BMJ Open

# Exploring user experiences of the National Institute of Health and Care Excellence's shared decision making learning package: A qualitative study

| | |
|---|---|
| Journal: | *BMJ Open* |
| Manuscript ID | bmjopen-2024-088856 |
| Article Type: | Original research |
| Date Submitted by the Author: | 16-May-2024 |
| Complete List of Authors: | Jacklin, Simon ; Keele University, School of Pharmacy and Bioengineering<br>Thompson, Jessica; Keele University, School of Pharmacy and Bioengineering<br>Hutchinson, Andy; National Institute for Health and Care Excellence<br>Maddock, Katie; Keele University, School of Pharmacy and Bioengineering<br>Maskrey, Neal; Keele University, School of Pharmacy and Bioengineering<br>Norburn, Laura; National Institute for Health and Care Excellence<br>Underhill, Jonathan; National Institute for Health and Care Excellence |
| Keywords: | Clinical Decision-Making, EDUCATION & TRAINING (see Medical Education & Training), QUALITATIVE RESEARCH, Person-Centered Care |
| | |

*I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.*

*The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.*

*Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.*

# EXPLORING USER EXPERIENCES OF THE NATIONAL INSTITUTE OF HEALTH AND CARE EXCELLENCE'S SHARED DECISION MAKING LEARNING PACKAGE: A QUALITATIVE STUDY

Simon Jacklin 1 s.jacklin@keele.ac.uk

Jessica Thompson 1 j.f.thompson@keele.ac.uk

Andy Hutchinson 2 andy.hutchinson@nice.org.uk

Katie Maddock 1 k.maddock@keele.ac.uk

Neal Maskrey 1 nealmaskrey@gmail.com

Laura Norburn 2 laura.norburn@nice.org.uk

Jonathan Underhill 2 jonathan.underhill@nice.org.uk

1 School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG

2 National Institute for Health and Care Excellence, Manchester, UK, M1 4BT

Corresponding author: Simon Jacklin, HNB 2.18, School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG.

Word Count: 3826

## ABSTRACT

Objective: To evaluate the user experience of the joint National Institute of Health and Care Excellence (NICE)/Keele University Shared Decision Making (SDM) learning package.

Methods: A qualitative study using semi-structured interviews with healthcare professionals who had used the NICE SDM learning package. Data were analysed using open coding followed by grouping the data into common categories.

Findings: 12 participants were interviewed and reported that the learning package was easy to use and the different formats for presenting the information were engaging. The package was available in discrete sections - "bitesize" chunks - which allowed the participants to fit their learning around their busy schedules. The package included virtual patients (VPs) which allowed users to practice their SDM skills and put the learning into practice. The VPs also stimulated reflection on current performance and a shift in approach to SDM in practice. Suggestions were made by participants to improve the usability and accessibility of the learning package.

Conclusion: The NICE SDM learning package was viewed favourably by the participants. The bitesize structure and interactivity were key positive elements. Many participants suggested that they had made changes to their practice as a result of using the package.

Key words: Shared decision making; clinical decision-making; education & training; qualitative research; person-centered care

Strength & limitations:

- The first evaluation of a learning package for SDM that incorporates virtual patient simulations.
- Semi-structured interviews gathered the participants' experience of the package.
- No measure of the participants clinical practice was undertaken.

- Not all professional groups were well represented.

## INTRODUCTION

### What is SDM and why?

Shared Decision Making (SDM) is a collaborative process that involves a person and their healthcare professional working together to reach a joint decision about care (1). This approach contrasts with paternalism, where patients are told what to do, rather than being invited into the decision making process (2). The term 'Shared Decision Making' was first used in the 1980s (3) and has been a subject of increased interest in health policy (4). In 2010, the Secretary of State for Health, Lord Andrew Lansley, indicated that patients should be involved in decisions about their own care, using the phrase "nothing about me, without me".

SDM is promoted on ethical grounds, respecting a person's right to autonomy and self-determination (5) in part by making the trade-off between the benefits and risks of treatment clear to each patient (6). The ethical position has been supported by the legal system in the UK; the Montgomery judgment of 2015 does not use the term "shared decision making" but supports a shift towards a more cooperative approach between clinicians and patients, with explicit discussion of the materials risks and benefits of treatment options, tailored to what matters to the individual person (7). Positive outcomes of SDM include people having less decisional regret (8), reduced antimicrobial prescribing (9), and decreased hospital admissions (10). As a result, SDM is advocated for in the standards of UK professional regulatory bodies (11, 12, 13).

### Need for training

Given the ethical, legal, clinical and policy drivers for SDM, it may be expected that SDM is well integrated into current practice. However, this is not the case; studies have shown that there is considerable variation in the adoption of SDM within clinical practice (14, 15). In the annual general practice survey, 44.6% of patients wanted more involvement than they currently had in their healthcare decisions (16). Part of the reason for this could be the fact that healthcare professionals might be "unconsciously incompetent"; that is, they believe that they do SDM well, when in fact they do not or not optimally (17, 18, 19).

The National Institute for Health and Care Excellence (NICE) published a guideline on SDM in 2021 (1) and many of the recommendations refer to the importance of training for healthcare professionals. The guideline states that this training should focus on improving the knowledge, skills and confidence of professionals. SDM is a skill, and therefore training should not be solely theoretical, but involve practice and feedback (20). The MAGIC programme – a programme funded by the Health Foundation to design, test, and identify the best ways to embed shared decision making as routine - concluded that "skills trump tools, and attitudes trump skills" (18). An attitudinal shift is required in addition to development of individuals' knowledge and skills.

### Intervention description

To support the release of the NICE SDM guideline and further encourage the implementation of SDM into healthcare professionals' routine practice, an open-access, online learning package was developed. The package was co-produced between Keele University and NICE. The learning package consisted of six modules; each one built using Microsoft Sway. The six modules were:

1. Orientation and background
2. Cognitive psychology: the science of how we all make decisions

3. Evidence-based medicine
4. Probability and uncertainty
5. Consultation skills
6. Practising shared decision making, staying up to date

The modules featured text, narrated PowerPoints, videos of healthcare professionals and patients expressing their experiences of SDM and various interactive elements. Each module was predicted to take around 40-minutes to complete. Module 6 featured two virtual patients (VPs); VPs are a 'specific type of computer program that simulates real-life clinical scenarios; learners emulate the roles of health care providers to obtain a history, conduct a physical exam, and make diagnostic and therapeutic decisions' (21). VPs were included to allow the learners to repeatedly practice their SDM skills and receive individualised feedback autonomously on their performance.

The learning package can be accessed via the 'Tools and Resources' section of the NICE SDM guideline (https://www.nice.org.uk/guidance/ng197/resources/shared-decision-making-learning-package-9142488109).

**Usage of the Learning Package**

The learning package was made publicly available in June 2021. Microsoft Sway provides its own user analytics and the number of users for each module is included in table 1.

Table 1 – Usage data for each module (as of 16/05/2024)

| Module | Views |
|---|---|
| 1 - Orientation and background | 12645 |
| 2 - Cognitive psychology: the science of how we all make decisions | 11750 |
| 3 - Evidence-based medicine | 5940 |
| 4 - Probability and uncertainty | 4953 |
| 5 - Consultation skills | 6333 |
| 6 - Practising shared decision making, staying up to date | 7007 |

Aim

To evaluate the user experience of the joint NICE/Keele University SDM learning package.

## METHODS

**Design**

A qualitative approach utilising semi-structured interviews was adopted.

**Population**

The target audience for the learning package were healthcare professionals based in the UK; "healthcare professional" was taken in the broadest sense and could include trainers and managers.

When users accessed module 1 of the learning package, they were given the option to provide their email address to be contacted about participation in an evaluation; providing an email address was not providing consent for the evaluation itself, only to be contacted. Individuals who gave their email addresses to be contacted between launch of the learning package (June 2021) and April 2022 were the population for this evaluation.

### Recruitment

To recruit participants for the study, initial and follow-up recruitment emails were sent to those who had provided their email addresses. An information sheet and a link to an online consent form were included in the email. To participate, participants had to complete the online consent form.

### Ethics statement (including consent process)

Potential participants were provided with an information sheet informing them of the details of the study and given the opportunity to ask questions. An online consent form was used to obtain informed consent. Participants were notified that they could withdraw from the study up until one week after their interview. Ethical approval for the study was provided by the Keele Institute for Innovation and Teaching Excellence Ethical Review Panel.

### Data collection

Once consent had been obtained, participants were contacted to arrange a semi-structured interview over Microsoft Teams. All interviews were conducted by either SJ or JT. The interview guide focused on four key topic areas: motivation/reason for use; how they used the package; their experience of using the package; any impacts on their practice. Following completion of the interview, recordings were transcribed verbatim.

### Data analysis

An inductive, iterative approach to data analysis was taken with the emerging results continuously cross-referenced with the data and refined. Each transcript was coded by both SJ and JT using open coding. After the first round of coding, SJ and JT grouped codes into topic areas independently and then mutually agreed the topic areas. These provisional categories were discussed with the wider project team to encourage reflexivity.

