in practice	22,00	6 – 33	19,00	10 – 32	22,75	6 – 38
Main professional activities*						
Patient care	4		6		2	
Education	2		1		1	
Research	1		-		-	
Policymaking	-		1		4	

*Some participants stated two main activities

Table 2: Final ranking

Themes and competencies	Points (%)*
Theme 1: Professional identity development and role definition by the GP.	
• Knows the expertise, tasks and work processes, and with that the (im)possibilities of collaborative partners, and can use this knowledge in daily care practice.	300 (17,7%)
• Knows his/her own expertise, tasks and work processes and can use this knowledge in daily care practice, and with that is conscious of own possibilities and boundaries.	260 (15,3%)
• Shows awareness of the importance of interprofessional collaboration and is prepared to collaborate interprofessionally.	225 (13,2%)
Theme 2: Developing and executing shared care plans for individual patients.	
• Makes shared decisions with patients, patients, their families and carers, and health care professionals.	320 (18,8%)
• Is available for consultation, knows how to make priorities and to set boundaries.	235 (13,8%)
• Sees who can take the lead in a care plan and dares to delegate.	185 (10.9%)
• Informs collaborative partners proactively and on time.	185 (10.9%)
• Recognizes and uses the possibilities of collaboration in the problem analysis.	185 (10.9%)
• Knows the social network and context of the patient.	180 (10.6%)
Theme 3: Initiating and maintaining interprofessional collaborative partnerships.	
• Works out agreements with collaborative partners regarding roles, care goals, responsibilities, possibilities for up-scaling and feedback moments.	445 (26,2%)
• Develops a shared vision with other primary care professionals regarding the collaborative partnership.	310 (18,2%)
• Initiates and maintains collaborative relationships with individual collaborative partners as well as within an interprofessional collaborative network proactively.	210 (12,4%)
• Evaluates the agreements and the collaboration itself with collaborative partners.	175 (10,3%)
• Shows leadership, expressed by decisiveness, direction, inspiration, creativity, delegation, negotiation, maintaining structure, conflict management and overseeing progress.	175 (10,3%)
**Cumulative number of allocated points by all participants (% of total allocated points in each theme)*	