Patient & Community Partnership for Education
informed and shared decision making

THE UNIVERSITY OF BRITISH COLUMBIA
Office of the Vice-President, Health
UBC Health

PRACTICAL GUIDES TO THE INVOLVEMENT OF PATIENTS IN HEALTH PROFESSIONAL EDUCATION

GUIDE 5

Evaluation and Research

Guide coordinator: Cathy Kline
Contributors: Amber Bennett-Weston, Félicia Bielser, James Bonnamy, Gabrielle Brand, Alina Dhanji, Knut Eirik Eliassen, Holly Harris, Catrine Buck Jensen, Csilla Kalocsai, Milena Lisboa, Heather Lochnan, Sophie Park, Betsabeh Parsa, Teo Quay, Paula Riganti, Bonita Sawatzky, Carolin Sehlbach, Terese Stenfors, Timothy Wideman, Kerry Wilbur



Before you begin

We recommend starting with the Introduction Guide, which provides essential context for getting the most out of this series.

All five guides are available at https://meetingofexperts.org/programs-activities/practical-guides/

Contents

1. Why this Guide was Written? 1

2. How to Use this Guide 2

3. How this Guide is Organized 3

4. Ethical Considerations 3

PART 1: EVALUATION OF PATIENT INVOLVEMENT IN HPE 4

1.1 Kirkpatrick Levels of Evaluation 4

1.2 Alternatives to Kirkpatrick 9

1.3 Novel Approaches to Evaluation of Patient Involvement in HPE 10

PART 2: RESEARCH ON THE IMPACT OF PATIENT INVOLVEMENT IN HPE 14

2.1 Theoretical and Conceptual Frameworks 14

2.2 General Research Tips 16

2.3 Patient Involvement in Research & Evaluation 17

2.4 Co-Designed Research on Patient Involvement in HPE 19

2.5 Participatory Action Research 20

2.6 Research on 'How' to Partner with Patients in Education 21

2.7 Evaluation of Patient Involvement in Research 22

2.8 Calls to Action 23

APPENDICES

Appendix 1: Description Study Examples 1-3 25

Appendix 2: Justification Study Examples 4-9 27

Appendix 3: Clarification Study Examples 10-14 31

Appendix 4: Co-Designed Research Examples 15-17 36

Appendix 5: How to Partner with Patients in Education Study Examples 18-20 38

Appendix 6: References 40

GUIDE 5

Evaluation and Research

1. Why this Guide was Written?

Patient involvement in health professional education (HPE) is growing with many new activities being tried, tested and refined. Whether you are a newcomer to the field or you have been actively involving patients in education for some time, this guide provides tips and resources recommended by researchers working in the field, along with examples from the literature to support different kinds of evaluation and research.

The guide was written to improve the quality of research and evaluation and to encourage patient involvement in research and evaluation efforts. Better quality evaluation and research are needed to advance patient involvement in HPE. Most studies simply describe activities or explain why patient involvement is important. Few studies have looked at how, and why, patient involvement works or what makes it effective in different settings. High-quality research and evaluation, especially when guided by theoretical or conceptual frameworks, can strengthen the evidence base to identify best practices and inform future research.

Working with patients as partners in research can strengthen relationships and makes research more relevant and meaningful. However, patient involvement in health education research and evaluation is still uncommon, and when patients are involved it is often at a late stage or in an advisory capacity. There is much that can be learned from patient partnership in health research more broadly and some relevant resources are included in this guide. If the goal is to improve healthcare and patient outcomes, then patients should be involved as partners in health education research and evaluation activities, just as they are in the educational initiatives under study. This guide has examples of good patient–researcher collaborations to learn from and build upon. The relational nature of patient involvement in HPE also means that some outcomes may be difficult to capture using standard research and evaluation approaches. Examples of novel approaches to measuring evidence of impact are also included in the guide.

2. How to Use this Guide

This guide can support a wide range of projects—from evaluating new initiatives to studying the long-term impact of established programs. It offers practical tips and real examples that can be adapted to different settings and types of patient involvement.

There is no single, one-size-fits-all approach to research and evaluation. The guide offers tips and ideas you can tailor to your own context. Choose methods that best fit your context, goals and resources available.

Although evaluation and research use similar methods, they serve different purposes. Evaluation is focused on appraisal of what is going well and what needs improvement for the purpose of enhancing quality or effectiveness, or for making practical recommendations to stakeholders. Research focuses on generating new knowledge for sharing in peer-reviewed scholarly publications that can be found in searches of library indexes and databases to inform other researchers and educators world-wide. Choose an approach that aligns with your goals. If you are starting a new initiative with limited resources you may wish to begin with a basic evaluation or small-scale exploratory, descriptive research before moving to more complex studies. Although you may be focused on a local context, your findings could be generalizable or transferable to other contexts, and therefore should be published if it is of interest to a wider audience. Most importantly, 'close the loop' by sharing the results and subsequent changes made with participants who provided feedback.

	Evaluation	**Research**
Purpose	To inform decision-making and program improvements	To generate new, generalizable or transferable knowledge
Audience	Stakeholders (students, patients, educators, institutions)	Academia and scholarly community
Focus	Question-driven, stakeholder-focused	Exploratory or hypothesis-driven, researcher-led
Outputs	Practical recommendations and reports to stakeholders, including the people who provided feedback.	Publications, theory-building, or recommendations for practice, and sharing results with research participants.

3. How this Guide is Organized

Part 1. Evaluation

- 1.1 Kirkpatrick Levels of Evaluation 1-4
- 1.2 Alternatives to Kirkpatrick
- 1.3 Novel approaches to evaluation

Part 2. Research

- 2.1 Theoretical and conceptual frameworks
- 2.2 General research tips
- 2.3 Patient involvement in research
- 2.4 Co-designed research on patient involvement in HPE
- 2.5 Participatory Action Research (PAR)
- 2.6 Research on 'how' to partner with patients in education
- 2.7 Evaluation of patient involvement in research
- 2.8 Calls to action

Appendices: Study Examples

- **Appendix 1:** Description Study Examples 1-3
- **Appendix 2:** Justification Study Examples 4-9
- **Appendix 3:** Clarification Study Examples 10-14
- **Appendix 4:** Co-designed Research with Patients Study Examples 15-17
- **Appendix 5:** How to Partner with Patients in Education Study Examples 18-20
- **Appendix 6:** References

4. Ethical Considerations

Most research involving human participants or their data requires research ethics review even if it is low risk. Many funding agencies and scientific journals require that researchers obtain Institutional Review Board (IRB) or Research Ethics Board (REB) approval to ensure informed consent was obtained from participants, and that participants' personal information and dignity are protected. Non-research activities such as program evaluation and quality improvement activities do not usually require ethics review. Typically, you do not need ethics approval to involve patients as partners in research and evaluation projects. However, research and evaluation for publication requires ethics aproval for all participants including patients, students, faculty, etc. Check with your institution's office of research ethics what is needed for your project.

To obtain ethics approval as an independent researcher outside of academia, reach out to REBs or IRBs at local universities or research institutions to inquire about the process for external researchers, or explore independent ethics committees (IECs) or external IRBs that offer oversight for research conducted by private laboratories, corporations, independent think-tanks, etc. Additional community approvals such as from schools, governments, or Indigenous organizations may also be required before applying to an ethics committee.



PART 1:

Evaluation of patient involvement in HPE

1.1 Kirkpatrick Levels of Evaluation

Kirkpatrick's model is a widely used evaluation framework in higher education and particularly in HPE (Kirkpatrick & Kirkpatrick, 2016). It has four levels. Level 1 aims to capture participants' reactions—what they liked and what they thought could be improved. Level 2 focuses on learning—changes in knowledge, skills and attitudes. Level 3 measures behaviour change as a result of changes in knowledge, skills or attitudes. Level 4 focuses on results—the ultimate impact on the organization or system. The model has been criticized for difficulties in implementing levels 3 and 4 (behaviour change and results) that have resulted in a propensity to focus on the first two levels of the model (reaction and learning).

Alternative evaluation models have been proposed (e.g., Frye & Hemmer 2012; Allen et al. 2022) that can be used to evaluate how and why outcomes occur. See section 1.2 for an overview of alternative evaluation approaches to Kirkpatrick and section 1.3 for examples of novel approaches that have been tried with patient involvement in HPE.

The following tables have some quick tips and resources for getting started that are organized by Kirkpatrick's four levels of evaluation. Evaluation reports are rarely made public and can be difficult to find. HPE journals publish papers with evaluation results, many of which use Kirkpatrick. The tips are drawn from the example papers that can be found in Appendices 1-3.

Kirkpatrick Level 1: Reaction

Use Level 1 to measure participants' initial feelings and satisfaction with the activity—was it engaging, relevant and satisfying? It captures what participants liked about the activity, what they thought could be improved, and whether it was a positive or negative experience. A negative experience can inhibit learning and is unlikely to result in application in practice. However, a positive experience does not guarantee learning occurred and subsequent application in practice.

When to use: Immediately or soon after the educational activity. If using course evaluations, you may need to add specific questions related to patient involvement.

How to measure: Course evaluations, surveys, questionnaires about the experience, satisfaction ratings.

EXAMPLES 1 & 2: Towle and Godolphin assessed acceptability with the following survey questions.

» **Learners:** Compared to other educational experiences you have had about X, on a scale of 1 (worst) to 5 (best) this activity was…

» **Patients:** Compared to other volunteering you have done, on a scale of 1 (worst) to 5 (best) this activity was…

TIPS:

Build-in time at the end of the activity for participants to complete the evaluation. Offer opt-in incentives such as a prize draw to increase survey response rates.