### Patient and public involvement

Patients were involved in the production of the package; it featured videos of patients explaining why SDM mattered to them. However, patients or the public were not involved in the design, conduct, reporting or dissemination of the evaluation.

## RESULTS

### Participant Demographics

13 participants consented to and were interviewed as part of the study; during the interview it transpired that one participant had not accessed the learning package and so only the data from the remaining 12 participants were included. Table 2 shows the professional background of the participants with “pharmacist” the most common. Interviews ranged from 20 – 50 minutes, with an average of 30 minutes.

Table 2 – Professional background of the participants

| Professional Background | Frequency |
|---|---|
| Pharmacist | 5 |
| Nurse | 2 |
| Healthcare Manager | 1 |
| Osteopath | 1 |
| Physiotherapist | 1 |

| | |
|---|---|
| Strength and Conditioning Coach (rehabilitation) | 1 |
| Surgeon | 1 |

Five key topics were identified from the interviews: 'motivation for use', 'accessing the package', 'features of the package', 'virtual patients', and 'outcomes'. The topics along with 13 themes are outlined in table 3. Findings from the various participant contributions are presented further.

Table 3 - Key themes and subthemes

| **Topic** | **Theme** |
|---|---|
| Motivation for use | Personal Interest<br>Role requirement<br>Supporting others |
| Accessing the package | Usability<br>Structure<br>Accessibility |
| Features of the package | Resource variety<br>Content |
| Virtual patients | Application of learning<br>Reflection |
| Outcomes | Change to practice<br>Attitudinal shift<br>Sharing information |

**Motivation for use**

Participants reported using the package for a variety of different reasons. All the participants had an interest in SDM prior to using the learning package and stated that they felt involving patients in the decision making process was important for effective patient care. None of the participants suggested that they were sceptical of or averse to SDM prior to commencing the package.

*"I think I wanted to learn more about it and I think I recognised how relevant that side of things was … through my professional training it was all around, you know, implementing interventions and there's a scientific basis to do that in the right way. However, one of the interesting things when you work with real people is that they don't always follow those guidelines to the tee...trying to understand the individual and the person...the shared decision making stuff just really underpins that and facilitates it I think." P12*

While the participants were already ostensibly bought into the idea of SDM, many commented on its absence from their formal training so far.

*"...there was nothing actually purely about decision making for the patient … no formal training."* P3

Many of the participants commented that they were interested in the package for their own practice, but also to support their colleagues' practice.

*"...it was mainly about supporting the healthcare professionals' skills and competencies that we were particularly interested in."* P8

Participants also reported how they had initially heard about the learning package. Some participants had come across the learning package via promotional materials, whereas others were

referred to it by their manager (or other senior colleague) or had seen it as directed reading in other SDM resources. This led to specific comments regarding the promotion of the learning package.

*"...the only thing is you need to promote more, to more people...we are a massive [number of] people working in surgeries...to say, OK, you should do that and it [your shared decision making] will be better."* P5

**Accessing the package**

All participants reported that the package was easy to access via the links on the NICE webpage, could be worked through using any electronic device, and the open-access nature of the resource meant there were no barriers to its use. It was reported that having easier transitions between the modules would have improved the access, but the current design was not seen as detrimental to its usability.

*"...a kind of 'move on to the next section' button...if you're just doing one bit at a time, that's fine ... But also, sometimes it's quite nice to go 'oh I've finished, I'll just go straight to the next [module]..."* P10

Whilst some participants completed the learning package in one go, the majority of participants reported completing the learning package in chunks as and when they were able to find time. This was noted by participants as a particular benefit of the learning package. Participants also reported that the package was learner-centred, and being able to choose which sections to complete at a given time was helpful for their learning.

*"Because it was in bite sized chunks, it was easy to like skip something if I felt I was already familiar with that. That's great, you know, being able to kind of tailor the learning was really nice about the package."* P7

With regards to the recorded videos, it was mentioned that allowing the option of speeding up or slowing down the video may help aid accessibility and usability.

*"I couldn't find a way of speeding up the video and some of them, probably quite rightly, were reasonably slow...when you're pushed for time, if you can listen to the same amount of information in a slightly shorter time that sometimes is helpful."* P10

**Features of the package**

When considering features of the learning package, participants commented on a number of areas. The majority of participants reported that the inclusion of a variety of resources, such as text, activities, reflections and videos in the learning package catered for those who like to learn in different ways and helped keep individuals engaged. Participants also reported that the inclusion of references and directed reading into the learning package allowed them to access additional, evidence-based resources if they wanted further information.

*"I suppose the bottom line is that we know [with] text heavy e-learning people get fatigued quite quickly, and what I particularly liked about the package was the variation in activities. I absolutely loved the quick tap on the notes. They're sort of like post it notes. I thought that was inspired...and that was just a really quick, engaging thing...I didn't want to just see all text"* P1

Further exploration of participants' thoughts on the variety of learning resources emphasised the benefit of having video clips demonstrating consultation skills.

*"I suppose sometimes it helps you to think... exactly what words would I use and what are the effect of different ways of saying the same sort of thing and subtle differences, which were seen in the scenarios. But also, I suppose, pointed out in some other learning like, 'I think you should do this' or 'what I need you to do is this'." P10*

Increasing the number and range of consultation demonstration videos was suggested by participants, to show that even with complex or uncertain patients the use of effective consultation skills is key for shared decision making to take place. Additionally, some participants also reported that the addition of collaborative peer discussions may aid individuals' learning experiences.

*"It might be helpful to see quite a challenging encounter with a patient... I think there's the incorrect view that it takes more time and people don't have time, and I think if it could sort of clearly come across of actually well, we know it doesn't, it's about having a different set of skills.... so when the person is saying stuff like "Well, you're the expert, you tell me." How shared decision making can be used in that sense by presenting people with choices; that could be something."* P9

All participants reported finding the learning package useful and felt it could be used by healthcare professionals of any type and level of training. However, some individuals did suggest the inclusion of non-medical examples to allow prospective users to see how the learning would be relevant to them.

*"It felt more specific to people from clinical backgrounds, by which I mean, you know, those who are more likely to be involved in prescribing in some way. So you know, whether it's at the dispensing end or even at the actual prescribing end. I think you could maybe do a slightly adapted version for non-clinical staff."* P6

Two participants suggested that certification for completing the learning package may be helpful for their workplace or Continuing Professional Development (CPD) records.

*"Often your workplace might ask for evidence if you've completed these sorts of things. Erm, so I think you know, formalising it in that sense"* P12

**Virtual patients**

The first five modules focused on the concepts and theories important for SDM, in addition to illustrative examples. In module 6 there were two VPs which simulated patient consultations; one focused on discussing treatment options for osteoarthritis of the knee, the other whether or not to prescribe a statin for primary prevention. The majority of the participants reported these simulations were useful as they enabled practical application of the concepts being taught.

*"...they were really helpful and really got you thinking about how to approach your questions and your interaction with people to get the best information from them. And, I think that's a good way to learn. So, it [the VPs] was very, very useful" P8*

In addition to the opportunity to apply the skills, the VPs also gave feedback and encouraged repetitive practice and reflection. It was suggested by one participant that the VPs were a *"real strength of the package"* P9.

*"I really like the scenario ones where you went into the room and you had to then be the practitioner...it was good to do that...I hadn't realised I was sort of pushing the patient in one way or another" P3*

**Outcomes**

Many participants felt that the learning package had a positive impact on their practice in terms of SDM with patients. Some participants were able to pin-point specific things that they had adopted in their practice, specific skills they had taken from the package. These ranged from small elements from within a module (e.g. acronyms), to whole modules which individuals reported had lacked from previous education and training, and practical skills to implement shared decision making in their own practice.

*"In those discussions I was referring to some of the points that were covered on the NICE shared decision making learning package...like around like the BRAN model" P12*

Other participants discussed a general shift in their approach to their practice, perhaps focusing on the attitudinal element of SDM.

*"It is a life changing way of having a conversation. You know, that is certainly not the feedback I've ever had before from, you know, 30 years of practice. I mean, people have said, "You're so lovely", "You're so kind", "Thank you for listening to me" - all those kinds of things. But, you know, not to have that kind of massive feedback about it being life changing and life affirming. People saying they've waited years to have this kind of conversation; this is the kind of feedback we're getting every single day."* P11

Some participants felt that the package had an impact beyond their own practice. There was discussion about passing this onto their colleagues to influence practice more widely.

*"I have to say I'm passing on all this wisdom when we speak about shared decision making and I've told them about the "shut up and listen". So it's sort of filtering through"* P7

## DISCUSSION

The aim of this research was to evaluate the user experience of NICE's SDM learning package. All the participants in the study were positive in their overall impressions of the learning package, with the ease of use, interactive elements, and VPs all key strengths. To improve the learning package, it was proposed that successful completion could result in a certification for continuing professional development records. While the "bitesize" nature of the package was reported as an advantage, it was also proposed that strategies to help learners engage with the package in a shorter timeframe could be useful for professionals who are particularly pressed for time.

