

2021-03-04

# GP trainee responses to using SHERPA for multimorbidity consultations

Swancutt, Dawn

<http://hdl.handle.net/10026.1/16960>

---

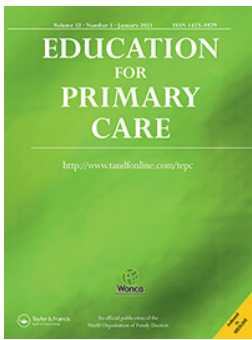
10.1080/14739879.2021.1888662

Education for Primary Care

Informa UK Limited

---

*All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.*



## GP trainee responses to using SHERPA for multimorbidity consultations

Dawn R. Swancutt, Edmund Jack, Hilary A. Neve, John Tredinnick-Rowe, Nick Axford & Richard Byng

To cite this article: Dawn R. Swancutt, Edmund Jack, Hilary A. Neve, John Tredinnick-Rowe, Nick Axford & Richard Byng (2021): GP trainee responses to using SHERPA for multimorbidity consultations, Education for Primary Care, DOI: [10.1080/14739879.2021.1888662](https://doi.org/10.1080/14739879.2021.1888662)

To link to this article: <https://doi.org/10.1080/14739879.2021.1888662>



© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 04 Mar 2021.



Submit your article to this journal [↗](#)

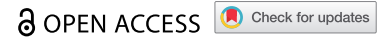


View related articles [↗](#)









View Crossmark data [↗](#)

RESEARCH ARTICLE



## GP trainee responses to using SHERPA for multimorbidity consultations

Dawn R. Swancutt , Edmund Jack , Hilary A. Neve , John Tredinnick-Rowe , Nick Axford   
and Richard Byng 

Faculty of Health, Peninsula Medical School, University of Plymouth, Plymouth, UK

### ABSTRACT

UK general practitioner (GP) trainees are taught a consultation model which elicits the patients' main reason for consulting 'today'. This approach will often miss important issues for the increasing number of patients with multimorbidity. We developed the SHERPA model as a person-centred biopsychosocial framework for consulting patients with multimorbidity to address this. We aimed to examine GPs trainees' responses to SHERPA when integrated into their vocational training. The research design was qualitative and participants were GPs trainees in vocational training from one UK training location. GP trainees were introduced to the SHERPA model through interactive workshops. Qualitative data were collected from 16 participants, through four hours of teaching observation, 24 feedback templates, six practical applications of SHERPA and eight one-to-one interviews. Data were transcribed, and, using the Framework approach, systematically analysed, focussing on trainees' learning and application of the model. The results demonstrated that all participants engaged well with the teaching sessions, brought observations from their own experience, and reflected on particularly complex consultations. Half of the participants applied SHERPA successfully with their patients, particularly repeat attenders. Barriers to this approach were: selecting appropriate patients; perceived time pressure; lack of familiarity using the model; viewing SHERPA as 'additional', rather than integral, to shared decision-making in complex situations. The SHERPA model was viewed as helpful by these GP trainees for patients with whom they had established a relationship. Earlier introduction and regular support from trainers, where trainees reflect on experience of SHERPA, could increase confidence in using this method.

### ARTICLE HISTORY

Received 21 September 2020  
Revised 4 February 2021  
Accepted 4 February 2021

### KEYWORDS

General practitioner; chronic disease; consultation; shared decision making; psychosocial; communication skills; multimorbidity



## Introduction

GPs and their trainees increasingly encounter patients with multiple long-term conditions affected by lifestyle and psycho-social issues [1,2]. For trainees, such complex consultations are known to be difficult [3]. Improving doctors' communication skills improves patient outcomes [1,4]; promoting shared decision-making and re-aligning care to match patients' goals can produce many benefits [5]. In complex multimorbidity, the difficulty of what to focus on first and how to create holistic care is amplified. Communication training typically emphasises the Calgary-Cambridge approach, based on a checklist for patients with a single presenting problem [4]. Specific training in how to apply evidence-based medicine in a patient-centred way with people who have multimorbidity is lacking [6,7], leaving trainees, and future GPs, underprepared. While individual clinicians may innovate within their personal practice, many patients with

multimorbidity remain inadequately supported in wider care planning [8].