- A Likert scale can be useful for assessing initial reactions to an intervention.
- A simple binary yes / no question can provide useful information about reactions to the program.
  I would recommend this workshop:
  Yes / No.
- Use open-ended questions to assess immediate reactions. What surprised you? What worked well? What didn't work well and how would you change it?
  For surveys: Ask for full sentences as point form or key words can be hard to analyze.
- Use the same questions across interventions for comparison.

Kirkpatrick Level 2: Learning

Use Level 2 to assess the extent to which participants acquired the intended knowledge, skills, attitudes and confidence. No change in behaviour (Level 3) can be expected without achieving the learning objectives. Evaluations before and after the intervention are recommended to assess changes in knowledge, skills and attitudes.

When to use: If using a pre-post design it should be implemented immediately before and after the intervention to improve confidence that observed changes are due to the intervention (internal validity). For further exploration, try to evaluate after a period of time for evidence of learning.

Note: Although participants may show changes in knowledge, skills and attitudes taught there is still no guarantee of application in practice.

How to measure: pre-post tests, simulations, role plays, case studies, attitude scales, knowledge tests.

» Ask learners to display their knowledge before and after an activity and check for differences.

EXAMPLE 7: Westmoreland et al (2009) used mixed methods to assess changes in attitudes and acceptability of an intervention.

RESOURCES: Validated Attitude Scales

1. Hojat M, Mangione S, Nasca TJ, Cohen MJ, Gonnella JS, Erdmann JB et al. The Jefferson Scale of Physician Empathy: development and preliminary psychometric data. Educational and Psychological Measurement 2001; 61(2):349-65. https://doi.org/10.1177/00131640121971158

2. Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam SM, Inui TS. The practice orientations of physicians and patients: the effect of doctor-patient congruence on satisfaction. Patient Education and Counseling 2000; 39:49-59. https://doi.org/10.1016/S0738-3991(99)00090-7

3. Sinclair S, Hack TF, MacInnis CC, Jaggi P, Boss H, McClement S et al. Development and validation of a patient-reported measure of compassion in healthcare: the Sinclair Compassion Questionnaire (SCQ). BMJ Open 2021; 11(6):e045988. https://doi.org/10.1136/bmjopen-2020-045988

TIPS:

- Link your questions to the learning objectives. Create a table of the learning objectives and how you will evaluate each one.
- Reflective journals or open-ended survey questions can be used to evaluate learning. What did you learn? How did the activity make you think differently about X? What insights did you gain about yourself? What else would you like to learn?
- Validated attitude scales can be used to measure changes in attitudes.
- Triangulate quantitative with qualitative data using open-ended questions. What was most and least helpful about the session?
- Validated attitude scales have limitations but are available to use. The Jefferson Empathy Scale and Patient-Practitioner Orientation scales are copyrighted and require permission to use them. The Sinclair Compassion Scale was patient-informed and is free to use. All are available in several languages.
- Jefferson Empathy Scale[1]
- Patient-Practitioner Orientation Scale (PPOS)[2]
- Sinclair Compassion Questionnaire (SCQ)[3]

Kirkpatrick Level 3: Behaviour Change

Use this level to determine if participants apply what they learned in practice, leading to changes in behaviour. It aims to capture behaviour change as a result of changes in knowledge, skills and attitudes attributed to the intervention. This level of evaluation tends to be resource intensive.

When to use: It is a good idea to embark on a Level 3 evaluation only after Level 1 and 2 evaluations have yielded positive results.

Note: *There could be barriers in the clinical environment that interfere with applications of learning in practice (e.g., the desired behaviour change is not valued or rewarded by their supervisor). A lack of application in practice is not necessarily an indicator that the educational activity was ineffective. Barriers may need to be explored and addressed.*

How to measure: Observations of clinical practice, reflective journals, interviews, surveys of preceptors and patients, Objective Clinical Structured Clinical Examinations (OSCEs).

EXAMPLE 11: Katz et al. (2000) used videos and focus groups to record and analyze clinicians' reflections about changes in practice over time.

TIPS:

- If direct observation in practice is not possible, longitudinal diaries or interviews can be conducted with participants to find out how they have used what they learned in practice. Ask for specific examples.
- Frame aims around improved judgment, relational understanding, and moral orientation—not only skills or knowledge acquisition.
- Ask: How have you used what you learned in practice? If not yet in practice, how do you plan to use what you learned in practice?
- Patient educators who work with students over time, such as in a Health Mentors program, can provide important insights about changes in students' behaviour and concrete examples of how and when students reported applying their learnings in clinical placements.

Kirkpatrick Level 4: Impact

Use this level to assess final results that occurred because of the activity. Examples might include improved patient experiences, better health outcomes, reduced burnout, lower costs, etc. It can also include short-term observations and measurements that can be indicators that critical behaviour changes are on track to create positive impact and desired results.

When to use: Level 4 involves measuring systems level or institutional impact. It is the most difficult because of the increased time requirements, costs, and complexity of measuring health care outcomes and is generally beyond the scope of small-scale educational activities. Consider this level if you can access clinical data or Patient Reported Experience Measures (PREMs).

» It is unlikely that any single intervention, particularly in undergraduate HPE, results in system level changes and we could find no examples of studies conducted at this level. Instead, we offer some examples of studies in which some of the data collected might be proxy indicators of potential health outcomes and economic impact.

EXAMPLE 6: Sawatzky and Kline (2025) compared care plans written by graduates of a Health Mentors program with those who did not take the program and found that graduates of the program ordered fewer unnecessary diagnostic tests (evidence of level 3 behaviour change), providing some evidence of potential economic savings to the health care system.

EXAMPLE 9: Cahill, Coffey, and Sanci (2015) showed self-reported improvements in adolescents' health seeking behaviour, especially their trust and confidence in doctors as sources of help from their involvement as educators.

TIPS:

- Evaluating impact is the most challenging and resource intensive. Identify proxies that can be used if it is not feasible to measure system level impact.
- Many hospitals, large health care centres, and other clinical settings have systems for collecting data that could be used to measure health outcomes. Develop collaborations with these institutions to explore ways this data might be used to evaluate systems impact.

RESOURCE: Kirkpatrick's Evaluation Framework

Kirkpatrick JD, Kirkpatrick WK. Kirkpatrick's four levels of training evaluation. Alexandria, VA: Association for Talent Development Press. 2016.

1.2 Alternatives to Kirkpatrick

While the Kirkpatrick model may be the most commonly used evaluation framework in HPE to show whether a program achieved a desired outcome, there is also a need to explain how and why interventions work. Allen et al. (2022) highlight several evaluation approaches better suited to complex educational interventions and examining questions about context, implementation, mechanisms of change, intended and unintended outcomes, sustainability and adaptation over time:

Evaluation Approach	Main Questions
Realist Evaluation	What works, for whom, in what contexts, and why?
CIPP (Context, Input, Process, Product)	How was the program designed, implemented, and what happened?
Theory-Driven Evaluation	What causal assumptions explain outcomes?
Contribution Analysis	How much did the program contribute to observed outcomes?
Layered Analysis	Did the intended educational intervention actually occur as planned?
RE-AIM	What was the reach, effectiveness, adoption, implementation, and maintenance?

In the context of patient involvement in HPE where relationship-building and identity shifts are important outcomes these approaches could be used to evaluate:

- How patient partners influence learning processes
- What contextual factors support meaningful engagement
- How patient involvement shapes professional identity
- Relationship and network development
- Community building
- Unintended impacts on students, faculty, and patient partners
- System-level and organizational change.

RESOURCES: Alternative Models of Evaluation

Allen LM, Hay M, Palermo C. Evaluation in health professions education—is measuring outcomes enough? Medical Education 2022; 56(1):127-36. https://doi.org/10.1111/medu.14654

Frye AW, Hemmer PA. Program evaluation models and related theories: AMEE guide no. 67. Medical Teacher 2012; 34(5):e288-99. https://doi.org/10.3109/0142159X.2012.668637

1.3 Novel Approaches to Evaluation of Patient Involvement in HPE

Patient involvement in HPE is transformative and the experiences can be highly personal for students, patients and educators. Standard evaluation methods (e.g., surveys, interviews, focus groups) may be inadequate to measure impacts that are individual, relational, or even unintended. Here are three examples of novel approaches to evaluation that have been used at the University of British Columbia (UBC) to capture evidence of impact. The approaches have proven effective in demonstrating the value of patient involvement in HPE to institutional leaders resulting in on-going support and were turned into a workshop for the UBC Centre for Community-Engaged Learning at their request.

WORD CLOUDS

A word cloud program (e.g., mentimeter.com) is used before and after a health advocacy workshop to identify changes in learners' understandings of health advocacy.

BEFORE



AFTER



ARTS-BASED METHODS OF EVALUATION

Creative poster displays and twitter tweets are presented during an annual symposium to share learning as part of a longitudinal Health Mentors program in which interprofessional groups of students learn from and with a patient mentor. The tweets from each group are compiled and published in the symposium program.