The interactivity of the package and the different media used were reported as positive features as they helped maintain users' interest and provided an opportunity for better engagement by considering different learning preferences. The inclusion of videos demonstrating key skills was especially well received by participants as they enabled users to see how to engage in person-centred consultations in practice. The first step in Peyton's 4-step approach to teaching a skill involves demonstrating the skill, followed by deconstruction, which was achieved through the descriptions surrounding the video(s) and explanation of what went well and what could have been improved for the key skills (22). Participants also indicated that the VPs had supported Peyton's third and fourth steps of comprehension and performance.

A challenge facing the adoption of SDM in routine practice is that many currently practicing professionals will not have been taught about SDM in their undergraduate training; indeed, communication skills training was not a big part of all undergraduate or postgraduate training historically (23). This means that some professionals might not have had any formal training in SDM. Furthermore, any training that registered professionals undertake must be able to fit alongside their busy clinical practice; one of the greatest barriers to CPD activities is frequently reported to be time (24, 25). A key advantage of the learning package was that it was broken into "bitesize" chunks that users could easily come back to. When designing educational materials, the results of this evaluation suggest that particular attention should be paid to how the materials might be used by busy working professionals.

Although many studies highlight the need for training healthcare professionals in SDM (18, 26), the form this training should take is less clear. The theory of deliberate practice suggests that learners need the opportunity to practice their skills repeatedly and receive personalised feedback on their efforts (20). This evaluation found that VPs were a particularly useful part of the package as they permitted users to engage in this practice-feedback loop; after consulting with the VP, the user received personalised feedback which they could then try and improve by having another attempt. In addition to supporting a practice-feedback loop, the VP also provided a stimulus for reflection. Participants stated that the choices presented by the VP and the feedback received at the end triggered a reflective process. This aligns with Kolb's reflective learning cycle in which learning can be viewed as a continuous process grounded in experience, within which previously learnt knowledge can and should change based on new experiences (27). Although reflective learning is a cyclical process, ideally learners start with concrete experience (27); findings from this evaluation suggest that the VPs could provide this, as well as the active experimentation phase. Users can repeat the VP simulation based on their previous experience and feedback; hence applying their learning and creating a new experience, allowing them to re-enter the reflective learning cycle. Consideration could be given to implementing a formal framework to scaffold this reflection for learners.

All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. This demonstrates the benefit that training in SDM can have. A key barrier to the implementation of SDM in practice is "unconscious incompetence" (17, 18, 19); the belief that they do SDM well, when in fact they do not or not optimally. For many professionals, there could be a disconnect between their self-assessment of their need for SDM training and their actual need. The results of this study suggest that VPs could be a useful way to promote reflection and create some cognitive dissonance; this can help users identify their current performance and plan to improve.

This evaluation explored user's views and experiences of a SDM learning resource aimed at a multi-disciplinary audience. It is the first evaluation of a SDM learning package which included VPs. The participants were from a variety of different professional backgrounds providing an insight into how the package was perceived by different groups. Although people from a range of different professional backgrounds participating, there was a preponderance of pharmacists. Many of the participants also used the package with a view to promoting SDM within their organisation and/or supporting colleagues, rather than their own practice with patients. The results therefore provide an insight into the participant's experience, rather than being generalisable to all users. This evaluation was primarily focused on the first level of the Kirkpatrick model of educational evaluations; the learners' reaction to the package (28). While the evaluation did explore participant-reported impact on practice, future research could measure any impact on practice directly.

## CONCLUSION

The NICE SDM learning package was viewed favourably by the participants in the study. The bitesize structure enabled busy professionals to fit their usage of the package around their own schedules and the different formats for presenting the information kept them engaged. The inclusion of VPs was reported as a strength of the learning package as they allowed individuals to practice and reflect upon their SDM skills. All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. Participants made minor suggestions to improve the usability and accessibility of the learning package.

## FUNDING STATEMENT

The learning package that was evaluated was created by the authors of the paper and funded jointly between the National Institute for Health and Care Excellence and the Keele University School of Pharmacy and Bioengineering.

## AUTHORSHIP STATEMENT

All authors were involved in the conception of the research study and planning the method. SJ and JT produced the study materials, collected and analysed the data. All authors supported the production of the manuscript including writing and editing.

The design of this learning package, but not the findings from this study, were previously presented as a conference poster (29).

## PATIENT AND PUBLIC INVOLVEMENT

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research. Patients were involved in the design of the learning package that was evaluated in this research.

## COMPETING INTERESTS

The package featured virtual patient simulations which SJ and NM were directly involved in developing. Keele University continues to develop similar simulations for a range of external organisations – none of the authors of this paper have received any financial reward for these simulations. Both SJ and JT have produced non-promotional educational materials on shared decision making for Astra Zeneca; they personally did not receive remuneration for this work, but their employer, Keele University, did. SJ and JU are advisors to a non-promotional research project funded by Pfizer exploring shared decision making in antimicrobial stewardship. JU and AH were involved in the development of the NICE guideline on SDM, which formed the basis of the educational package.

## REFERENCES

1. NICE, 2021. SDM Guideline. NG 197.
2. Sandman L and Munthe C. Shared decision making, paternalism and patient choice. Health Care Anal. 2010;18(1):60-84. PMID: 19184444
3. Elwyn, G. Shared decision making: What is the work? Patient Education and Counseling 2021;104(7):1591-1595. PMID: 33353840
4. Coulter A and Collins A, 2011. Making shared decision-making a reality. London: King's Fund.

5. Sandman L and Munthe C. Shared decision-making and patient autonomy. Theoretical medicine and bioethics 2009;30(4):289-310. PMID: 19701695
6. Elwyn G, Tilburt J, Montori V. The ethical imperative for shared decision-making. European Journal for Person Centered Healthcare 2013;1(1):129-131. DOI: http://dx.doi.org/10.5750/ejpch.v1i1.645
7. Chan SW, Tulloch E, Cooper ES, et al. Montgomery and informed consent: where are we now? BMJ 2017; 357:j2224. PMID: 28500035
8. Reyes-Hadsall S, Drake L, Han JJ, et al. Shared Decision-Making, Therapeutic Choice, and Decisional Regret in Patients With Alopecia Areata. JAMA dermatology 2022;158(10):1187-1191. PMID: 35976667
9. van Esch TE, Brabers AE, Hek K, et al. Does shared decision-making reduce antibiotic prescribing in primary care? Journal of Antimicrobial Chemotherapy 2018;73(11):3199-3205. PMID: 30165644
10. Hess EP, Hollander JE, Schaffer JT, et al. Shared decision making in patients with low risk chest pain: prospective randomized pragmatic trial. BMJ 2016;355:i6165. PMID: 27919865
11. General Medical Council. Decision making and consent. General Medical Council, Manchester, 2020.
12. Nursing and Midwifery Council. The Code. Nursing and Midwifery Council, London, 2024.
13. General Pharmaceutical Council. Standards for pharmacy professionals. General Pharmaceutical Council, London, 2017.
14. van Dulmen S, Roodbeen R, Schulze L, et al. Practices and perspectives of patients and healthcare professionals on shared decision-making in nephrology. BMC nephrology 2022;23(1):1-13. PMID: 35864466
15. Haugom EW, Stensrud B, Beston G, et al. Experiences of shared decision making among patients with psychotic disorders in Norway: a qualitative study. BMC psychiatry 2022;22(1):1-11. PMID: 35300633
16. NHS, 2022. GP Patient Survey.
17. Driever EM, Stiggelbout AM, Brand PL. Do consultants do what they say they do? Observational study of the extent to which clinicians involve their patients in the decision-making process. BMJ open 2022;12(1):e056471. PMID: 34987047
18. Joseph-Williams N, Lloyd A, Edwards A, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. BMJ 2017;357:j1744. PMID: 28420639
19. Kruger J and Dunning D. Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. Journal of personality and social psychology 1999;77(6):1121.
20. Ericsson KA, Krampe RT, Tesch-Römer C. The role of deliberate practice in the acquisition of expert performance. Psychological review 1993;100(3):363-406. DOI:10.1037//0033-295X.100.3.363
21. Association of American Medical Colleges. Effective Use of Educational Technology in Medical Education: Summary Report of the 2006 AAMC Colloquium on Educational Technology. Washington, DC: AAMC 2007; p7.
22. Romero P, Günther P, Kowalewski KF, et al. Halsted's "see one, do one, and teach one" versus Peyton's four-step approach: a randomized trial for training of laparoscopic suturing and knot tying. Journal of surgical education 2018;75(2):510-515. PMID: 28801083
23. Cegala DJ and Lenzmeier Broz S. Physician communication skills training: a review of theoretical backgrounds, objectives and skills. Med Educ 2002;36(11):1004-16. doi: 10.1046/j.1365-2923.2002.01331.x. PMID: 12406260.