Training in, and research into, communication in complex consultations is limited [7]. NICE Guidelines (2016) highlight objectives for managing multimorbidity but do not describe in detail how to make decisions with individuals [9]. Shared decision-making models typically address specific medical decisions, for example, should a patient have a hip replacement, rather than broader ongoing issues. There is a lack of tools and a limited evidence base for making patient values visible in multimorbidity healthcare [10]. Indeed, there is no standardised approach for how to understand patient preference in multimorbidity [11] or how clinicians and patients should work together to agree to priorities and ensure holistic care. Patients and clinicians recognise this deficiency [12].

As a first step in supporting GPs' shared decision-making in the context of multimorbidity, we developed

**CONTACT** Dawn R. Swancutt  Dawn.Swancutt@plymouth.ac.uk  Department of Primary Care, Faculty of Health, University of Plymouth, Room N9, ITC Building, Plymouth Science Park, Plymouth PL6 8BX, UK

Swancutt & Jack: Joint first authors

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

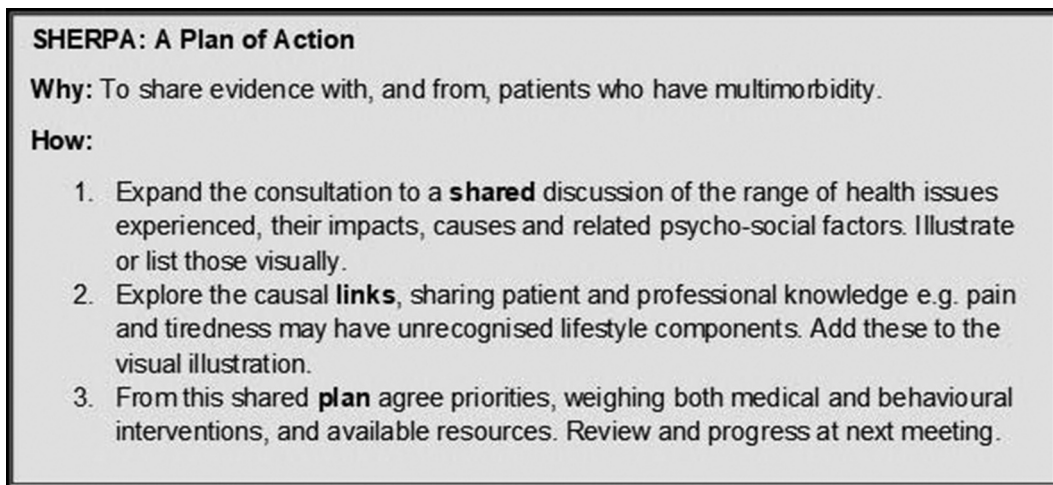


Figure 1. The SHERPA model.

a framework (SHERPA: Shared Evidence Routine for a Person-centred Plan for Action) whereby the practitioner acts as a 'guide', working with patients to apply evidence and explore solutions in a holistic way (Figure 1). SHERPA uses a three-step approach to *share* and *link* relevant information about the patient's health and *plan* together with patients [13]. Implementing SHERPA can be challenging as it requires the integration of high-level skills that encompass several areas of the GP curriculum [10]. For many, it requires a significant change in mindset away from reasoning based on a single diagnosis. As part of testing SHERPA, we ran two training sessions for GP trainees, introducing the model and exploring approaches for adapting their

communication and practical skills to incorporate this within the consultation.

### Research aim

To understand:

- How GP trainees responded to training in the SHERPA model
- Whether they subsequently used SHERPA with patients who have multimorbidity, and the factors that facilitated or limited this