Annual Symposium



Example Symposium Program Booklet



Example Poster Board & Tweet



13	By challenging conventional healthcare practices, we can provide innovative support catered towards each individual's unique needs.	Erikiur (Mentor) Amy, GC Delon, Kinesiology Kaylie, Medicine Ian, OT
14	It shouldn't take a lifetime to be heard. Learning to navigate the healthcare system shouldn't be a barrier to competent care. #teamEve	Eve (Mentor) John, OT Celine, Medicine Caitlin, GC Danielle, Audiology
15	I am not my disability. I am strong. I am smart. I am creative. I am not breakable.	Felicia and Jennifer (Mentors) Nikol, Kinesiology
22	Self-advocacy: An open and understanding environment creates a space to be heard and valued. Stand up for what you deserve! #selfadvocacy	Karen (Mentor) Maria, Medicine Anika, Kinesiology Michelle, SLP Olivia, OT
23	What do you do with free time? Though it has changed for our mentors, they exemplify living a meaningful life and remind us to do the same.	Ken and Mark (Mentors) Turmer, Pharmacy Henry, Nursing Michelle, OT Imelda, Medicine
24	#usefulnotuseless	Kristi (Mentor) Pourya, Pharmacy Kristen, OT Brianna, Nursing
25	Disability doesn't mean what you think it does.	Laurette (Mentor) Sina, Pharmacy Alicia, OT Annie, Nursing Sabrina, Medicine
26	The patient is the heart of what we do, and all healing hands must work together to achieve holistic care.	Lelainia (Mentor) Madeline, OT Stephanie, Pharmacy Kristen, SLP
27	Beyond the medical context: The flower requires more than its petals. It requires a broader nurturing environment.	Leslie (Mentor) Julia, Medicine Jennifer, Nursing Linda, OT Kadaajah, Pharmacy
28	#ResiliencyThroughPartnership	Lynn (Mentor) Katherine, Medicine Brianna, GC Gemma, OT
29	Super heroes are present in all areas of Sophie's life. Her family, her community, her health care team, and most importantly in herself.	Mandy (Mentor) Trevor, Pharmacy Ashley, OT Brittany, Nursing Emily, Medicine
30	The mental health system needs an overhaul; it creates too many challenges for clients and their caregivers. #Advocacy #PolicyChange	Marge and Eric (Mentors) Kaitlin, Medicine Haddon, Nursing Joanne, OT

"I am not my disability. I am strong. I am smart. I am creative. I am not breakable."

GRAPHIC RECORDING & GIFT GIVING AS MEASURES OF IMPACT

To capture community outcomes of a partnership with the university in which health professional students participated in the cultural camps for youth in an Indigenous community, researchers and community leaders hosted a gathering and hired a young artist from the community to graphically record discussions about how the presence of UBC students impacted the community (Figure 1). Gifts, certificates of appreciation, thank you cards, invitations to community events and community artifacts of cultural significance can be key performance indicators of reciprocity and partnership (Figure 2).



Figure 1: Graphic recording of community impact.



Figure 2: Photo of artifacts and gifts received from a community partnership.

BACK TO TABLE OF CONTENTS



PART 2:

Research on the Impact of Patient Involvement in HPE

This part of the guide offers practical tips to undertaking high quality research that adds to the evidence base and advances our understanding of how and why patient involvement in HPE works. If you are new to research, we suggest you work with established researchers or research units. Many academic institutions have dedicated units that support educational research such as the Centre for Health Education Scholarship (CHES) at the University of British Columbia.

Cook, et al. (2008) identified three categories of medical education research—Description, Justification and Clarification. **All are important**, however, more clarification research will help us understand the mechanisms (what, why, how) of patient involvement in HPE. Examples of research from each category are provided in Appendices 1-3. You may also find other frameworks useful such as Park and Leedham-Green's (2024, Figure 4.2, p.79) generalist research approaches which has four categories—Exploratory, Explanatory, Evaluative and Translational—and includes participatory and collaborative approaches directed at patient and public agendas (see Case Study: Incubator for Clinical Education Research, National Institutes of Health and Care Research, UK).

DESCRIPTION What was done? Appendix 1: Examples 1-3	JUSTIFICATION Did it work? Appendix 2: Examples 4-9	CLARIFICATION Why and how did it work? Appendix 3: Examples 10-14
• Describes what was done or a new conceptual model • Good for sharing novel ideas and interventions • **Examples:** case study, single group, post-test design • May include an assessment of outcomes	• Makes comparisons with another intervention • Good for investigating behaviour changes, patient or practice outcomes • **Examples:** control group or single group pre-post test design • Usually lacks a conceptual framework or model	• Clarifies the processes that underlie the observed effects • Good for building on prior research, developing models and theories, making and testing predictions • **Examples:** case control, cohort or cross-sectional design, qualitative research • Its hallmark is the presence of a conceptual or theoretical framework

RESOURCES: Research Approaches

Cook DA, Bordage G, Schmidt HG. Description, justification and clarification: a framework for classifying the purposes of research in medical education. Medical Education 2008; 42(2):128-33. https://doi.org/10.1111/j.1365-2923.2007.02974.x

Park S, Leedham-Green K, editors. Generalism in clinical practice and education. UCL Press, 2024. https://doi.org/10.14324/111.9781800085428.

2.1 Theoretical and Conceptual Frameworks

The literature on patient involvement in HPE, as we might expect for a newly emerging field, has primarily focused on observation and testing with little attention to model development or theory building. Theories help explain the application, interpretation, and outcomes of learning and education. Frameworks are models that are informed by research to help us understand why and how particular phenomena work to ultimately inform educational design. Both can inform patient involvement in educational activities, curriculum development, and when included in scholarly publications, they generate new knowledge that contributes to broader conversations that can help educators design education based on principles that have been empirically tested. The principles can then be adapted to different contexts, translating theory to practice.

> *"We're relatively early in the field of understanding about patient involvement in health professional education and our research can really illuminate examples of what good practice looks like that we have, but also start to bring in theoretical concepts that can help to underpin the rigour and ensure that when we're sharing good practice, that we have some really clear ideas about what the values are that underpin what we do, and how the ways that we think about knowledge and partnership really inform what happens in practice. And so, once we can start to develop this field, we can really start to speak to policy, funders, journals about this exciting area and how we can expand work in that area."* **Sophie Park**

THEORETICAL AND CONCEPTUAL FRAMEWORKS USED FOR PATIENT INVOLVEMENT IN HPE RESEARCH

Reviews of the literature by Gordon et al. (2020) and Bennett-Weston et al. (2022) identified the following theories that have been used to study patient involvement in HPE. However, you do not need to limit yourself to the application of these theories. See examples 10-14 in Appendix 3.

- Complexity theory (Byrne, 1998)
- Constructionist theory (Berger & Luckmann, 1966)
- Transformative learning theory (Kumagai, 2008)
- Socio-cultural learning theory (Vygotsky, 1978)
- Theory of liminality (Turner, 1980)
- Social representations theory (Moscovici, 1981)
- Psychosocial theory of human development (Erikson, 1968)
- Communities of practice (Wenger, 1999)

Researchers at the University of British Columbia have used theory and complementary conceptual frameworks together to investigate student and patient outcomes. In a long-term follow up study of student learning, they used Erikson's theory of identity development (1968) and Marcia's (1993) identity statuses to show how learning from patient mentors can help students construct a patient-centred professional identity. And, in a study of patient benefits they used Erikson's theory of generativity along with Healy and Welchert's (1990) contextual-developmental framework to study how patients benefit from their involvement in teaching and learning. (See example clarification studies 10 & 12 in Appendix 3).

RESOURCES: Theoretical Frameworks Used for Patient Involvement in HPE Research

Byrne D. Complexity theory and the social sciences: an introduction. London: Routledge, 1998.

Berger PL, Luckmann T. The social construction of reality: a treatise in the sociology of knowledge. New York (NY): Anchor Books, 1966.

Erikson EH. Identity: youth and crisis. New York (NY): W. W. Norton & Company, 1968.

Moscovici S. On social representations. In: Forgas JP, editor. Social cognition: perspectives on everyday understanding. London: Academic Press, 1981, p. 181–209.

Turner V. The ritual process: structure and anti-structure. Chicago (IL): Aldine Publishing, 1969.

Vygotsky LS. Mind in society: the development of higher psychological processes. Cambridge (MA): Harvard University Press, 1978.

Wenger E. Communities of practice: learning, meaning, and identity. Cambridge University Press, 1999.

RESOURCES: Using Theory Effectively and Intentionally

Artino AR Jr, Konopasky A. The practical value of educational theory for learning and teaching in graduate medical education. Journal of Graduate Medical Education 2018; 10(6):609-13. https://doi.org/10.4300/JGME-D-18-00825.1

Hean S, Anderson L, Green C, John C, Pitt R, O'Halloran C. Reviews of theoretical frameworks: challenges and judging the quality of theory application. Medical Teacher 2016; 38(6):613–620. https://doi.org/10.3109/0142159X.2015.1075648

Stalmeijer RE, Varpio L. How to incorporate theory in qualitative research: AMEE Guide No. 183. Medical Teacher 2026; 1–16. https://doi.org/10.1080/0142159X.2026.2614604.

2.2 General Research Tips

In this section are some general tips and resources shared by researchers working in the field of patient involvement in HPE. This is not a step-by-step instruction guide to design the perfect study. It is a summary list of practical advice from researchers who have studied patient involvement in HPE.

> *"I think what is really important in any of these assessments is to continue to go back to your learning outcomes and objectives and ensure that we are actually assessing those things, whatever tools we come up with."*
> **Bonita Sawatzky**

- The foundation of a good research study is a good research question. Your research question informs the selection of methods and keeps the scope of the study manageable. In some cases, this may require immersion in the field or context you want to study. A good research question does not always emerge at first glance but has to be elaborated and constructed thoughtfully.
- To investigate outcomes of patient involvement in HPE, align your research questions with the goals and learning objectives of the activity.
- Research questions should be written in clear, non-technical language and fit within the broader context of current theories and relevant research. This keeps the focus and avoids unnecessary detours.
- Choose methods that will best help you answer your research questions. Qualitative methods (e.g., interviews, observation, reflection) are particularly useful for studying outcomes like professional identity formation, shifts in perspectives, empathy or values (see Appendix 3: Examples 10, 11, 13).
- Pilot test instruments such as interview or focus group questions with trusted volunteers and do some preliminary analysis with the pilot data to ensure the data that will be collected directly contribute to answering the central research question.
- Consider hiring research assistants at arm's length from the program to collect data to increase trustworthiness. Participants may be more candid about their experiences with those who are not directly connected to the program. (see Appendix 3: Example 14).
- Interpret the data in the context of relevant research and use theory to help explain the results. If appropriate, check your interpretations with participants. Don't ignore negative cases. These can be rich sources of data.
- Be careful not to over-state your findings and carefully acknowledge limitations and challenges faced by pointing out methodological, contextual or operational obstacles. This shows scientific honesty and strengthens the credibility of the research.
- Summarize findings, reflections on implications, research limitations and challenges with suggestions for future studies or practical actions.
- Share your work clearly and concisely but with sufficient detail that others could replicate it. Be sure to share results with program participants through newsletters, social media posts, direct emails, etc. and don't forget to acknowledge sources of funding for the work! Participants want to know the outcomes of their contributions to education and funders want their contributions recognized.