24. Ikenwilo D and Skåtun D. Perceived need and barriers to continuing professional development among doctors. Health Policy 2014;117(2):195-202. PMID: 24836019
25. Reis T, Faria I, Serra H, et al. Barriers and facilitators to implementing a continuing medical education intervention in a primary health care setting. BMC health services research 2022;22(1):638. PMID: 35562695
26. Légaré F, Ratte S, Stacey D, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. Cochrane database of systematic reviews 2018;(5). PMID: 20464744
27. Kolb, D.A. Experiential learning: Experience as the source of learning and development. FT press 2014.
28. Kirkpatrick, D. and Kirkpatrick, J. Evaluating training programs: The four levels. Berrett-Koehler Publishers 2006.
29. Thompson J, Jacklin S, Hutchinson A, Norburn L, Maddock K, Maskrey N and Underhill J. The creation of an online learning resource to support the implementation of the nice shared decision making guideline. In Pharmacoepidemiology and Drug Safety 2022;31:7-7.

BMJ Open

# Exploring user experiences of the National Institute of Health and Care Excellence's shared decision making learning package: An online qualitative study



| | |
|---|---|
| Journal: | *BMJ Open* |
| Manuscript ID | bmjopen-2024-088856.R1 |
| Article Type: | Original research |
| Date Submitted by the Author: | 22-Oct-2024 |
| Complete List of Authors: | Jacklin, Simon ; Keele University, School of Pharmacy and Bioengineering<br>Thompson, Jessica; Keele University, School of Pharmacy and Bioengineering<br>Hutchinson, Andy; National Institute for Health and Care Excellence<br>Maddock, Katie; Keele University, School of Pharmacy and Bioengineering<br>Maskrey, Neal; Keele University, School of Pharmacy and Bioengineering<br>Norburn, Laura; National Institute for Health and Care Excellence<br>Underhill, Jonathan; National Institute for Health and Care Excellence |
| Primary Subject Heading: | Medical education and training |
| Secondary Subject Heading: | Patient-centred medicine |
| Keywords: | Clinical Decision-Making, EDUCATION & TRAINING (see Medical Education & Training), QUALITATIVE RESEARCH, Person-Centered Care |
| | |

*I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.*

*The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.*

*Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.*

# EXPLORING USER EXPERIENCES OF THE NATIONAL INSTITUTE OF HEALTH AND CARE EXCELLENCE'S SHARED DECISION MAKING LEARNING PACKAGE: AN ONLINE QUALITATIVE STUDY

Simon Jacklin 1 s.jacklin@keele.ac.uk

Jessica Thompson 1 j.f.thompson@keele.ac.uk

Andy Hutchinson 2 andy.hutchinson@nice.org.uk

Katie Maddock 1 k.maddock@keele.ac.uk

Neal Maskrey 1 nealmaskrey@gmail.com

Laura Norburn 2 laura.norburn@nice.org.uk

Jonathan Underhill 2 jonathan.underhill@nice.org.uk

1 School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG

2 National Institute for Health and Care Excellence, Manchester, UK, M1 4BT

Corresponding author: Simon Jacklin, HNB 2.18, School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG.

Word Count: 3826

## ABSTRACT

Objective: To evaluate the user experience of the joint National Institute of Health and Care Excellence (NICE)/Keele University Shared Decision Making (SDM) learning package.

Design: A qualitative study using online semi-structured interviews. Data were analysed using open coding followed by the construction of themes.

Setting: Participants were recruited and interviewed online via Microsoft Teams.

Participants: Healthcare professionals who had used the NICE SDM learning package and provided contact details between June 2021 and April 2022 were eligible to be contacted

Intervention: The online learning package developed to support the implementation of the NICE SDM guideline.

Findings: 12 participants from a variety of different professional backgrounds were interviewed and reported that the learning package was easy to use and the different formats for presenting the information were engaging. The package was available in discrete sections - "bitesize" chunks - which allowed the participants to fit their learning around their busy schedules. The package included virtual patients (VPs) which allowed users to practice their SDM skills and put the learning into practice. The VPs also stimulated reflection on current performance and a shift in approach to SDM in practice. Suggestions were made by participants to improve the usability and accessibility of the learning package.

Conclusion: The NICE SDM learning package was viewed favourably by the participants. The bitesize structure and interactivity were key positive elements. Many participants suggested that they had made changes to their practice as a result of using the package.

Key words: Shared decision making; clinical decision-making; education & training; qualitative research; person-centered care

Strength & limitations:

- Semi-structured interviews gathered the participants' experience of the package.
- An inductive, iterative approach to data analysis enabled a reflexive process to data exploration.
- No measure of the participants clinical practice was undertaken.
- Not all professional groups were well represented.

## INTRODUCTION

### What is SDM and why?

Shared Decision Making (SDM) is a collaborative process that involves a person and their healthcare professional working together to reach a joint decision about care [1]. This approach contrasts with paternalism, where patients are told what to do, rather than being invited into the decision making process [2]. The term 'Shared Decision Making' was first used in the 1980s [3] and has been a subject of increased interest in health policy [4]. In 2010, the Secretary of State for Health, Lord Andrew Lansley, indicated that patients should be involved in decisions about their own care, using the phrase "nothing about me, without me" [4].

SDM is promoted on ethical grounds, respecting a person's right to autonomy and self-determination [5] in part by making the trade-off between the benefits and risks of treatment clear to each patient [6]. The ethical position has been supported by the legal system in the UK; the Montgomery judgment of 2015 does not use the term "shared decision making" but supports a shift towards a more cooperative approach between clinicians and patients, with explicit discussion of the materials risks and benefits of treatment options, tailored to what matters to the individual person [7]. Positive outcomes of SDM include people having less decisional regret [8], reduced antimicrobial prescribing [9], and decreased hospital admissions [10]. As a result, SDM is advocated for in the standards of UK professional regulatory bodies [11, 12, 13].

### Need for training

Given the ethical, legal, clinical and policy drivers for SDM, it may be expected that SDM is well integrated into current practice. However, this is not the case; studies have shown that there is considerable variation in the adoption of SDM within clinical practice [14, 15]. In the annual general practice survey, 44.6% of patients wanted more involvement than they currently had in their healthcare decisions [16]. Part of the reason for this could be the fact that healthcare professionals might be "unconsciously incompetent"; that is, they believe that they do SDM well, when in fact they do not or not optimally [17, 18, 19].

The National Institute for Health and Care Excellence (NICE) published a guideline on SDM in 2021 [1] and many of the recommendations refer to the importance of training for healthcare professionals. The guideline states that this training should focus on improving the knowledge, skills and confidence of professionals. SDM is a skill, and therefore training should not be solely theoretical, but involve practice and feedback [20]. The MAGIC programme – a programme funded by the Health Foundation to design, test, and identify the best ways to embed shared decision making as routine - concluded that "skills trump tools, and attitudes trump skills" [18]. An attitudinal shift is required in addition to development of individuals' knowledge and skills.

**Intervention description**

To support the release of the NICE SDM guideline and further encourage the implementation of SDM into healthcare professionals' routine practice, an open-access, online learning package was developed. The package was co-produced between Keele University and NICE. The learning package consisted of six modules; each one built using Microsoft Sway. The six modules were:

1. Orientation and background
2. Cognitive psychology: the science of how we all make decisions
3. Evidence-based medicine
4. Probability and uncertainty
5. Consultation skills
6. Practising shared decision making, staying up to date

The modules featured text, narrated PowerPoints, videos of healthcare professionals and patients expressing their experiences of SDM and various interactive elements. Each module was predicted to take around 40-minutes to complete. Module 6 featured two virtual patients (VPs); VPs are a 'specific type of computer program that simulates real-life clinical scenarios; learners emulate the roles of health care providers to obtain a history, conduct a physical exam, and make diagnostic and therapeutic decisions' [21]. VPs were included to allow the learners to repeatedly practice their SDM skills and receive individualised feedback autonomously on their performance.

The learning package can be accessed via the 'Tools and Resources' section of the NICE SDM guideline (https://www.nice.org.uk/guidance/ng197/resources/shared-decision-making-learning-package-9142488109).

**Usage of the Learning Package**

The learning package was made publicly available in June 2021. The package was promoted via both NICE and Keele University's communication networks; this included social media and press releases. Microsoft Sway provides its own user analytics and the number of users for each module is included in table 1.

Table 1 – Usage data for each module (as of 16/05/2024)

| Module | Views |
|---|---|
| 1 - Orientation and background | 12645 |
| 2 - Cognitive psychology: the science of how we all make decisions | 11750 |
| 3 - Evidence-based medicine | 5940 |
| 4 - Probability and uncertainty | 4953 |
| 5 - Consultation skills | 6333 |
| 6 - Practising shared decision making, staying up to date | 7007 |

Aim

To evaluate the user experience of the joint NICE/Keele University SDM learning package.

It was important that this learning package was evaluated as it was the first that included VPs with the aim of supporting the implementation of the NICE SDM guideline.

## METHODS

## Design

As the study sought to explore participant's experiences and views of the learning package, a qualitative approach utilising online semi-structured interviews was adopted. The study was undertaken within a constructivist paradigm, acknowledging that truth is relative and constructed by individuals and societies [22].

## Population

The target audience for the learning package were healthcare professionals based in the UK; "healthcare professional" was taken in the broadest sense and could include trainers and managers.

When users accessed module 1 of the learning package, they were given the option to provide their email address to be contacted about participation in an evaluation; providing an email address was not providing consent for the evaluation itself, only to be contacted. Individuals who gave their email addresses to be contacted between launch of the learning package (June 2021) and April 2022 were the population for this evaluation.