## Mr A: Understanding his causal model

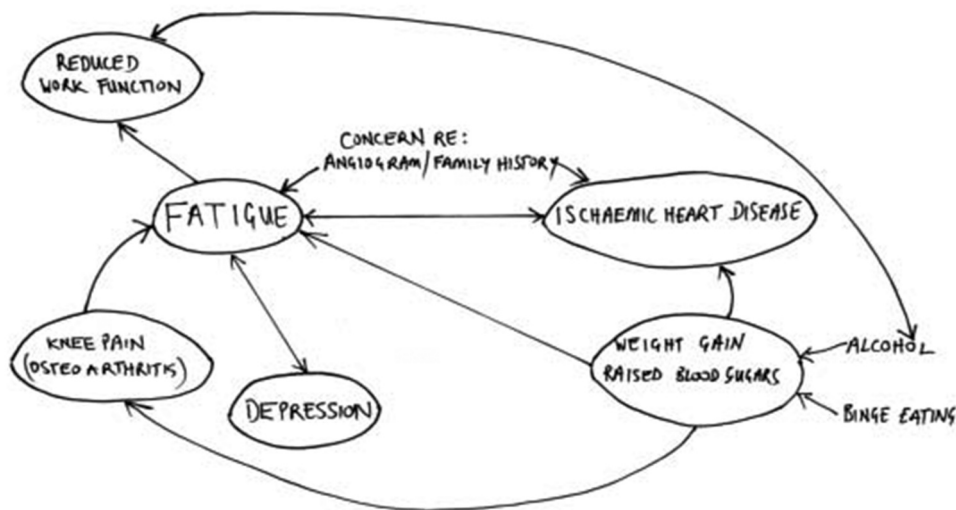


Figure 2. SHERPA step 2 – GP drawing out and linking issues together with Mr A.

- The perceived acceptability of the approach for GPs and patients

## Method

### Study design and setting

Two interactive educational sessions were delivered to trainees in South West England during 2018 (Table 1). To minimise disruption these were delivered as part of the trainees' ongoing teaching programme. The intervention was informed by feedback from a Public and Patient Involvement and Engagement (PPIE) group and from previous cohorts of trainee GPs, allied health professionals and GP trainers who had been introduced to SHERPA.

A qualitative, multi-data source design was used, involving observation of the sessions, participant feedback post-session, template feedback from participants on their use of SHERPA and one-to-one interviews with trainees and trainers. We aimed to develop a broad understanding of the impact of the training on the trainees and their practice (Table 2 example and Figure 2).

### Sampling and recruitment

The trainers were GPs and educators with experience of teaching, and using, SHERPA. Participants were qualified doctors in their second year of GP training. At the time of training approximately half were in their GP placement and the other half were soon to transfer to it. All those invited consented to participating in the study ( $n = 16$ ). An introduction to the study, the consent and observation processes were included in both sessions. PPIE work with an earlier cohort had confirmed that

observation of sessions appeared not to change participant behaviour.

### Data collection

Research team members observed sessions to capture interactions, note trainees' initial reactions to SHERPA, how the teaching material was received, and trainees' ability to engage with, and apply the model in a classroom setting. Trainees completed feedback templates after each session about the training structure and content, what was helpful and what could have been improved.

Trainees were asked, when in their GP practice, to try out SHERPA with patients and complete brief reflective templates about its use and perceived acceptability. All participants were invited to discuss this in more detail in short semi-structured interviews with the researcher, which were audio-recorded. The interview topic guide included questions about what trainees had learnt from applying SHERPA in practice and their recommendations for future training. Trainees were invited to describe the diagrams they had co-created with patients to identify their symptoms, concerns and the inter-relations between these.

### Data analysis

Data from all sources were coded, linked to emergent themes and charted into a coding matrix, using the Framework approach, to facilitate between-case and within-case analysis [14]. Two authors read and coded all interview transcripts, observational notes and feedback template data (DS and EJ). Authors coded independently and then consulted each other to resolve queries. A realist informed approach was applied to focus on the causal mechanisms driving trainee learning