RESOURCES: Designing and Disseminating Research

Lingard L, Watling C. Story, not study: 30 brief lessons to inspire health researchers as writers. Cham: Springer International Publishing, 2021 . https://doi.org/10.1007/978-3-030-71363-8

Lingard L. Collaborative writing: strategies and activities for writing productively together. Perspectives on Medical Education 2021; 10(3):163-6. https://doi.org/10.1007/s40037-021-00668-7

The Clinical Teacher. Virtual issue on qualitative research for clinical educators – the "How to" series. 2020. Available from: https://asmepublications.onlinelibrary.wiley.com/hub/journal/1743498x/homepage/qualitative_research_for_ce

2.3 Patient Involvement in Research & Evaluation

Involving patients as partners in research and evaluation—not merely participants—is consistent with the values of involving patients in education. Meaningful collaboration strengthens relevance, ethical integrity and accountability, while also challenging traditional power dynamics in health professions education scholarship. Patient involvement in clinical research has gained momentum in recent decades more so than it has in health education research and evaluation. Involving patients as true partners in research helps ensure research is relevant and actionable.

Case Study: Incubator for Clinical Education Research, National Institutes of Health and Care Research, UK

In the UK, patient involvement in clinical research has been normalized and positioned as best practice by funders and publishers. These drivers have helped to shift patient involvement away from token involvement in reviewing results to shared ownership of research. In clinical education research, initiatives like a national incubator program funded by the National Institutes of Health Care Research (NIHR) have supported this work. The Incubator for Clinical Education Research Patient and Public Involvement (PPI) working group meets regularly to provide feedback on research ideas at the earliest stages of research (idea generation and question setting) before funding is secured.

As co-leads of the Incubator for Clinical Education Research PPI Working Group, Sophie Park, Margaret Ogden and Adedoyin Alao support the involvement of patients throughout the research cycle as co-applicants and in research design, data collection, analysis, and knowledge translation.

VIDEO: learning.media.ubc.ca/media/Guide+5%2C+Clip+1+-++Sophie+Park/0_zbfnqeut



TIPS:

Create a shared glossary and build in informal discussion time (e.g., “kettle boiling” moments) to support equitable participation.

Tips for Involving Patients in Research

PATIENT INVOLVEMENT	TIPS	EXAMPLES
As members of the team	Involve patient partners from the beginning in developing the research and evaluation questions and throughout the research process. What's important to patients? Set-up a steering committee, advisory or reference group that includes patients to guide the project.	**Example 15:** Brand et al. (2021) involved patients from the very beginning at the proposal and priority-setting stage. **Example 18:** Bennett-Weston et al. (2025) established a reference group with three patients to guide the study scope, interview topics and analysis.
In data collection	Research participants may be reluctant to share negative experiences with researchers who are connected to the program or activity. Train patients or community partners who are at arms-length from the researchers and program coordinators to collect data.	**Example 14:** Kline et al. (2013) hired a research assistant from the community and at arm's length from the project team to conduct interviews with community partners.
In data analysis	Patients can be involved in qualitative data analysis with a coding framework.	**Example 4:** Jha et al. (2015) involved two patients in qualitative analysis using a coding framework.
In dissemination and knowledge exchange	Involve patient partners in presentations and publications. Publish in open-access formats as much as possible. Consider accessible and creative formats such as newsletters, podcasts, videos, etc.	**Example 2:** The paper by Towle et al. (2014) includes patient (Health Mentors) and student co-authors.

RESOURCES: Involving Patients in Health Research

Engage with Impact toolkit: https://www.evaluateengagement.ca/

Hawke LD, Dada-Phillips W, Seiyad H, Orson J, Goldsmith L, Conway S, et al. Best practice guidelines for the engagement of people with lived experience in mental health and substance use health research. Toronto (ON): Centre for Addiction and Mental Health, 2024. Available from: https://www.camh.ca/-/media/professionals-files/engagement-people-lived-experience-mhresearch2024-pdf.pdf. [Accessed 2026 Mar 11].

Jennings H, Slade M, Bates P, Munday E, Toney R. Best practice framework for Patient and Public Involvement (PPI) in collaborative data analysis of qualitative mental health research: methodology development and refinement. BMC Psychiatry 2018; 18(1):213. https://doi.org/10.1186/s12888-018-1794-8

National Institute of Health Care Research. Incubator for Clinical Education Research Public Partners Group: https://clinicaleducationresearch.org/patient-and-public-involvement/ [Accessed 2026 Apr 10].

Newman A, McAlister B, Seddon K, Peddle S, Nelson A. Public Involvement in Research Impact Toolkit (PIRIT). Cardiff University, Wales, UK: Cardiff University, 2023. Available at: https://www.cardiff.ac.uk/marie-curie-research-centre/patient-and-public-involvement/public-involvement-in-research-impact-toolkit-pirit. [Accessed 31.03.2026].

2.4 Co-Designed Research on Patient Involvement in HPE

If you wish to involve patients in research, co-designed and participatory approaches offer promising pathways to more equitable, inclusive, and impactful research, particularly when diverse voices and lived experiences are included (see Appendix 4, examples 15-17).

Brand and colleagues (2023) have taken patient involvement in health education research to the next level with participatory approaches to co-designing educational research with patients. They used arts-based and humanities approaches (visual arts and recorded narratives) to co-design rich educational experiences in mental health education and identified five principles for co-designing educational research: 1) Inclusive (diverse lived experience involved throughout); 2) Respectful (lived experience is valued equally including authorship and remuneration); 3) Participatory (open, empathetic dialogue); 4) Iterative (cyclical reflection and refinement); 5) Outcomes-focused (outputs emerge collaboratively, not pre-determined). They argue that health education research needs to move beyond ad hoc or single event patient contributions to co-designed approaches that involve democratic processes, shared decision-making and transparency. See example 15 in Appendix 4.

Augeard et al. (2022) and (2025) also included patients in leadership roles and as co-authors. Patient partners helped define what competencies should be assessed in physiotherapy students' pain management skills and were involved throughout the full life-cycle of the project. See examples 16 & 17 in Appendix 4.

RESOURCE: Co-Designed Research

Brand G, River J, Molloy R, Kemp H, Bellingham B. Whose knowledge is of value? Co-designing healthcare education research with people with lived experience. Nurse Education Today 2023; 120:105616. https://doi.org/10.1016/j.nedt.2022.105616

2.5 Participatory Action Research

Participatory Action Research (PAR) aligns well with the values of patient involvement in HPE because it prioritizes experiential knowledge. PAR is research done ***with*** people, not ***on*** people, with the goal of improving real-world practice or conditions. It is a collaborative, iterative and action-oriented approach to research that involves those affected by a problem as co-researchers to generate knowledge and implement change. It is rooted in critical pedagogy, democratic and emancipatory traditions, and community-based research movements. A core principle is the co-creation of knowledge where community members help define the problem, research questions, methods and interpretation. Power is shared, not controlled by academic researchers. It is action-oriented with the goal of creating practical change in policy, improved services and better systems.

Its strengths are that it is contextually grounded knowledge, enhances relevance and uptake, and builds capacity among community partners. However, PAR is time-intensive, requires trust and relationship building, and power dynamics can persist despite best intentions. While a deep dive into PAR is outside the scope of this guide, many of the tips, examples and calls to action support co-designed approaches to evaluation and research.

RESOURCES: Participatory Action Research

Reason P, Bradbury H, editors. The SAGE handbook of action research. SAGE Publications Ltd, 2008. https://doi.org/10.4135/9781848607934

Kindon S, Pain R, Kesby M. Participatory action research approaches and methods. Connecting people, participation and place. Abingdon: Routledge, 2007.

Paxino J, Eppich W, Bolton J, Kron RW, Denniston C. A primer on participatory research for health professional education. Focus on Health Professional Education: A Multi-Professional Journal 2024; 25(3):121-32. https://search.informit.org/doi/10.3316/informit.T202410110000389069249303 6

2.6 Research on 'How' to Partner with Patients in Education

Research on ***how*** patient partnership in education can be done well is also needed. Critical questions around power, whose voices are heard, and what partnership in education means need to be addressed and would help advance the field (see Appendix 5, examples 18-20).

Bennett-Weston et al. (2025) explored the mechanisms through which patient partnerships are facilitated, to understand how patients become and belong as partners within an academic community. They offer a conceptual model that illustrates how patient involvement is experienced by patients, educators and students in an academic community and the tensions created when they interact (see Bennett-Weston 2025, Figure 1, p. 471). Their exploration of how and under what conditions meaningful partnership occurs provides a number of tips for research dedicated to understanding best practices on ***how*** to partner with patients in education:

- Design studies that explore culture, relationships and power, not just educational outcomes.
- Use study designs that gather triangulated perspectives across stakeholder groups.
- Examine training for patients, faculty development for educators, and orientation for students.
- Evaluate which types of preparation improve trust, collaboration and educational outcomes.
- Examine longitudinal programs and sustained collaborations, not isolated teaching sessions.
- Explore organizational policies and governance structures that support or hinder partnership.
- Future studies should involve patients as research partners, not just participants.