## Recruitment

To recruit participants for the study, initial and follow-up recruitment emails were sent to those who had provided their email addresses. An information sheet and a link to an online consent form were included in the email. To participate, participants had to complete the online consent form.

Due to low recruitment numbers initially, a convenience sampling approach was adopted. All participants who consented were interviewed.

## Ethics statement (including consent process)

Potential participants were provided with an information sheet informing them of the details of the study and given the opportunity to ask questions. An online consent form was used to obtain informed consent. Participants were notified that they could withdraw from the study up until one week after their interview. Ethical approval for the study was provided by the Keele Institute for Innovation and Teaching Excellence Ethical Review Panel.

## Data collection

Once consent had been obtained, participants were contacted to arrange a semi-structured interview over Microsoft Teams. All interviews were conducted by either SJ or JT. The interview guide focused on four key topic areas: motivation/reason for use; how they used the package; their experience of using the package; any impacts on their practice. Following completion of the interview, recordings were transcribed verbatim. Participants were interviewed once, with no repeat interviews. The transcripts were not returned to the participants for member checking. The interview guide is included as supplemental material.

## Data analysis

An inductive, iterative approach to data analysis was taken with the emerging results continuously cross-referenced with the data and refined. Firstly, each transcript was coded by both SJ and JT using open coding. Open coding derives the codes from the data itself, rather than a set of predefined codes. After all of the transcripts had been initially coded, SJ and JT each reviewed the codes and grouped them into themes independently. These were then mutually agreed as provisional themes; as there were a number of themes, they were grouped under common topic areas. These provisional topic areas and themes were discussed with the wider project team to encourage reflexivity.

Collaborative discussions amongst the research team were key to enable the acknowledgement of any potential risks of personal biases.The iterative approach to data analysis encouraged a reflexive process and consideration of data saturation. This is the point at which each subsequent interview does not yield any new data or themes relevant to the study [23]. To determine data saturation in this study, SJ and JT monitored the coding to look for new words or ideas in the data; if new codes were being applied to the data, it is unlikely that data saturation had been reached. Data saturation was decided when no new data was being presented in two consecutive interviews; it was at this point that data collection stopped.

### Patient and public involvement

Patients were involved in the production of the package; it featured videos of patients explaining why SDM mattered to them. However, patients or the public were not involved in the design, conduct, reporting or dissemination of the evaluation.

## RESULTS

### Participant Demographics

322 users of the learning package provided their email address to be invited to participate in this study; recruitment emails were sent to all. Overall, 13 participants consented to and were interviewed as part of the study; during the interview it transpired that one participant had not accessed the learning package and so only the data from the remaining 12 participants were included. Table 2 shows the professional background of the participants with "pharmacist" the most common. Interviews ranged from 20 – 50 minutes, with an average of 30 minutes.

Table 2 – Professional background of the participants

| Professional Background | Frequency |
|---|---|
| Pharmacist | 5 |
| Nurse | 2 |
| Healthcare Manager | 1 |
| Osteopath | 1 |
| Physiotherapist | 1 |
| Strength and Conditioning Coach (rehabilitation) | 1 |
| Surgeon | 1 |

Five key topic areas were identified from the interviews: 'motivation for use', 'accessing the package', 'features of the package', 'virtual patients', and 'outcomes'. The topics along with 13 themes are outlined in table 3. Findings from the various participant contributions are presented further.

Table 3 - Key themes

| Topic | Theme |
|---|---|
| Motivation for use | Personal Interest<br>Role requirement<br>Supporting others |
| Accessing the package | Usability<br>Structure<br>Accessibility |

| | |
|---|---|
| Features of the package | Resource variety<br>Content |
| Virtual patients | Application of learning<br>Reflection |
| Outcomes | Change to practice<br>Attitudinal shift<br>Sharing information |

**Motivation for use**

Participants reported using the package for a variety of different reasons. All the participants had an interest in SDM prior to using the learning package and stated that they felt involving patients in the decision making process was important for effective patient care. None of the participants suggested that they were sceptical of or averse to SDM prior to commencing the package.

*"I think I wanted to learn more about it and I think I recognised how relevant that side of things was … through my professional training it was all around, you know, implementing interventions and there's a scientific basis to do that in the right way. However, one of the interesting things when you work with real people is that they don't always follow those guidelines to the tee...trying to understand the individual and the person...the shared decision making stuff just really underpins that and facilitates it I think." P12*

While the participants were already ostensibly bought into the idea of SDM, many commented on its absence from their formal training so far.

*"...there was nothing actually purely about decision making for the patient … no formal training."* P3

Many of the participants commented that they were interested in the package for their own practice, but also to support their colleagues' practice.

*"...it was mainly about supporting the healthcare professionals' skills and competencies that we were particularly interested in."* P8

Participants also reported how they had initially heard about the learning package. Some participants had come across the learning package via promotional materials, whereas others were referred to it by their manager (or other senior colleague) or had seen it as directed reading in other SDM resources. This led to specific comments regarding the promotion of the learning package.

*"...the only thing is you need to promote more, to more people...we are a massive [number of] people working in surgeries...to say, OK, you should do that and it [your shared decision making] will be better."* P5

**Accessing the package**

All participants reported that the package was easy to access via the links on the NICE webpage, could be worked through using any electronic device, and the open-access nature of the resource meant there were no barriers to its use. It was reported that having easier transitions between the modules would have improved the access, but the current design was not seen as detrimental to its usability.

*"...a kind of 'move on to the next section' button...if you're just doing one bit at a time, that's fine ... But also, sometimes it's quite nice to go 'oh I've finished, I'll just go straight to the next [module]..."* P10

Whilst some participants completed the learning package in one go, the majority of participants reported completing the learning package in chunks as and when they were able to find time. This was noted by participants as a particular benefit of the learning package. Participants also reported that the package was learner-centred, and being able to choose which sections to complete at a given time was helpful for their learning.

*"Because it was in bite sized chunks, it was easy to like skip something if I felt I was already familiar with that. That's great, you know, being able to kind of tailor the learning was really nice about the package."* P7

With regards to the recorded videos, it was mentioned that allowing the option of speeding up or slowing down the video may help aid accessibility and usability.

*"I couldn't find a way of speeding up the video and some of them, probably quite rightly, were reasonably slow...when you're pushed for time, if you can listen to the same amount of information in a slightly shorter time that sometimes is helpful."* P10

**Features of the package**

When considering features of the learning package, participants commented on a number of areas. The majority of participants reported that the inclusion of a variety of resources, such as text, activities, reflections and videos in the learning package catered for those who like to learn in different ways and helped keep individuals engaged. Participants also reported that the inclusion of references and directed reading into the learning package allowed them to access additional, evidence-based resources if they wanted further information.

*"I suppose the bottom line is that we know [with] text heavy e-learning people get fatigued quite quickly, and what I particularly liked about the package was the variation in activities. I absolutely loved the quick tap on the notes. They're sort of like post it notes. I thought that was inspired...and that was just a really quick, engaging thing...I didn't want to just see all text."* P1

Further exploration of participants' thoughts on the variety of learning resources emphasised the benefit of having video clips demonstrating consultation skills.

*"I suppose sometimes it helps you to think... exactly what words would I use and what are the effect of different ways of saying the same sort of thing and subtle differences, which were seen in the scenarios. But also, I suppose, pointed out in some other learning like, 'I think you should do this' or 'what I need you to do is this'." P10*

Increasing the number and range of consultation demonstration videos was suggested by participants, to show that even with complex or uncertain patients the use of effective consultation skills is key for shared decision making to take place. Additionally, some participants also reported that the addition of collaborative peer discussions may aid individuals' learning experiences.

*"It might be helpful to see quite a challenging encounter with a patient... I think there's the incorrect view that it takes more time and people don't have time, and I think if it could sort of clearly come across of actually well, we know it doesn't, it's about having a different set of skills.... so when the*

*person is saying stuff like "Well, you're the expert, you tell me." How shared decision making can be used in that sense by presenting people with choices; that could be something."* P9

All participants reported finding the learning package useful and felt it could be used by healthcare professionals of any type and level of training. However, some individuals did suggest the inclusion of non-medical examples to allow prospective users to see how the learning would be relevant to them.

*"It felt more specific to people from clinical backgrounds, by which I mean, you know, those who are more likely to be involved in prescribing in some way. So you know, whether it's at the dispensing end or even at the actual prescribing end. I think you could maybe do a slightly adapted version for non-clinical staff."* P6

Two participants suggested that certification for completing the learning package may be helpful for their workplace or Continuing Professional Development (CPD) records.

*"Often your workplace might ask for evidence if you've completed these sorts of things. Erm, so I think you know, formalising it in that sense."* P12

A summary of the recommended changes suggested by participants is featured in table 4.