**Table 1.** Structure of training sessions.

Training sessions summary: the aim of the first educational session was for participants to achieve a working understanding of the SHERPA model and how they could apply it to their patients. The second session, eight weeks later, revisited the model, supporting the trainees after they had started putting the model into practice and gaining an understanding of their reflections of this. The case study Mr A (Table 2) was used in session one to illustrate the use of SHERPA in practice.	
Session one Introduction and context <ul style="list-style-type: none"> <li>• Define and discuss multimorbidity and the challenges it presents for patients, clinicians and evidence-based medicine</li> <li>• Review NICE multimorbidity guidance</li> </ul> Introduction to SHERPA <ul style="list-style-type: none"> <li>• SHERPA model and underpinning rationale</li> <li>• Illustrate steps with example case study, Mr A (Table 2)</li> </ul> Application <ul style="list-style-type: none"> <li>• Rehearse GP-patient consultation in pairs: drawing SHERPA model, using case studies provided</li> <li>• Feedback and next steps</li> </ul>	Session two How did it go? <ul style="list-style-type: none"> <li>• Sharing experiences of using SHERPA in small groups:               <ul style="list-style-type: none"> <li>○ What happened? How did you feel?</li> <li>○ What worked well/ less well?</li> </ul> </li> <li>• Feedback and discussion</li> </ul> Revisit <ul style="list-style-type: none"> <li>• SHERPA model and underpinning rationale</li> <li>• Used trainees experience to develop specific skills eg. motivational interviewing</li> <li>• Consider application with future patients</li> </ul> Application <ul style="list-style-type: none"> <li>• Further rehearsal in pairs with case studies (own and provided) using 'SHERPA statement and question' handout</li> <li>• Feedback and next steps for using in practice</li> </ul>

**Table 2.** Example of how a patient and GP might use SHERPA in a consultation, showing the applied skills and goals for each step.

Mr A presenting complaint and background		
Mr A's Presentation (Phone consultation)	'Dr I feel awful. I'm feeling really tired, my hands are shaking and my knee is getting more painful'. I think I might need an increase in my antidepressants.	
Mr A's Medical Record:	GP arranges further review and opts to use SHERPA model. Major problems: Ischaemic heart disease, osteoarthritis, depression, glaucoma, overweight, impaired fasting glycaemia. Medication: Aspirin, Bisoprolol, Losartan, Atorvastatin, Naproxen, omeprazole, sertraline, timolol	
How SHERPA was used by Mr A and his GP		
SHERPA Step	Action in consultation with Mr A	Skills applied/goals
Step 1: Share GP and patient discuss issues and problems as they see them	Mr A attends the consultation in person Expressed his additional concern: he might die from heart attack now. Doctor's concerns: risk of heart disease in long term, alcohol consumption, potential for depression.	Communication skills to elicit patient's issues and to present issues patient not aware of or foreseen. Goal of achieving a shared understanding.
Step 2: Link GP and patient work together to understand how the issues link.	During this second consultation Mr A's issues were discussed and linked. We encourage this to be drawn out together (Figure 1). The visual element can facilitate discussion and care planning. Mr A started to identify the links between stress, alcohol, fatigue and pain. His priorities shifted from the initial fatigue and tremor to considering his diet and lifestyle to address his health.	Facilitating discussion about the underlying causation of the patient's issues. An understanding of both pathophysiology of disease and biopsychosocial model. Being able to apply both. Allowing judgement to be applied as to where the links are for that individual.
Step 3: Plan Using the model and discussions to agree achievable goals and consider timeframes.	Mr A identified his weight as a key issue and wanted to work on this. Goal setting: Reduce alcohol to weekends only Increase exercise (daily walk) Rationalise medication (with his GP) Resources to do this: Behavioural change to establish routines Himself and wife supporting each other Agreed patient-led GP follow-up	An awareness of techniques such as motivational interviewing. Changing the focus to the clinician facilitating patient goal setting. Understanding evidence and how it may or may not apply to that individual. Enabling consideration of other resources available eg. signposting to third sector support, from family, within themselves.

and implementation [15]. This allowed us to explore how trainees responded to the training approach and evaluate how closely this aligned with theoretical expectations [16]. We interrogated the data inductively for unexpected occurrences and reactions to the training and the facilitators and barriers to trainees applying SHERPA in practice [17] (conducted by JTR).

## Results

All attendees provided qualitative data on their experience and follow-up use of SHERPA (including three trainers  $n = 16$ ). Four hours of teaching were observed. Twenty-four feedback templates on training ( $n = 18$ ) and SHERPA application in practice ( $n = 6$ ) were collected. Eight semi-structured one-to-one interviews were conducted with trainees ( $n = 5$ ) and trainers ( $n = 3$ ). Trainees' group size was 12 for the first session and 10 for the second, with a mix of genders. One new attendee arrived for the second session. Most trainees attended both sessions. The coding structure was developed by DS and EJ from session feedback and observational data, then expanded as trainer views and feedback were added to the dataset. The analysis focussed on the facilitators and barriers to using SHERPA in practice. Four main themes were constructed from the data and are included in Box 1.