Sehlbach et al. (2024) looked at patient and health professional perceptions of the potential for patient feedback to support practice-based learning. Similarly, they found that issues of power need be addressed and tools are needed to help engage patients in feedback conversations. Tips for future research:

- Research should examine feedback dialogue and relational processes.
- Include patients who have been involved in education for deeper insights and reflections.
- Include questions about power, trust and safety when studying patient involvement.
- Examine how to help patients see themselves as educators.
- Study institutional context, not just individual interactions.

Harris et al. (2023) looked at how people with lived experience of mental health system encounters can be meaningfully involved in continuing professional development (CPD) for mental health professionals. Drawing from the literature and reflecting on their own experience they offer guidance on how to meaningfully engage patients in CPD settings. They propose critical reflexivity – ongoing exploration of knowledge generation from different perspectives and questioning of power structures that influence how knowledge is produced as a key strategy for creating equitable partnerships. In practice this means:

- Investing time and resources in relationship building.
- Treating lived experience as legitimate expertise.
- Clarifying motivations and expectations – asking "Why are we engaging lived experience now?"
- Including diverse experiences and avoiding tokenistic representation.
- Sharing power, decision making and leadership roles.

2.7 Evaluation of Patient Involvement in Research

Some researchers have begun to develop and test frameworks for evaluating the quality of engagement and co-production processes in health research, policy, systems, etc. Although not specific to patient involvement in HPE, you may find some of these resources useful.

RESOURCES: Evaluation of Patient Involvement in Research

McLean RK, Carden F, Aiken AB, Armstrong R, Bray J, Cassidy CE et al. Evaluating the quality of research co-production: Research Quality Plus for Co-Production (RQ+ 4 Co-Pro). Health Research Policy and Systems 2023; 21(1):51. https://doi.org/10.1186/s12961-023-00990-y

Public and Patient Engagement Collaborative. Casebook of public and patient engagement evaluation in health research, health systems and policy. McMaster University, 2025. Available at: https://ppe.mcmaster.ca/casebook-public-and-patient-engagement-evaluation/ [Accessed 31.03.2026]

Harris H, Donner K, Rovet J, Rosell E, Wolframe J, Lee T et al. The trials and triumphs of co-producing an evaluation plan: a principles-focused evaluation. Research Involvement and Engagement 2024; 10(1):132. https://doi.org/10.1186/s40900-024-00666-z

2.8 Calls to Action

Kalocsai and colleagues (2024) conducted a co-produced critical literature review with patients (service-users) and academics working together. They reviewed papers describing patient involvement in mental health education. The purpose was to critically examine how power is addressed in the literature on patient involvement in mental health professional education. They call for educators and researchers to be more power-conscious and engage in co-production that can truly transform the ways health professionals are educated, particularly in mental health. They propose five calls to action that are useful for involving patients in research and evaluation.

> *"I come to this work as a researcher. I've been working very closely with a clinician educator who has created or co-produced the program with service user educators to teach psychiatry residents at the department of psychiatry at the University of Toronto. And we have conducted several studies. And, in one of the studies entitled, 'Power to the people: a co-produced critical review of service user involvement in mental health professional education', we end with a call to action. And I'm hoping that that call to action can shape some of these guidelines, including the guidelines on evaluation and research that is the output of this conference."* **Csilla Kalocsai**

1. **Centre relational accountability:** Be accountable to service user collaborators, position service users as experts by experience and share power. Recognize that meaningful power shifts require challenging dominant biomedical epistemic frameworks.

2. **Broaden whose knowledge counts:** Actively include diverse service users, including those who are also educators, learners, researchers, or clinicians. Address intersecting forms of marginalization (e.g., racism, ableism, colonialism) that shape whose experiences are legitimized.

3. **Embed equity in research, writing, and authorship:** Extend service user involvement beyond teaching into inquiry, analysis, authorship and knowledge mobilization. Use reflexivity and fair authorship practices to avoid tokenism and epistemic exploitation.

4. **Theorize power rigorously and explicitly:** Use robust critical theories of power to examine tensions, contradictions, resistance and unintended harms in patients. Treat power as a central analytic concern from the outset—not merely an outcome or afterthought.

5. **Advocate for structural and systems-level change:** Identify and challenge institutional, cultural and political–economic structures that constrain meaningful involvement. Engage seriously with the long-standing critiques and demands of patient advocates.

RESOURCE: Co-Production

Kalocsai C, Agrawal S, de Bie L, Beder M, Bellissimo G, Berkhout S et al. Power to the people? A co-produced critical review of service user involvement in mental health professions education. Advances in Health Sciences Education 2024; 29(1):273-300. https://doi.org/10.1007/s10459-023-10240-z

BACK TO TABLE OF CONTENTS

Appendices

Appendix 1: Description Study Examples 1-3

Description Studies

The focus of descriptive studies is observation and describing a novel intervention. There is a continued need for studies that describe novel ideas or interventions that will lay the groundwork for future innovation and research. The patient involvement in HPE literature has many of these kinds of studies but many interventions are poorly described and evaluated. The following descriptive studies include useful evaluation techniques.

Key Idea: The innovation should be described in sufficient detail, including pedagogy, setting and content of the intervention, that it can be replicated and tested in other contexts to further develop conceptual frameworks.

> **EXAMPLE 1:** Towle and Godolphin (2013) describe the development of an educational model in which interprofessional workshops are co-designed and delivered by patients living with chronic conditions. While not a comparison study, the intervention and evaluation are well described and the study clearly demonstrates the feasibility and immediate outcomes of patients as teachers of patient-centred care.

Educational activity: 2-hour interprofessional workshops designed and taught by patients.

Participants: health professional students, patients living with chronic conditions, caregivers, patient and community organizations.

Theoretical framework: Bleakley and Bligh (2008) patient-centred education.

Purpose: To identify issues involved in creating an educational intervention designed and delivered by patients and document outcomes.

Questions: 1) What are the considerations for creating an educational intervention designed and delivered by patients? 2) How are the sessions received by students from different disciplines? 3) To what extent do students learn patient-centredness when the education is led by patients?

Methods: Post-workshop student evaluation surveys and debriefing sessions with patient educators.

Analysis: descriptive statistics and thematic analysis of open-ended questions mapped to key dimensions of patient-centredness.

TIPS FOR: ASSESSING REACTIONS AND LEARNING (LEVELS 1 & 2)

- Compare free-text survey responses about what they learned to definitions of patient-centredness.
- Use a Likert scale of 1 (the worst) to 5 (the best) to ask participants to compare their experience with similar learning / volunteer experiences.
- Ask if they would recommend the activity to their peers.

> **EXAMPLE 2:** Towle et al. (2014) describe the development, implementation and evaluation of an interprofessional health mentors program. The paper presents early outcomes and experiences of both students and patient participants. It is an example of a paper co-written with students and patients as co-authors.

Educational activity: A longitudinal interprofessional Health Mentors program in which groups of 3-4 students from different disciplines learn together, with and from a mentor with a chronic condition who is an 'expert by experience'.

Participants: health professional students, patients living with chronic conditions or disability, caregivers.

Theoretical framework: N/A

Purpose: Describe a novel program involving patients as mentors and document learning outcomes.

Methods: surveys, focus groups, interviews, reflective journals.

Analysis: descriptive statistics and thematic analysis.

TIPS FOR: ASSESSING REACTIONS AND LEARNING (LEVELS 1 & 2)

- Use a Likert scale of 1 (the worst) to 5 (the best) to ask participants to compare their experience with similar learning / volunteer experiences.
- Compare student reflective journals and free-text survey responses to the learning goals.

> **EXAMPLE 3:** Towle et al. (2015) describe the adaptation of a health fair concept into a multi-professional event at which students learn from and about the expertise and resources of non-profit community organizations. The paper presents evaluation methods and challenges associated with a large, informal, 'drop-in', public event.

Educational activity: A fair for students to learn about non-profit community organizations.

Participants: Representatives from patient organizations, students and faculty from different health disciplines.

Theoretical framework: N/A

Purpose: To describe 5 years of experience with a Patient & Community Fair designed to teach students about local community expertise and resources that could be a model replicated by other academic institutions.

Methods: surveys, exit interviews, visitor tracking, observation.

Analysis: thematic analysis and descriptive statistics.

TIPS FOR: ASSESSING REACTIONS AND LEARNING (LEVELS 1 & 2)

- Register participants in a door prize draw and send them a survey afterwards.
- Involve community in recording the number of visitors to their exhibit as they are motivated to collect this data for their own purposes.
- Brief exit interviews with a convenience sample of students to capture their immediate reactions (this quickly reaches saturation and can be triangulated with survey data).

Appendix 2: Justification Study Examples 4-9

Justification Studies

Justification studies focus on the last part of the scientific process to find out if a new intervention works. There is a continued need for justification studies, particularly studies of longer-term impact on professional practice and patient care.

Key Idea: We need evidence of patient involvement benefitting learners not just in an educational context, but in professional practice.

Learner Benefits

Most justification studies have focused on student outcomes.

> **EXAMPLE 4:** Jha et al. (2015) conducted a randomized controlled trial (RCT) to measure the impact of patient narratives on patient safety training of junior doctors. The study shows that involving patients is equally effective as traditional teaching about patient safety and it is an example of an RCT in medical education.

Educational activity: 1-hour long patient narratives followed by discussion.

Participants: junior doctors, patients / families who experienced harm or medical errors.

Conceptual framework: Kumagai's (2008) conceptual framework for the use of illness narratives in medical education.

Purpose: To measure the impact of patient narratives used to train junior doctors in patient safety.

Question: Does facilitating trainees to reflect on the patient stories and on their own experiences influence their own beliefs, attitudes and intention of future behaviour?

Methods: mixed methods, multi-centre, two-arm, parallel design randomised controlled trial comparing the intervention to conventional faculty-delivered teaching using the Attitude to Patient Safety Questionnaire (APSQ) and the Positive and Negative Affect Schedule (PANAS) to measure impact, and an open-ended question asked for three learning points they would try and implement in practice.