Table 4 – Recommendations made by the participants for future iterations of the learning package

| **Participant recommendations** |
|---|
| To include a certificate of completion for CPD records |
| A greater range of videos demonstrating the skills required for SDM |
| Inclusion of non-medical examples to improve applicability to non-medical groups |

**Virtual patients**

The first five modules focused on the concepts and theories important for SDM, in addition to illustrative examples. In module 6 there were two VPs which simulated patient consultations; one focused on discussing treatment options for osteoarthritis of the knee, the other whether or not to prescribe a statin for primary prevention. The majority of the participants reported these simulations were useful as they enabled practical application of the concepts being taught.

*"...they were really helpful and really got you thinking about how to approach your questions and your interaction with people to get the best information from them. And, I think that's a good way to learn. So, it [the VPs] was very, very useful." P8*

In addition to the opportunity to apply the skills, the VPs also gave feedback and encouraged repetitive practice and reflection.

*"It's a safe space to be able to make mistakes and have a practice of it…in the avatar bit at the end, there's different options and some of them you think are right and then you'll get feedback and it'll say "Fine, but actually have you thought about this"? So, I think it was trying to give me a bit of a different way of thinking." P11*

It was suggested by one participant that the VPs were a *"real strength of the package"* P9.

*"I really like the scenario ones where you went into the room and you had to then be the practitioner...it was good to do that...I hadn't realised I was sort of pushing the patient in one way or another." P3*

Participants did not report any weaknesses associated with the VPs.

**Outcomes**

Many participants felt that the learning package had a positive impact on their practice in terms of SDM with patients. Some participants were able to pin-point specific things that they had adopted in their practice, specific skills they had taken from the package. One example of the changes in practice suggested were the use of specific acronyms to present options to patients e.g. BRAN.

*"In those discussions I was referring to some of the points that were covered on the NICE shared decision making learning package...like around like the BRAN model." P12*

Other participants suggested whole modules included in the package which had lacked from previous education and training, and practical skills to implement shared decision making in their own practice.

*"I was so interested in the evidence section, it's really helpful…how you present them [statistics] can make quite a big difference in how somebody might make a decision…all your patient decision aids and everything, you think, well, I don't know if you're one of the green faces, the red faces or the yellow faces…and how to sort of convey that but in a way that they can still use the information helpfully to make a decision." P14*Participants also discussed a general shift in their approach to their practice, perhaps focusing on the attitudinal element of SDM.

*"It is a life changing way of having a conversation. You know, that is certainly not the feedback I've ever had before from, you know, 30 years of practice. I mean, people have said, "You're so lovely", "You're so kind", "Thank you for listening to me" - all those kinds of things. But, you know, not to have that kind of massive feedback about it being life changing and life affirming. People saying they've waited years to have this kind of conversation; this is the kind of feedback we're getting every single day."* P11

Some participants felt that the package had an impact beyond their own practice. There was discussion about passing this onto their colleagues to influence practice more widely.

*"I have to say I'm passing on all this wisdom when we speak about shared decision making and I've told them about the "shut up and listen". So it's sort of filtering through."* P7

## DISCUSSION

The aim of this research was to evaluate the user experience of NICE's SDM learning package. All the participants in the study were positive in their overall impressions of the learning package, with the ease of use, interactive elements, and VPs all key strengths. To improve the learning package, it was proposed that successful completion could result in a certification for continuing professional development records. While the "bitesize" nature of the package was reported as an advantage, it was also proposed that strategies to help learners engage with the package in a shorter timeframe could be useful for professionals who are particularly pressed for time.

The interactivity of the package and the different media used were reported as positive features as they helped maintain users' interest and provided an opportunity for better engagement by considering different learning preferences. The inclusion of videos demonstrating key skills was especially well received by participants as they enabled users to see how to engage in person-centred consultations in practice. The first step in Peyton's 4-step approach to teaching a skill involves demonstrating the skill, followed by deconstruction, which was achieved through the descriptions surrounding the video(s) and explanation of what went well and what could have been

improved for the key skills [24]. Participants also indicated that the VPs had supported Peyton's third and fourth steps of comprehension and performance.

A challenge facing the adoption of SDM in routine practice is that many currently practicing professionals will not have been taught about SDM in their undergraduate training; indeed, communication skills training was not a big part of all undergraduate or postgraduate training historically [25]. This means that some professionals might not have had any formal training in SDM. Furthermore, any training that registered professionals undertake must be able to fit alongside their busy clinical practice; one of the greatest barriers to CPD activities is frequently reported to be time [26, 27]. A key advantage of the learning package was that it was broken into "bitesize" chunks that users could easily come back to. When designing educational materials, the results of this evaluation suggest that particular attention should be paid to how the materials might be used by busy working professionals.

Although many studies highlight the need for training healthcare professionals in SDM [18, 28], the form this training should take is less clear. The theory of deliberate practice suggests that learners need the opportunity to practice their skills repeatedly and receive personalised feedback on their efforts [20]. This evaluation found that VPs were a particularly useful part of the package as they permitted users to engage in this practice-feedback loop; after consulting with the VP, the user received personalised feedback which they could then try and improve by having another attempt. In addition to supporting a practice-feedback loop, the VP also provided a stimulus for reflection. Participants stated that the choices presented by the VP and the feedback received at the end triggered a reflective process. This aligns with Kolb's reflective learning cycle in which learning can be viewed as a continuous process grounded in experience, within which previously learnt knowledge can and should change based on new experiences [29]. Although reflective learning is a cyclical process, ideally learners start with concrete experience [29]; findings from this evaluation suggest that the VPs could provide this, as well as the active experimentation phase. Users can repeat the VP simulation based on their previous experience and feedback; hence applying their learning and creating a new experience, allowing them to re-enter the reflective learning cycle. Consideration could be given to implementing a formal framework to scaffold this reflection for learners.

All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. This demonstrates the benefit that training in SDM can have. A key barrier to the implementation of SDM in practice is "unconscious incompetence" [17, 18, 19]; the belief that they do SDM well, when in fact they do not or not optimally. For many professionals, there could be a disconnect between their self-assessment of their need for SDM training and their actual need. The results of this study suggest that VPs could be a useful way to promote reflection and create some cognitive dissonance; this can help users identify their current performance and plan to improve. Future studies could explore how this package could be promoted to professionals who are unconsciously incompetent.

This evaluation explored user's views and experiences of a SDM learning resource aimed at a multi-disciplinary audience. It is the first evaluation of a SDM learning package which included VPs. The participants were from a variety of different professional backgrounds providing an insight into how the package was perceived by different groups. Although people from a range of different professional backgrounds participating, there was a preponderance of pharmacists. Many of the participants also used the package with a view to promoting SDM within their organisation and/or supporting colleagues, rather than their own practice with patients. The results therefore provide an insight into the participant's experience, rather than being generalisable to all users. The small

sample size is also acknowledged; results may not be representative of the experiences and views of all professional groups. Study limitations also include the voluntary recruitment of participants which may have resulted in interviewing those specifically interested in shared decision making. This evaluation was primarily focused on the first level of the Kirkpatrick model of educational evaluations; the learners' reaction to the package [30]. While the evaluation did explore participant-reported impact on practice, future research could measure any impact on practice directly.

## CONCLUSION

The NICE SDM learning package was viewed favourably by the participants in the study. The bitesize structure enabled busy professionals to fit their usage of the package around their own schedules and the different formats for presenting the information kept them engaged. The inclusion of VPs was reported as a strength of the learning package as they allowed individuals to practice and reflect upon their SDM skills. All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. Participants made minor suggestions to improve the usability and accessibility of the learning package.

## FUNDING STATEMENT

The learning package that was evaluated was created by the authors of the paper and funded jointly between the National Institute for Health and Care Excellence and the Keele University School of Pharmacy and Bioengineering.

## AUTHORSHIP STATEMENT

All authors were involved in the conception of the research study and planning the method. SJ and JT produced the study materials, collected and analysed the data. All authors supported the production of the manuscript including writing and editing. Simon Jacklin is the guarantor.

The design of this learning package, but not the findings from this study, were previously presented as a conference poster [31].

## PATIENT AND PUBLIC INVOLVEMENT

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research. Patients were involved in the design of the learning package that was evaluated in this research.

## COMPETING INTERESTS

The package featured virtual patient simulations which SJ and NM were directly involved in developing. Keele University continues to develop similar simulations for a range of external organisations – none of the authors of this paper have received any financial reward for these simulations. Both SJ and JT have produced non-promotional educational materials on shared decision making for Astra Zeneca; they personally did not receive remuneration for this work, but their employer, Keele University, did. SJ and JU are advisors to a non-promotional research project funded by Pfizer exploring shared decision making in antimicrobial stewardship. JU and AH were involved in the development of the NICE guideline on SDM, which formed the basis of the educational package. LN and KM do not have any competing interests to declare.