### Box 1. Main themes.

How to use SHERPA
Who to use SHERPA with: the SHERPA patient
When to apply a SHERPA consultation
When to introduce SHERPA training

### How to use SHERPA

The construction of SHERPA diagrams detailing how a patient's conditions interact was deemed valuable by trainee GPs. During training sessions, diagrams based on case vignettes were created in small groups, then shared with the wider group. Working collaboratively helped participants engage with and reflect upon the model.

*'All groups could see each other's models progressing. As soon as one group began to draw on the paper, the others also quickly started theirs.'* (Researcher DRS observing session 1)

This encouraged trainees to think relationally about multimorbid patient consultations.

*'I like visual things and I like the idea of chatting together, pulling different problems together, mapping it out, and then explaining to the patient how you sort of map everything together'* (GP trainee 1)

Using SHERPA to create diagrams with 'real' patients, seemed to help trainees explore the relationships

between different parts of a patient's condition/experience.

*'At first I had all sorts of differentials in mind. I discussed her with my trainer and quickly realised all her problems could be looked at together, so I brought her back for a new consultation which went really well.'* (GP trainee 6)

Trainees found that producing diagrams helped them interact with patients and engage them in managing and understanding their own care.

*'And it's a way of starting to break the problem down into bite-sized chunks, which you can then start to develop some kind of positive problem-solving approach to normally, when you see a patient, we sort of link it in our minds, but I'm not good at showing it out to the patient. But when you sort of draw it out and when they see it I think it just puts everything into perspective for them as well.'* (GP trainer 1)

Trainees found that SHERPA helped support patients to visualise their condition and see links between their symptoms and underlying causes. Several trainees used SHERPA diagrams as an aide memoire or a self-management tool.

### Who to use SHERPA with: the SHERPA patient

Trainees identified a cluster of indicative biopsychosocial markers for which SHERPA was most effective. For example, in terms of physical and psychological symptoms:

*'She had [...] number of different aches and pain, headaches, arm [...] back pain, and she had a background of depression as well, a lot of stress at work.'* (GP trainee 11)

*'So, particularly people who ... and that tends to be flagged up by people coming back to see you quite often about the same sort of things. And it's often where patients have an overlap of physical and a sort of psychological element.'* (GP trainer 3)

Some trainees had only worked in A&E, where time was limited and where they lacked exposure to complex and/or multimorbid patients:

*'[placement in A&E] ... And you don't really have a lot of, a lot of time, and you are a bit pressured with the time to do that ... So that was the reason why I haven't tried it yet.'* (GP trainee 3)

Trainees identified that patients who improved most as a consequence of the SHERPA consultation style had alcohol and substance use as co-morbid factors. Participants indicated that younger (20s to 50s) patients responded particularly well with SHERPA as regards engagement and co-production.

*'The cohort of patients I have been seeing in GP practice and the hospital are quite different because you see the younger patients with all these problems, and I think it works better with them rather than with an elderly person.'* (Interview 3)

*'I feel like there's a chance that it will work better with the younger population that are more open to new ideas and diagrams ... And I'm not sure if with other populations they can get a bit confused from a flow chart.'* (GP trainee 3)

A patient that embodies these characteristics was described as follows:

*'Young lady with, erm, lupus and other comorbidities, with problems with anxiety and coping at life. We essentially diagnosed [her] with fibromyalgia and IBS and so a lot of functional disease on account of her severe illness [...] and anxiety and depression [...] and she came with the big list of non-specific symptoms again. And, so I think it could be very useful to use this kind of model on patients with functional disease that it's difficult to show the patient that its sometimes one disease that is ... covering everything.'* (GP trainee 3)

One participant emphasised the importance of fitting the model to the patient and not the patient to the model:

*'This isn't something that I use all the time. I've got a handful of patients [...] where this model just fits really, really well and, for those patients, it's an absolute godsend. Umm, for other patients, I don't kind of need to use it, I don't need to invest that time because it's a more straightforward medical model fit.'* (GP trainer 1)

This represents a shift away from applying a set of fixed criteria to patients.