Analysis: Wilcoxon rank sum tests of the scales were used to assess difference between groups. Qualitative data was analyzed thematically.

TIP FOR: PATIENT INVOLVEMENT IN RESEARCH AND EVALUATION

- Two patients were involved in the analysis of the qualitative data using a coding framework.

TIP FOR: ASSESSING CHANGES IN ATTITUDES

- RCTs are rare in patient involvement research. If context permits, this study is a good example of how to set one up.
- Validated attitude scales can be used to assess changes in attitudes.

> **EXAMPLE 5:** Dhatt et al. (2024) conducted a longitudinal diary study of pharmacy students' reflections on opportunities to practice health advocacy in community pharmacy placements following a health advocacy workshop involving patients. It is an example of the limitations of one-off educational interventions and speaks to the need for programmatic approaches to patient involvement in HPE, particularly when it comes to complex topics such as health advocacy which need to be integrated throughout the curriculum.

Educational activity: 2-hour workshop on health advocacy co-facilitated by patients and faculty.

Participants: pharmacy students, patients, caregivers, community partners.

Conceptual framework: A health advocacy competency framework for pharmacists.

Purpose: To explore how on-campus advocacy instruction informed students' actual patient care during workplace-based training.

Method: longitudinal diary study.

Analysis: content analysis.

TIP FOR: ASSESSING IMPACT ON PRACTICE (KIRKPATRICK LEVEL 3)

- Diaries or reflective journals kept by learners during clinical practice are a good way to assess application (or lack) of learning in practice.

> **EXAMPLE 6:** Sawatzky and Kline (2025) used a case-based assessment to examine the lasting effects of a health mentor program. They compared care plans written by medical students who had taken the program in the first year of medical school with those who did not participate in the program. Students who participated in the program significantly prioritized the patient's and caregiver's voices and ordered fewer diagnostic tests. It is one of a few studies to attempt to measure the long-term impact of learning from patients.

Educational activity: Longitudinal interprofessional Health Mentors program in which groups of 3-4 students from different disciplines learn together, with and from a mentor with a chronic condition who is an 'expert by experience'.

Participants: 4th year medical students.

Conceptual framework: shared-decision making.

Purpose: To assess the long-term impact of the program on intentions to involve patients in decision-making at entry-to-practice.

Method: case-based assessment.

Analysis: Levene's T-tests to determine if there were statistically significant differences between groups.

TIPS FOR: QUANTITATIVE ASSESSMENT OF LONG-TERM IMPACT

- Case-based assessments can be used to examine the lasting impact of patient involvement.
- Align your research questions and design to the learning objectives.

> **EXAMPLE 7:** Westmoreland et al. (2009) incorporated a 'Council of Elders' to foster positive attitudes in medical students towards older adults. Using a validated Geriatrics Attitudes Scale, written reflective journals, and learner satisfaction surveys they were able to determine that an experience originally designed for medical residents was effectively adapted and implemented for medical students.

Educational activity: A 'Council of Elders'. The council is a panel of healthy older adults who present themselves as senior instructors to trainees.

Participants: medical students and healthy older adults.

Conceptual framework: N/A

Purpose: To assess if an older adult session designed for graduate medical education could be adapted into a new geriatrics learning experience for medical students to foster positive attitudes towards older adults.

Methods: triangulation of an attitude scale, reflective journals, and satisfaction survey.

Analysis: descriptive statistics and content analysis.



TIPS FOR: MIXED METHODS APPROACHES TO RESEARCH AND EVALUATION

- Triangulation of attitude scales with qualitative measures such as reflective journals and surveys can provide strong evidence.
- Reflective journals serve as both an important educational activity and are also a source of data about what students find most memorable and are likely to remember later in practice.

Patient Benefits

There are fewer studies of patient outcomes.

> **EXAMPLE 8:** Stacy and Spencer (2002) carried out semi-structured interviews with 20 patients taking part in a community-based undergraduate medical student project to explore what they gained from participating and any problems that occurred. They used a grounded theory approach to identify themes. They found that patients saw themselves as experts and exemplars of their condition with important contributions to make to students' professional skills and attitudes. Reported benefits from participation included learning more about themselves and satisfaction in helping students learn. Important issues were identified related to interpersonal dynamics, gender and ethnic differences, inadequate briefing of participants, and whether the exercise might be considered exploitive in some situations. It is an example of a study of the patient experience of being involved in education.

Educational activity: Pairs of students visit a patient with a chronic condition several times over 6-months to observe and discuss the impact of chronic conditions on a patient and their family.

Participants: 2nd year medical students and patients living with chronic conditions.

Conceptual framework: N/A

Purpose: To explore patients' perspectives on their involvement in education.

Methods: semi-structured interviews.

Analysis: grounded theory.

TIPS FOR: INVESTIGATING PATIENT PERSPECTIVES AND BENEFITS OF INVOLVEMENT FOR PATIENTS

- Asking patients about how they approach their role can provide insights into what matters most to patients, what they think students need to learn, as well as uncover program deficiencies in understanding the purpose and processes of the activity.
- It can also illuminate how students might experience learning from patients, including potential problems that students might need to navigate such as interpersonal dynamics between a patient and caregiver.

Studies of Both Learners and Patients

It is possible to investigate outcomes for learners and patients in a single study. Such studies can demonstrate the opportunity that patient involvement in HPE provides for professionals and patients to develop insights into the challenges faced by one another, build trust and capacity necessary for equal partnership in health care.

> **EXAMPLE 9:** Cahill et al. (2015) used a pre-post design to examine if formative feedback from high school students as simulated patients enhanced medical students' ability to discuss sensitive health issues with adolescents. It is an example of a pre-post study design using a mixed-method approach of qualitative (focus groups) and quantitative (surveys) methods to look at outcomes for both medical students and high school student participants. The study demonstrates positive outcomes for both and is a proof-of-concept for involving vulnerable patient populations in HPE.

Educational activity: high school students as simulated patients who give formative feedback.

Participants: medical students and high-school students.

Conceptual framework: N/A

Purpose: To evaluate whether simulations with high-school students who provide formative feedback improve medical students' communication skills with adolescents about sensitive topics.

Methods: pre-post surveys and focus groups.

Analysis: thematic analysis and descriptive statistics.

TIPS FOR: ASSESSING BENEFITS TO STUDENTS AND PATIENTS

- Align research questions with known practice gaps. This study is grounded in documented deficiencies (e.g., clinicians' discomfort communicating with adolescents, adolescents' reluctance to seek help), strengthening the relevance and justification of the research.
- Combining qualitative (pre/post focus groups) and quantitative (post-workshop surveys) methods allows the researchers to examine changes in confidence and attitudes and perceived skill development.
- Use mixed methods to capture complex outcomes.
- Surveys can be designed to get participants reactions to individual aspects of an intervention.
- Focus groups are useful to explore survey participants' responses in more depth.

Appendix 3: Clarification Study Examples 10-14

Clarification Studies

Clarification studies use all steps of the scientific method to answer how and why an intervention works in ways that clarify our understanding of patient involvement in HPE. These studies employ conceptual frameworks or theory to support a sustained line of inquiry. While description and justification studies look into the past, clarification studies help illuminate a path forward to advance the science of patient involvement in HPE.

Key Idea: The presence of a theoretical or conceptual framework is a defining characteristic of clarification studies and essential for bringing into focus how and why an intervention works.

Learner Benefits

> **EXAMPLE 10:** Kline et al. (2020) investigated the long-term outcomes of an interprofessional health mentors program using in-depth interviews with medical residents 3-4 years post-program. They found evidence of patient-centred professional identity formation rooted in learning that took place during the program. It is an example of how research underpinned by theory and a conceptual framework can deepen our understanding of the mechanisms of patient involvement that influence professional identity and behaviours.

Educational activity: Longitudinal interprofessional Health Mentors program in which groups of 3-4 students from different disciplines learn together, with and from a mentor with a chronic condition who is an 'expert by experience'.

Participants: medical residents.

Theoretical/conceptual framework: Erikson's (1968) theory of psychosocial development and Marcia's (1990) identity status paradigm.

Purpose: To examine the role that patients can play in supporting professional identify formation (PIF).

Question: What long-term effect does interaction with a patient mentor in the preclinical years have on the PIF of medical students?

Method: semi-structured in-depth interviews.

Analysis: thematic analysis mapped to identity status concepts (exploration and commitment).

TIPS FOR: ASSESSING LONGER-TERM IMPACT ON PRACTICE

- Get consent from participants to be contacted for research at the start of a program or activity so you can invite them to participate in future research to assess the lasting effects on practice.
- Follow-up interviews can be used to trace the sustainability of learning over time by asking participants for specific examples of how they use what they learned in practice.
- Theoretical and conceptual frameworks can be used to interpret results and explain how and why an intervention works.
- Choose a framework that operationalizes the phenomenon under study so abstract concepts (like identity) can be analyzed empirically.

- Be explicit about *why* a particular theoretical lens fits your context—and acknowledge where another lens might be more appropriate later.
- When studying formation or development, build in distance from the intervention to distinguish short-term reactions from sustained change.
- Retrospective data can be a strength when the outcome of interest is meaning-making, not behaviour frequency.
- Align methods with the values under study.
- When studying change, define markers of both process (moments that prompt reflection or disruption such as exploration) and outcomes (statements showing personal investment and integration into practice such as commitment)—not just attitudes.
- Identify linguistic or behavioural indicators that align with your framework to enhance analytic transparency.
- Context is important. Attend to how learning is structured, not just what learners do.