## REFERENCES

1. NICE, 2021. SDM Guideline. NG 197.
2. Sandman L and Munthe C. Shared decision making, paternalism and patient choice. Health Care Anal. 2010;18(1):60-84. PMID: 19184444
3. Elwyn, G. Shared decision making: What is the work? Patient Education and Counseling 2021;104(7):1591-1595. PMID: 33353840
4. Coulter A and Collins A, 2011. Making shared decision-making a reality. London: King's Fund.
5. Sandman L and Munthe C. Shared decision-making and patient autonomy. Theoretical medicine and bioethics 2009;30(4):289-310. PMID: 19701695
6. Elwyn G, Tilburt J, Montori V. The ethical imperative for shared decision-making. European Journal for Person Centered Healthcare 2013;1(1):129-131. DOI: http://dx.doi.org/10.5750/ejpch.v1i1.645
7. Chan SW, Tulloch E, Cooper ES, et al. Montgomery and informed consent: where are we now? BMJ 2017; 357:j2224. PMID: 28500035
8. Reyes-Hadsall S, Drake L, Han JJ, et al. Shared Decision-Making, Therapeutic Choice, and Decisional Regret in Patients With Alopecia Areata. JAMA dermatology 2022;158(10):1187-1191. PMID: 35976667
9. van Esch TE, Brabers AE, Hek K, et al. Does shared decision-making reduce antibiotic prescribing in primary care? Journal of Antimicrobial Chemotherapy 2018;73(11):3199-3205. PMID: 30165644
10. Hess EP, Hollander JE, Schaffer JT, et al. Shared decision making in patients with low risk chest pain: prospective randomized pragmatic trial. BMJ 2016;355:i6165. PMID: 27919865
11. General Medical Council. Decision making and consent. General Medical Council, Manchester, 2020.
12. Nursing and Midwifery Council. The Code. Nursing and Midwifery Council, London, 2024.
13. General Pharmaceutical Council. Standards for pharmacy professionals. General Pharmaceutical Council, London, 2017.
14. van Dulmen S, Roodbeen R, Schulze L, et al. Practices and perspectives of patients and healthcare professionals on shared decision-making in nephrology. BMC nephrology 2022;23(1):1-13. PMID: 35864466
15. Haugom EW, Stensrud B, Beston G, et al. Experiences of shared decision making among patients with psychotic disorders in Norway: a qualitative study. BMC psychiatry 2022;22(1):1-11. PMID: 35300633
16. NHS, 2022. GP Patient Survey.
17. Driever EM, Stiggelbout AM, Brand PL. Do consultants do what they say they do? Observational study of the extent to which clinicians involve their patients in the decision-making process. BMJ open 2022;12(1):e056471. PMID: 34987047
18. Joseph-Williams N, Lloyd A, Edwards A, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. BMJ 2017;357:j1744. PMID: 28420639
19. Kruger J and Dunning D. Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. Journal of personality and social psychology 1999;77(6):1121.
20. Ericsson KA, Krampe RT, Tesch-Römer C. The role of deliberate practice in the acquisition of expert performance. Psychological review 1993;100(3):363-406. DOI:10.1037//0033-295X.100.3.363
21. Association of American Medical Colleges. Effective Use of Educational Technology in Medical Education: Summary Report of the 2006 AAMC Colloquium on Educational Technology. Washington, DC: AAMC 2007; p7.

22. Denzin NK and Lincoln YS. The SAGE Handbook of Qualitative Research. 2018, 5th edn. Los Angeles: Sage
23. Naeem M, Ozuem W, Howell K, Ranfagni S. Demystification and actualisation of data saturation in qualitative research through thematic analysis. International Journal of Qualitative Methods, 2024, 23. doi:16094069241229777.
24. Romero P, Günther P, Kowalewski KF, et al. Halsted's "see one, do one, and teach one" versus Peyton's four-step approach: a randomized trial for training of laparoscopic suturing and knot tying. Journal of surgical education 2018;75(2):510-515. PMID: 28801083
25. Cegala DJ and Lenzmeier Broz S. Physician communication skills training: a review of theoretical backgrounds, objectives and skills. Med Educ 2002;36(11):1004-16. doi: 10.1046/j.1365-2923.2002.01331.x. PMID: 12406260.
26. Ikenwilo D and Skåtun D. Perceived need and barriers to continuing professional development among doctors. Health Policy 2014;117(2):195-202. PMID: 24836019
27. Reis T, Faria I, Serra H, et al. Barriers and facilitators to implementing a continuing medical education intervention in a primary health care setting. BMC health services research 2022;22(1):638. PMID: 35562695
28. Légaré F, Ratte S, Stacey D, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. Cochrane database of systematic reviews 2018;(5). PMID: 20464744
29. Kolb, D.A. Experiential learning: Experience as the source of learning and development. FT press 2014.
30. Kirkpatrick, D. and Kirkpatrick, J. Evaluating training programs: The four levels. Berrett-Koehler Publishers 2006.
31. Thompson J, Jacklin S, Hutchinson A, Norburn L, Maddock K, Maskrey N and Underhill J. The creation of an online learning resource to support the implementation of the nice shared decision making guideline. In Pharmacoepidemiology and Drug Safety 2022;31:7-7.

## Shared Decision Making Interview Guide

### Interview Guide

- ☐ Interviewer introduces themselves.
- ☐ Explain the process and purpose of the interview.
- ☐ Elicit any questions regarding the evaluation.
- ☐ As the participants have already completed a consent form, double-check that they are still happy to proceed with an interview and for it to be recorded.
- ☐ Reiterate withdrawal procedure/timeline
- ☐ Ask for the participant to state their name at the beginning of recording.

1. **Introductory questions**
    a. Could you tell me a little bit about your role in practice?
    b. Where did you hear about the learning package?
    c. What made you want to use the learning package?

2. **Usage of the package**
    a. How did you access the package?
    b. Which sections of the package have you accessed?
    c. How did you use the package?

3. **Thoughts about the package**
    a. What were you expecting from the package before you started it?
    b. What did you think of the learning package after you used it (partly/fully)?
    c. Which elements of the package were the most challenging?
    d. Was there anything surprising about the package?
    e. Are there any changes that you would suggest for the package?

4. **Impact on clinical practice**
    a. Has the package had any impact on your clinical practice?
    b. Which elements of the package were the most useful for supporting your clinical practice?

Thank the participant for their time.

Ask the participant if they have any final questions.

BMJ Open

# Exploring user experiences of the National Institute of Health and Care Excellence's shared decision making learning package: An online qualitative study

| | |
|---|---|
| Journal: | *BMJ Open* |
| Manuscript ID | bmjopen-2024-088856.R2 |
| Article Type: | Original research |
| Date Submitted by the Author: | 03-Dec-2024 |
| Complete List of Authors: | Jacklin, Simon ; Keele University, School of Pharmacy and Bioengineering<br>Thompson, Jessica; Keele University, School of Pharmacy and Bioengineering<br>Hutchinson, Andy; National Institute for Health and Care Excellence<br>Maddock, Katie; Keele University, School of Pharmacy and Bioengineering<br>Maskrey, Neal; Keele University, School of Pharmacy and Bioengineering<br>Norburn, Laura; National Institute for Health and Care Excellence<br>Underhill, Jonathan; National Institute for Health and Care Excellence |
| Primary Subject Heading: | Medical education and training |
| Secondary Subject Heading: | Patient-centred medicine |
| Keywords: | Clinical Decision-Making, EDUCATION & TRAINING (see Medical Education & Training), QUALITATIVE RESEARCH, Person-Centered Care |
| | |

*I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.*

*The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.*

*Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.*

# EXPLORING USER EXPERIENCES OF THE NATIONAL INSTITUTE OF HEALTH AND CARE EXCELLENCE'S SHARED DECISION MAKING LEARNING PACKAGE: AN ONLINE QUALITATIVE STUDY

Simon Jacklin 1 s.jacklin@keele.ac.uk

Jessica Thompson 1 j.f.thompson@keele.ac.uk

Andy Hutchinson 2 andy.hutchinson@nice.org.uk

Katie Maddock 1 k.maddock@keele.ac.uk

Neal Maskrey 1 nealmaskrey@gmail.com

Laura Norburn 2 laura.norburn@nice.org.uk

Jonathan Underhill 2 jonathan.underhill@nice.org.uk

1 School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG

2 National Institute for Health and Care Excellence, Manchester, UK, M1 4BT

Corresponding author: Simon Jacklin, HNB 2.18, School of Pharmacy and Bioengineering, Keele University, Keele, Staffordshire, UK, ST55BG.

Word Count: 3826

## ABSTRACT

Objective: To evaluate the user experience of the joint National Institute of Health and Care Excellence (NICE)/Keele University Shared Decision Making (SDM) learning package.

Design: A qualitative study using online semi-structured interviews. Data were analysed using open coding followed by the construction of themes.

Setting: Participants were recruited and interviewed online via Microsoft Teams.

Participants: Healthcare professionals who had used the NICE SDM learning package and provided contact details between June 2021 and April 2022 were eligible to be contacted

Intervention: The online learning package developed to support the implementation of the NICE SDM guideline.

Findings: 12 participants from a variety of different professional backgrounds were interviewed and reported that the learning package was easy to use and the different formats for presenting the information were engaging. The package was available in discrete sections - "bitesize" chunks - which allowed the participants to fit their learning around their busy schedules. The package included virtual patients (VPs) which allowed users to practice their SDM skills and put the learning into practice. The VPs also stimulated reflection on current performance and a shift in approach to SDM in practice. Suggestions were made by participants to improve the usability and accessibility of the learning package.