### When to apply a SHERPA consultation

Timing was a frequent theme. For example, some trainees did not use SHERPA in their first consultation with a patient but introduced it once the relationship had developed:

*'It's an issue when you're initially a GP and don't know anything about most of your patients, it would feel easier to use SHERPA with patients you have a relationship with. Coming in at the point when you're satisfied that there's no undiagnosed serious medical issue.'* (GP trainee 4)

Others used SHERPA within double appointments.

*'If you don't have time at that time, I'll bring someone back for a specific double appointment to actually go through that process [...] So that initial bit might take a good 20-30 minutes but, once you've done that bit, umm, the subsequent consultations are a lot quicker and easier.'* (GP trainer 1)

The majority of trainees felt that SHERPA made consultations longer.

*'I felt that I'm constrained because ... it definitely needs more than 10 minutes to work through this. Maybe a double appointment.'* (GP trainee 6)

### When to introduce SHERPA training

Ideas for when to introduce SHERPA training into the GP trainee curriculum ranged across Speciality Training (ST) years 1, 2 or 3. Some advocated introducing training earlier:

*'[it] depends on their level of maturity and some [...] relatively junior trainees, say in ST1, sometimes they are really mature in their approach and they have no trouble at all with other kind of consultation models, and they are already working at quite an advanced level, and so I ... bring the SHERPA model in [...] early on.'* (GP trainer 1)

However, the lack of experience of general practice and its complexity at this stage was noted:

*'The trainees are new to General Practice often, they often have come out of a hospital environment where they have been seeing a lot of single-issue patients or, at least, patients where they have been encouraged only to look at the single issue'* (GP trainer 2)

More participants favoured introducing SHERPA in ST3:

*'I think ST3s who have got a bit of experience under their belt kind of 'get it' more quickly.'* (GP trainer 1)

Others proposed introducing SHERPA earlier in speciality training, and then revisiting it in ST3 when trainees have developed a more mature approach to consultation.

## Discussion

### Summary

Currently, there are no specific frameworks to help learn the high-level communication skills and complex decision-making required with multimorbidity. The SHERPA model and associated training were created as a first step in addressing this gap. The training sessions facilitated discussions about how to identify, make explicit and link patients' problems. Almost half of the trainees used the model in practice between the two sessions: they found it particularly useful with patients who were young, attended frequently or had mental health problems. Barriers identified to using SHERPA

were the need for continuity or extra time with a patient, or not working in a suitable clinical setting (e.g. not in general practice). However, trainees speculated that in the longer-term, SHERPA might increase patients' self-management and reduce the frequency of appointments, compared to existing communication methods. Some trainees were hesitant in using the drawing element of SHERPA. To address this we provided examples of how models might look, and opportunities in training sessions for participants to create models, and to share and reflect on their experiences with SHERPA in practice.

### Building on existing literature

SHERPA adds to the literature addressing the challenges of multimorbidity in primary care [18–20]. The largest trial addressing multimorbidity [21] was unable to demonstrate a measurable impact on patient care but did find an improved perception of quality of life. This supports SHERPA's approach of taking into account each patient's current situation and life goals [22]. Goal-setting with patients who have multimorbidity can result in a very different consultation which emphasises the patient as a person [23]. A previous study using case studies to teach trainees about multimorbidity helped trainees to understand the complexity of patient's issues, but not to devise individualised action plans [24]. SHERPA's simple (share, link, plan) framework not only leads to a shared visual map of issues but, importantly, facilitates doctor and patient to identify goals and plan care together.

Our study suggests that introducing SHERPA to trainees in ST3 might be appropriate, but might delay essential skills development. An alternative would be to introduce the model in medical school and again in speciality training, revisiting it in ST3 when trainees have had more experience of complex consultations. A stepped approach involving classroom-based theoretical training and reflection cycles on the practical application of SHERPA at different stages could deepen understanding and support skills development [25].

Knowledge management in primary care is complex, and influenced not only by formal channels but also opinion leaders [26]. We acknowledge that the critical role of peers and trainers in implementing changes in primary care consultations [27] will be key to successfully integrating SHERPA into practice. Learning about how to undertake clinical reasoning and share decisions with patients with multimorbidity should also be an essential part of curricula and assessment.



SHERPA represents a move away from reductionist ways of thinking [28] and consultation models with predetermined, fixed aetiology categories, to a more flexible process-orientated, iterative form of learning which makes explicit the tacit knowledge of patient and practitioner. It is more akin to the mechanism of ‘mindlines’ which describes the human process of interacting to create knowledge, rather than there being one simple knowable truth [29].