> **EXAMPLE 11:** Katz et al. (2000) used video observation and focus groups to examine the effects of a community of elders who functioned as senior faculty to medical residents. Drawing on Kleinman's explanatory model, the authors use a case study to illustrate lessons learned about the process by which elders become more than teachers or advisors but collaborators with doctors and researchers in creating a community of resources to identify novel approaches to overcoming health problems that neither group would likely arrive at independently. Through rigorous qualitative research they showed how bringing together different generations and cultures (including professional culture and lived experience) in a dialogic relationship can transform approaches to care. Using focus groups they further showed how the program addresses ageism and promotes decision making ***with*** rather than *for* patients. The model has been replicated elsewhere with additional research conducted to further understand and refine the model (see Example 7: Westmoreland, 2009).

Educational activity: A 'Council of Elders' in which community elders function as our `Senior Faculty', to whom medical residents present their challenging and heartfelt dilemmas in caring for elder patients.

Participants: medical residents, clinical faculty, seniors.

Theoretical framework: Kleinman's explanatory model.

Purpose: To describe a novel intervention and its immediate and long-term effects on relationship-centred care.

Methods: observation and focus groups.

Analysis: discourse analysis.

TIPS FOR: ASSESSING CHANGES IN ATTITUDES AND BEHAVIOURS IN PRACTICE (LEVELS 2 & 3)

- Invest in relationship-building and preparation as part of the research design, not as an "extra."
- Open dialogue rather than structured interviews or surveys can surface meaning, values, moral reasoning, and lived worlds that are often invisible in traditional data collection methods. Consider dialogic forums, facilitated conversations, or co-reflective sessions as qualitative methods.
- Exploring the meanings participants make of patient involvement can uncover changes in attitudes. Pay attention to language and framing which can be rich sources of data.
- Analytic approaches should allow for complexity, contradiction, and multiple truths rather than forcing convergence.
- Video recordings can be used to observe engagement and attentiveness that can provide insights such as shifts in power dynamics that might otherwise go unseen.
- Document not only what happened, but how and why it mattered to different participants.
- Follow-up sessions can be used to capture reflections over-time that can be analyzed for practice implications such as effects on clinical reasoning to go beyond immediate outcomes and assess shifts in mindset over time.
- Document not only what happened, but how and why it mattered to different participants.

Patient Benefits

> **EXAMPLE 12:** Kline et al. (2021) studied how health mentors (patients living with chronic conditions or disability) benefit from mentoring students in an interprofessional health mentors program. Using a contextual-developmental framework and Erikson's theory of generativity they identified the contextual factors that contributed to the different ways that mentors benefitted from mentoring health professional students, including self-reported improvements in communication with health care providers. The study adds to the sparse literature on the benefits of patient involvement in HPE for patients and shows how the use of a theoretical framework can advance research and practice.

Educational activity: Longitudinal interprofessional Health Mentors program in which groups of 3-4 students from different disciplines learn together, with and from a mentor with a chronic condition who is an 'expert by experience'.

Participants: Health Mentors (patients living with chronic conditions or disabilities, or their caregivers).

Theoretical/conceptional framework: Erikson's (1968) theory of psychosocial development and Healy and Welchert's (1990) contextual-developmental framework.

Purpose: To identify the benefits Health Mentors get from mentoring and the contextual factors that contribute to or explain the benefits.

Questions: What benefits do health mentors identify from mentoring health professional students and what contextual (program design) factors contribute to, or explain, the benefits?

Method: surveys.

Analysis: thematic analysis mapped to a contextual-developmental framework.

TIPS FOR: ASSESSING OUTCOMES OF INVOLVEMENT FOR PATIENTS

- Collect data directly from patients rather than indirectly through student outcomes.
- Ask patient partners to describe how they have benefited from being involved, how they have changed, and what else they have done as a consequence of their involvement to assess outcomes.
- Use open-ended questions to capture unintended benefits you may not have thought of such as identity change or new life opportunities.
- Ask patients what changes they have observed in the students and/or what, if any changes, they have witnessed / experienced in care settings.
- Look at the data through the lens of a conceptual framework and ask how changes occur, for whom, and under what conditions, not just whether changes occurred to move beyond description.
- Look for transformation, not just satisfaction. Go beyond "positive experiences" to examine identity shifts, empowerment, advocacy, and changes in mentors' roles or activities.
- Consider mentor and student motivation and readiness as key variables influencing reciprocity and outcomes.
- Investigate how perceived benefits influence retention and sustainability.

Studies of Both Learners and Patients (in the same study)

> **EXAMPLE 13:** Agrawal et al. (2021) explored how psychiatry residents and patient advisors experience a longitudinal relationship-based co-produced course that paired people with lived experience of mental illness as advisors to 4th year psychiatry residents. Using in-depth interviews and liminality theory the study provides insights into the transformative processes that result (or not) in changes in traditional understandings about the doctor-patient relationship and dominance of biomedical knowledge.

Educational activity: co-produced a longitudinal course in psychiatry that paired people with lived experience of mental health challenges as advisors to fourth-year psychiatry residents.

Participants: 4th year psychiatry residents and patient advisors with lived experience of mental health challenges.

Theoretical framework: the anthropological theory of liminality.

Purpose: To examine a novel, relationship-based course in order to understand co-produced health professions education more broadly.

Methods: in-person semi-structured interviews with advisors and residents after the end of the course.

Analysis: thematic and subjectivist theory-informing inductive data analysis.

TIPS FOR: ASSESSING LEARNING OUTCOMES

- Pay attention to negative or ambivalent responses. Discomfort, uncertainty, or resistance can be signs of transformative learning rather than failures.
- Learners may struggle to articulate what they learned. Look at changes in language, assumptions, clinical reasoning, or self-awareness instead of explicit claims of learning.

- The authors emphasize transformation as a process of becoming, not an instant outcome. Short-term studies may miss down-stream effects. Consider longitudinal designs or follow-up studies to capture delayed impacts on identity, practice, or advocacy.
- Align research questions and methods with the values of co-production (e.g., reflexivity, relationality, equity).
- Make researcher positionality, roles, and assumptions explicit and methodologically visible. Include researchers at arm's length of the intervention to reduce bias.
- Treat institutional and educational context as an active component of what you are studying, not background noise.

> **EXAMPLE 14:** Kline et al. (2013) describe the development and outcomes of an educational model in which health professional students learn alongside Aboriginal youth at summer camps and experience the community as teacher. Using Cultural Safety as a conceptual framework they assessed student learning outcomes and benefits to the community in follow-up interviews and focus groups. The study provides some evidence of impact on practice with specific examples of the ways students described how they used what they learned in practice to build trust and improve patient care.

Educational activity: 3-4 days immersion in community (cultural summer camps).

Participants: undergraduate health care students and an Aboriginal community organization.

Conceptual framework: Cultural Safety.

Purpose: To describe the development and outcomes of a community-driven service-learning program in which health professional students learn with, from, and about the community through brief immersion in summer camps put on by an Aboriginal agency.

Methods: interviews and focus groups.

Analysis: interpretive thematic analysis mapped to dimensions of Cultural Safety.

TIPS FOR: ASSESSING LASTING OUTCOMES OF COMMUNITY-BASED LEARNING

- Semi-structured interviews, storytelling, and participant reflections are well suited to capturing shifts in assumptions and stereotypes.
- Create interview guides that invite participants to describe moments that stayed with them.
- Ask participants to compare the learning experience with the formal curriculum.
- Ask not only what students learn, but what the community gains and how the partnership shifts power.
- Use a theoretically grounded conceptual framework to structure the analysis.
- Treat reciprocity and power-sharing as core assessment criteria, not side considerations.
- Share results with community partners in accessible ways such as a poster of illustrative quotes from students about what they learned.

Appendix 4: Co-Designed Research Examples 15-17

Co-Designed Research

> **EXAMPLE 15:** Brand et al. (2021) used arts and humanities-based approaches (visual arts and recorded narratives) to co-design rich educational experiences in mental health education and practice. They identified five principles for co-designing educational research: 1) Inclusive (diverse lived experience involved throughout); 2) Respectful (lived experience is valued equally including authorship and remuneration); 3) Participatory (open, empathetic dialogue); 4) Iterative (cyclical reflection and refinement); 5) Outcomes-focused (outputs emerge collaboratively, not pre-determined).

Educational activity: arts and humanities-based educational vignettes.

Participants: mental health professionals and consumers.

Conceptual framework: arts and humanities-based teaching methodologies including engagement, meaning-making and translational education strategies.

Purpose: To apply participatory action research methods to co-designed patient involvement in HPE.

Methods: in-depth audio-recorded reflective conversations.

Analysis: iterative, collaborative narratives analysis between researchers and consumers.

TIPS FOR: CO-DESIGNED RESEARCH WITH PATIENTS

- Involve patients from the very beginning at the proposal and priority-setting stage.
- Position patients as experts by experience.
- Use participatory and relationship research methods (e.g., conversational interviews, storytelling, personal humanities-based artefacts such as fine art, sculpture, music, literature, historical records, clinical notes, letters to the editor, mind maps, etc.
- Let outputs emerge through the co-design process, guided by shared meaning-making.
- Use regular check-ins, especially when working with vulnerable populations.
- Be prepared to re-visit data and reframe interpretations. Be flexible with timelines and expectations.

> **EXAMPLES 16 & 17:** Augeard et al. (2022) and (2025) included two patient partners in leadership roles. Lynn Cooper and Lesley Singer both live with chronic pain and helped oversee all aspects of the project and played key leadership roles in helping to engage other people living with chronic pain. Both papers describe the development of a competency assessment using integrated knowledge translation (IKT) and meaningful involvement of people with lived experience throughout the research and evaluation process. Patient partners helped define what competencies should be assessed and how they should be evaluated.

Activity: Competency-based assessment tool development.

Participants: Physiotherapy students and patients living with chronic pain.

Theoretical framework: Kane's argument-based validity framework and Miller's Pyramid of Clinical Competence.

Purpose: To develop a tool to reliably measure pain management competencies of physical therapy students.