### Strengths and limitations

This is the first time that SHERPA has been evaluated formally from initial training through to application. Use of data from several sources allowed us to create a broad view of the impact and potential future use of the training. The study only involved one cohort of trainees, some of whom were not in general practice, or unable to attend both sessions. While this limits the generalisability of findings, the results do provide insights into the facilitators and barriers to trainees applying SHERPA in practice, and patient groups with whom it may be particularly useful. We did not observe consultations or gather feedback from patients, so we cannot comment on how consultations unfolded or were experienced by patients.

### Implications for practice and future research

While the development of an evidence-base for SHERPA is at an early stage, this study suggests that it can be a useful practical framework for shared clinical decision-making in multimorbidity. Although trainees felt training in the model should not start until ST3, we suggest that it could be introduced in undergraduate settings as part of communications skills training. This would align with updated General Medical Council guidance for UK undergraduates which include learning outcomes related to multimorbidity, complexity and shared decision-making [30]. SHERPA may be useful for other generalist and primary care clinicians, for example, care of the elderly doctors, community nurses and clinical practitioners. Our next steps are to implement and evaluate training sessions for these groups.

### Conclusion

SHERPA can be taught and used by trainee GPs with patients who have multimorbidity, particularly patients with whom they had established a relationship. Given changing demographics, SHERPA should be viewed as an integral part of

clinicians’ communication skills training rather than an add-on. This could result in a better shared understanding of the biological-psychosocial links in complex health conditions and more appropriate goal setting. Training GP trainers to use SHERPA and to support trainees in their transition from newly qualified to expert clinical communicator is an important next step.

### Acknowledgments

We are grateful to the GP trainees and GP trainers who participated in this study. We thank the public patient involvement group at Peninsula Applied Research Collaboration for their help and opinions on the patients’ perspective during our planning stage. We thank Professor Neal Maskrey for his feedback and comments during the preparation of this manuscript.

### Disclosure statement

The authors report no conflicts of interest.

### Funding

This work is independent research jointly funded by Health Education England and the National Institute for Health Research Applied Research Collaboration South West Peninsula. The views expressed in this publication are those of the authors and not necessarily those of the National Institute for Health Research or the Department of Health and Social Care.

### Ethical approval

Ethical approval for this study was obtained from the University of Plymouth Ethical Review Panel. Ref: PSMD-246819-EJ-219.

### ORCID

Dawn R. Swancutt  <http://orcid.org/0000-0003-1477-9935>  
 Edmund Jack  <http://orcid.org/0000-0003-3321-0365>  
 Hilary A. Neve  <http://orcid.org/0000-0003-1831-9821>  
 John Tredinnick-Rowe  <http://orcid.org/0000-0002-1154-7410>  
 Nick Axford  <http://orcid.org/0000-0003-2434-2091>  
 Richard Byng  <http://orcid.org/0000-0001-7411-9467>

### References

- [1] Barnett K, Mercer SW, Norbury M, et al. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet*. 2012 Jul 07;380(9836):37–43.
- [2] Cassell A, Edwards D, Harshfield A, et al. The epidemiology of multimorbidity in primary care:

- a retrospective cohort study. *Br J Gen Pract.* 2018 Apr;68(669):e245–e251.
- [3] Giroldi E, Veldhuijzen W, de Leve T, et al. ‘I still have no idea why this patient was here’: an exploration of the difficulties GP trainees experience when gathering information. *Patient Educ Couns.* 2015;98(7):837–842.
- [4] Silverman J, Kurtz SM, Draper J. *Skills for communicating with patients.* 3rd ed. 2013; Taylor & Francis Group. London, New York: Radcliffe Publishing.
- [5] Lewis-Barned N, Coulter A, Eaton S, et al. Multimorbidity and patient-centred care in the 3D trial. *Lancet.* 2019 Jan 12;393(10167):127.
- [6] Hughes LD, McMurdo ME, Guthrie B. Guidelines for people not for diseases: the challenges of applying UK clinical guidelines to people with multimorbidity. *Age Ageing.* 2013 Jan;42(1):62–69.
- [7] Maskrey N. Shared decision making: why the slow progress? An essay by Neal Maskrey. *BMJ.* 2019 Dec 5;367:l6762.
- [8] Mason B, Nanton V, Epiphaniou E, et al. ‘My body’s falling apart.’ Understanding the experiences of patients with advanced multimorbidity to improve care: serial interviews with patients and carers. *BMJ Support Palliat Care.* 2016 Mar 6;6(1):60–65.
- [9] National Institute for Health and Clinical Excellence. *Multimorbidity: clinical assessment and management.* 2016;NICE Guideline 56.
- [10] Mangin D, Stephen G, Bismah V, et al. Making patient values visible in healthcare: a systematic review of tools to assess patient treatment priorities and preferences in the context of multimorbidity. *BMJ Open.* 2016 Jun 10;6(6):e010903.
- [11] Butterworth JE, Hays R, McDonagh STJ, et al. Interventions for involving older patients with multi-morbidity in decision-making during primary care consultations. *Cochrane Database Syst Rev.* 2019. DOI:10.1002/14651858.CD013124.pub2
- [12] Sinnott C, Mc Hugh S, Browne J, et al. GPs’ perspectives on the management of patients with multimorbidity: systematic review and synthesis of qualitative research. *BMJ Open.* 2013 Sep 13;3(9):e003610.
- [13] Jack E, Lloyd H, Maskrey N, et al. SHERPA: a new consultation framework for multimorbidity. Sharing evidence routine for a person-centred plan for action. *Lancet.* 2018;392(10156):1397–1399.
- [14] Gale NK, Heath G, Cameron E, et al. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol.* 2013;13(1):117.
- [15] Pawson R, Tilley N. *Realist evaluation.* Boca Raton, London, New York: Sage; 1997.
- [16] Wilkes M, Bligh J. Evaluating educational interventions. *BMJ.* 1999;318(7193):1269–1272.
- [17] Fletcher AJ. Applying critical realism in qualitative research: methodology meets method. *Int J Soc Res Methodol.* 2017;20(2):181–194.
- [18] Bickford J, Cohen A. Multimorbidity: what next? *Br J Gen Pract.* 2017 Jul;67(660):300.
- [19] Hoffmann T, Jansen J, Glasziou P. The importance and challenges of shared decision making in older people with multimorbidity. *PLoS Med.* 2018 Mar;15(3):e1002530.
- [20] Lancet T. Making more of multimorbidity: an emerging priority. *Lancet.* 2018;391(10131):1637.
- [21] Salisbury C, Man M-S, Bower P, et al. Management of multimorbidity using a patient-centred care model: a pragmatic cluster-randomised trial of the 3D approach. *Lancet.* 2018;392(10141):41–50.
- [22] Burton CD, Entwistle VA, Elliott AM, et al. The value of different aspects of person-centred care: a series of discrete choice experiments in people with long-term conditions. *BMJ Open.* 2017 Apr 26;7(4):e015689.
- [23] Salter C, Shiner A, Lenaghan E, et al. Setting goals with patients living with multimorbidity: qualitative analysis of general practice consultations. *Br J Gen Pract.* 2019 Jul;69(684):e479–e488.
- [24] Maguire S, Hanley K, Quinn K, et al. Teaching multimorbidity management to GP trainees: a pilot workshop. *Educ Prim Care.* 2015 Nov;26(6):410–415.
- [25] Yardley S, Teunissen PW, Dornan T. Experiential learning: AMEE Guide No. 63. *Med Teach.* 2012;34(2):e102–15.
- [26] Gabbay J, le May A. Evidence based guidelines or collectively constructed “mindlines?” Ethnographic study of knowledge management in primary care. *BMJ.* 2004 Oct 30;329(7473):1013.
- [27] Shiner A, Howe A. Professional learning during the transition from trainee to newly qualified general practitioner. *Educ Prim Care.* 2013 Sep;24(5):346–354.
- [28] Scallan S. Educating for complexity and professional judgement: whither the role of practice-based research? *Educ Prim Care.* 2014 Nov;25(6):299–301.
- [29] Wieringa S, Greenhalgh T. 10 years of mindlines: a systematic review and commentary. *Implement Sci.* 2015 Apr 09;10:45.
- [30] General Medical Council. *Outcomes for graduates.* 2018.