Methods: Mixed-method, iterative design grounded in educational measurement and co-design with stakeholders.

Analysis: They combined psychometric analysis of test items with qualitative feedback analysis to refine the assessment and evaluate its reliability and validity.

TIPS FOR: CO-DESIGNED RESEARCH WITH PATIENTS

- Include patients in defining research questions, outcomes, and evaluation priorities.
- Establish a governance structure where patient partners participate as full team members.
- Work with patient partners continuously and engage them across the project life cycle.
- Ask patient partners to help with case scenarios, examples of real-world problems, and priorities for evaluation.
- Include patient partners in survey item review, interview guide design, outcome measure selection.
- Expect patient input to reshape the intervention or evaluation.
- Pilot test with patient partners to check wording, interpretation, and relevance.
- Include evaluation approaches that measure relational aspects of care.
- Continually ask patient partners: "Would this make care better for patients?"

Appendix 5: How to Partner with Patients in Education Study Examples 18-20

Research on How to Partner with Patients in Education

> **EXAMPLE 18:** Bennett-Weston et al. (2025) studied what involving patients in education means to patient partners and academic educators. They found that differences in knowledge, lack of shared vision, and lack of trust in patients can be barriers to meaningful involvement. They suggest that adequate training of patients and faculty development for educators are needed.

Educational activity: Various roles including teaching, curriculum development, committee work, and admissions.

Participants: health professional students, clinical and non-clinical educators, patients with diverse lived experience.

Theoretical framework: Wenger's (1999) communities of practice.

Purpose: To examine what involving patients as partners within an academic community means to patients, educators, and students.

Questions: What are stakeholders' perceptions of patients' roles in health care education? To what extent are patients supported and included as members of the academic community?

Methods: Qualitative case study involving semi-structured interviews and focus groups.

Analysis: reflexive thematic analysis.

TIPS FOR: TIPS FOR RESEARCH ON *HOW* TO PARTNER WITH PATIENTS IN EDUCATION

- A reference group with three patients was established to guide the study scope, interview topics, and analysis.
- Purposefully sample for patients with diverse lived experience and diverse types and length of involvement to include different perspectives.

> **EXAMPLE 19:** Sehlbach et al. (2024) explored patients' and health care providers' perspectives on engaging patients in feedback conversations as informal learning opportunities. The authors wanted to understand why patient feedback is valued but rarely used effectively in practice, particularly in dialogue-based feedback conversations. They found that there are missed opportunities for patient feedback to support practice-based learning because of role conflicts, power dynamics, and lack of skills for initiating feedback conversations. To make patient involvement effective, they propose that both clinicians and patients need tools, training, and cultural support for safe feedback dialogue.

Educational activity: patient feedback conversations in practice settings.

Participants: health professionals (nurses, midwives, residents, medical specialists) and patient consultants (patients who have been involved in education).

Theoretical framework: N/A

Purpose: To understand why patient feedback is valued but rarely used effectively in practice, particularly in dialogue-based feedback conversations.

Question: What are patients' and health care professionals' perceptions regarding patient feedback for learning and integrating patient feedback into feedback conversations?

Methods: semi-structured interviews.

Analysis: inductive thematic analysis.

TIPS FOR RESEARCH ON *HOW* TO PARTNER WITH PATIENTS IN EDUCATION

- Research should examine feedback dialogue and relational processes.
- Include patients who have been involved in education for deeper insights and reflections.
- Include questions about power, trust, and safety when studying patient involvement.
- Examine how to help patients see themselves as educators.
- Study institutional context, not just individual interactions.

> **EXAMPLE 20:** Harris et al. (2023) suggest that meaningful involvement of people with lived experience in continuing professional development (CPD) requires more than simply inviting them to share stories. From a review of the literature and drawing on their own experiences, they propose critical reflexivity – a rethinking of how knowledge is produced and whose voices are valued—as a key strategy for creating equitable partnerships.

Educational activity: continuing professional development workshop for mental health professionals.

Participants: people with lived experience of encounters with the health care system and mental health professionals.

Theoretical framework: N/A

Purpose: To develop guidance on equitable patient partnerships in CPD.

Questions: The paper explores three topics: 1) the current state of patient involvement in CPD mental health initiatives; 2) barriers to meaningful engagement; 3) recommendations for using critical reflexivity to support the involvement and leadership of patients in CPD for mental health professionals.

Methods: literature review and reflection on patient experiences of being involved in education.

Analysis: critical reflexivity.

TIPS FOR RESEARCH ON *HOW* TO PARTNER WITH PATIENTS IN EDUCATION

- Use critical reflexivity to examine how partnerships are formed, how expectations, needs and supports are negotiated, how lived experience is valued and integrated.
- Ask “Why are we engaging lived experience now?”

Appendix 6: References

Agrawal S, Kalocsai C, Capponi P, Kidd S, Ringsted C, Wiljer D, Soklaridis S. "It was great to break down the walls between patient and provider": liminality in a co-produced advisory course for psychiatry residents. Advances in Health Sciences Education 2021; 26(2):385-403. https://doi.org/10.1007/s10459-020-09991-w

Augeard N, Bostick G, Miller J et al. Development of a national pain management competency profile to guide entry-level physiotherapy education in Canada. Canadian Journal of Pain 2022; 6(1):1–11. https://doi.org/10.1080/24740527.2021.2004103

Augeard N, Miller J, Bostick G et al. Development of a pain management competency assessment for physiotherapy students: integrating simulation and written assessments. Canadian Journal of Pain 2025; 9(1). https://doi.org/10.1080/24740527.2025.2512728

Bennett-Weston A, Gay S, Anderson ES. Meaningful patient participation in health care education: a theoretically informed study exploring boundaries and identities. Academic Medicine 2025; 100(4):466-474. https://doi.org/10.1097/ACM.0000000000005919

Brand G, Sheers C, Wise S, Seubert L, Clifford R, Griffiths P, Etherton-Beer C. A research approach for co-designing education with healthcare consumers. Medical Education 2021; 55(5):574-81. https://doi.org/10.1111/medu.14411

Cahill H, Coffey J, Sanci L. 'I wouldn't get that feedback from anywhere else': learning partnerships and the use of high school students as simulated patients to enhance medical students' communication skills. BMC Medical Education 2015; 15(1):35. https://doi.org/10.1186/s12909-015-0315-4

Dhatt A, Fazelipour M, Sun T, Nemir A, Wilbur K. Health advocacy: a gulf between instruction and practice. Currents in Pharmacy Teaching and Learning 2024; 16(5):335-42. https://doi.org/10.1016/j.cptl.2024.01.001

Harris H, Clarkin C, Rovet J, et al. Meaningful engagement through critical reflexivity: engaging people with lived experience in continuing mental health professional development. Health Expect. 2023;26:1793-1798. https://onlinelibrary.wiley.com/doi/10.1111/hex.13798

Jha V, Buckley H, Gabe R, Kanaan M, Lawton R, Melville C et al. Patients as teachers: a randomised controlled trial on the use of personal stories of harm to raise awareness of patient safety for doctors in training. BMJ Quality & Safety 2015; 24(1):21-30. https://doi.org/10.1136/bmjqs-2014-002987

Katz AM, Conant L Jr, Inui TS, Baron D, Bor D. A council of elders: creating a multi-voiced dialogue in a community of care. Social Science & Medicine 2000; 50(6):851-60. https://doi.org/10.1016/S0277-9536(99)00341-X

Kline CC, Godolphin WJ, Chhina GS, Towle A. Community as teacher model: Health profession students learn cultural safety from an Aboriginal community. Michigan Journal of Community Service Learning. 2013;20(1):5-17. https://quod.lib.umich.edu/m/mjcsl/3239521.0020.101/1

Kline CC, Park SE, Godolphin WJ, Towle A. Professional identity formation: a role for patients as mentors. Academic Medicine 2020; 95(10):1578-86. https://doi.org/10.1097/ACM.0000000000003561

Kline CC, Riganti P, Moller-Hansen A, Godolphin W, Towle A. Patients benefit from mentoring students in an interprofessional health mentors program: a contextual-developmental analysis. Medical Teacher 2022; 44(7):730-6. https://doi.org/10.1080/0142159X.2021.2020737

Towle A, Brown H, Hofley C, Kerston RP, Lyons H, Walsh C. The expert patient as teacher: an interprofessional Health Mentors programme. Clinical Teacher 2014; 11(4):301-306. https://doi.org/10.1111/tct.12222

Towle A, Godolphin W. Patients as educators: interprofessional learning for patient-centred care. Medical Teacher 2013; 35(3):219-25. https://doi.org/10.3109/0142159X.2012.737966

Towle A, Godolphin W, Kline C. The community comes to campus: the Patient and Community Fair. Clinical Teacher 2015; 12(4):260-6. https://doi.org/10.1111/tct.12285

Sawatzky B, Kline C. Lasting impact of patient-led medical education. Clinical Teacher 2025; 22(4):e70147. https://doi.org/10.1111/tct.70147

Sehlbach C, Bosveld MH, Romme S, Nijhuis MA, Govaerts MJ, Smeenk FW. Challenges in engaging patients in feedback conversations for health care professionals' workplace learning. Medical Education 2024; 58(8):970-9. https://asmepublications.onlinelibrary.wiley.com/doi/full/10.1111/medu.15313

Stacy R, Spencer J. Patients as teachers: a qualitative study of patients' views on their role in a community-based undergraduate project. Medical Education 1999; 33(9):688-94. https://doi.org/10.1046/j.1365-2923.1999.00454.x

Westmoreland GR, Counsell SR, Sennour Y, Schubert CC, Frank KI, Wu J et al. Improving medical student attitudes toward older patients through a "council of elders" and reflective writing experience. Journal of the American Geriatrics Society 2009; 57(2):315-20. https://doi.org/10.1111/j.1532-5415.2008.02102.x