Conclusion: The NICE SDM learning package was viewed favourably by the participants. The bitesize structure and interactivity were key positive elements. Many participants suggested that they had made changes to their practice as a result of using the package.

Key words: Shared decision making; clinical decision-making; education & training; qualitative research; person-centered care

Strength & limitations:

- Semi-structured interviews gathered the participants' experience of the package.
- An inductive, iterative approach to data analysis enabled a reflexive process to data exploration.
- No measure of the participants clinical practice was undertaken.
- Not all professional groups were well represented.

## INTRODUCTION

### What is SDM and why?

Shared Decision Making (SDM) is a collaborative process that involves a person and their healthcare professional working together to reach a joint decision about care [1]. This approach contrasts with paternalism, where patients are told what to do, rather than being invited into the decision making process [2]. The term 'Shared Decision Making' was first used in the 1980s [3] and has been a subject of increased interest in health policy [4]. In 2010, the Secretary of State for Health, Lord Andrew Lansley, indicated that patients should be involved in decisions about their own care, using the phrase "nothing about me, without me" [4].

SDM is promoted on ethical grounds, respecting a person's right to autonomy and self-determination [5] in part by making the trade-off between the benefits and risks of treatment clear to each patient [6]. The ethical position has been supported by the legal system in the UK; the Montgomery judgment of 2015 does not use the term "shared decision making" but supports a shift towards a more cooperative approach between clinicians and patients, with explicit discussion of the materials risks and benefits of treatment options, tailored to what matters to the individual person [7]. Positive outcomes of SDM include people having less decisional regret [8], reduced antimicrobial prescribing [9], and decreased hospital admissions [10]. As a result, SDM is advocated for in the standards of UK professional regulatory bodies [11, 12, 13].

### Need for training

Given the ethical, legal, clinical and policy drivers for SDM, it may be expected that SDM is well integrated into current practice. However, this is not the case; studies have shown that there is considerable variation in the adoption of SDM within clinical practice [14, 15]. In the annual general practice survey, 44.6% of patients wanted more involvement than they currently had in their healthcare decisions [16]. Part of the reason for this could be the fact that healthcare professionals might be "unconsciously incompetent"; that is, they believe that they do SDM well, when in fact they do not or not optimally [17, 18, 19].

The National Institute for Health and Care Excellence (NICE) published a guideline on SDM in 2021 [1] and many of the recommendations refer to the importance of training for healthcare professionals. The guideline states that this training should focus on improving the knowledge, skills and confidence of professionals. SDM is a skill, and therefore training should not be solely theoretical, but involve practice and feedback [20]. The MAGIC programme – a programme funded by the Health Foundation to design, test, and identify the best ways to embed shared decision making as routine - concluded that "skills trump tools, and attitudes trump skills" [18]. An attitudinal shift is required in addition to development of individuals' knowledge and skills.

**Intervention description**

To support the release of the NICE SDM guideline and further encourage the implementation of SDM into healthcare professionals' routine practice, an open-access, online learning package was developed. The package was co-produced between Keele University and NICE. The learning package consisted of six modules; each one built using Microsoft Sway. The six modules were:

1. Orientation and background
2. Cognitive psychology: the science of how we all make decisions
3. Evidence-based medicine
4. Probability and uncertainty
5. Consultation skills
6. Practising shared decision making, staying up to date

The modules featured text, narrated PowerPoints, videos of healthcare professionals and patients expressing their experiences of SDM and various interactive elements. Each module was predicted to take around 40-minutes to complete. Module 6 featured two virtual patients (VPs); VPs are a 'specific type of computer program that simulates real-life clinical scenarios; learners emulate the roles of health care providers to obtain a history, conduct a physical exam, and make diagnostic and therapeutic decisions' [21]. VPs were included to allow the learners to repeatedly practice their SDM skills and receive individualised feedback autonomously on their performance.

The learning package can be accessed via the 'Tools and Resources' section of the NICE SDM guideline (https://www.nice.org.uk/guidance/ng197/resources/shared-decision-making-learning-package-9142488109).

**Usage of the Learning Package**

The learning package was made publicly available in June 2021. The package was promoted via both NICE and Keele University's communication networks; this included social media and press releases. Microsoft Sway provides its own user analytics and the number of users for each module is included in table 1.

Table 1 – Usage data for each module (as of 16/05/2024)

| Module | Views |
|---|---|
| 1 - Orientation and background | 12645 |
| 2 - Cognitive psychology: the science of how we all make decisions | 11750 |
| 3 - Evidence-based medicine | 5940 |
| 4 - Probability and uncertainty | 4953 |
| 5 - Consultation skills | 6333 |
| 6 - Practising shared decision making, staying up to date | 7007 |

Aim

To evaluate the user experience of the joint NICE/Keele University SDM learning package.

It was important that this learning package was evaluated as it was the first that included VPs with the aim of supporting the implementation of the NICE SDM guideline.

## METHODS

## Design

As the study aimed to explore individual participant's experiences and views of the learning package, a qualitative approach utilising online semi-structured interviews was adopted. The study was undertaken within a constructivist paradigm, acknowledging that truth is relative and constructed by individuals and societies [22]. A qualitative method underpinned by a constructivist framework allowed the researchers to conduct an in-depth study of the participants views of the learning package, whilst acknowledging the subjective nature of their reported experiences and the co-creation of understanding between the researchers and participants. By using a constructivist framework, the study provided an exploration of how users engaged with and perceived the learning package, which is essential for evaluating its effectiveness and identifying areas for improvement.

## Population

The target audience for the learning package were healthcare professionals based in the UK; "healthcare professional" was taken in the broadest sense and could include trainers and managers.

When users accessed module 1 of the learning package, they were given the option to provide their email address to be contacted about participation in an evaluation; providing an email address was not providing consent for the evaluation itself, only to be contacted. Individuals who gave their email addresses to be contacted between launch of the learning package (June 2021) and April 2022 were the population for this evaluation.

## Recruitment

To recruit participants for the study, initial and follow-up recruitment emails were sent to those who had provided their email addresses. An information sheet and a link to an online consent form were included in the email. To participate, participants had to complete the online consent form.

Due to low recruitment numbers initially, a convenience sampling approach was adopted. All participants who consented were interviewed.

## Ethics statement (including consent process)

Potential participants were provided with an information sheet informing them of the details of the study and given the opportunity to ask questions. An online consent form was used to obtain informed consent. Participants were notified that they could withdraw from the study up until one week after their interview. Ethical approval for the study was provided by the Keele Institute for Innovation and Teaching Excellence Ethical Review Panel.

## Data collection

Once consent had been obtained, participants were contacted to arrange a semi-structured interview over Microsoft Teams. All interviews were conducted by either SJ or JT. The interview guide focused on four key topic areas: motivation/reason for use; how they used the package; their experience of using the package; any impacts on their practice. Following completion of the interview, recordings were transcribed verbatim. Participants were interviewed once, with no repeat interviews. The transcripts were not returned to the participants for member checking. The interview guide is included as supplemental material.

## Data analysis

An inductive, iterative approach to data analysis was taken with the emerging results continuously cross-referenced with the data and refined. Firstly, each transcript was coded by both SJ and JT using

open coding. Open coding derives the codes from the data itself, rather than a set of predefined codes. After all of the transcripts had been initially coded, SJ and JT each reviewed the codes and grouped them into themes independently. These were then mutually agreed as provisional themes; as there were a number of themes, they were grouped under common topic areas. These provisional topic areas and themes were discussed with the wider project team to encourage reflexivity. Collaborative discussions amongst the research team were key to enable the acknowledgement of any potential risks of personal biases. The iterative approach to data analysis encouraged a reflexive process and consideration of data saturation. This is the point at which each subsequent interview does not yield any new data or themes relevant to the study [23]. To determine data saturation in this study, SJ and JT monitored the coding to look for new words or ideas in the data; if new codes were being applied to the data, it is unlikely that data saturation had been reached. Data saturation was decided when no new data was being presented in two consecutive interviews; it was at this point that data collection stopped.

### Patient and public involvement

Patients were involved in the production of the package; it featured videos of patients explaining why SDM mattered to them. However, patients or the public were not involved in the design, conduct, reporting or dissemination of the evaluation.

## RESULTS

### Participant Demographics

322 users of the learning package provided their email address to be invited to participate in this study; recruitment emails were sent to all. Overall, 13 participants consented to and were interviewed as part of the study; during the interview it transpired that one participant had not accessed the learning package and so only the data from the remaining 12 participants were included. Table 2 shows the professional background of the participants with “pharmacist” the most common. Interviews ranged from 20 – 50 minutes, with an average of 30 minutes.

Table 2 – Professional background of the participants

| Professional Background | Frequency |
|---|---|
| Pharmacist | 5 |
| Nurse | 2 |
| Healthcare Manager | 1 |
| Osteopath | 1 |
| Physiotherapist | 1 |
| Strength and Conditioning Coach (rehabilitation) | 1 |
| Surgeon | 1 |

Five key topic areas were identified from the interviews: ‘motivation for use’, ‘accessing the package’, ‘features of the package’, ‘virtual patients’, and ‘outcomes’. The topics along with 13 themes are outlined in table 3. Findings from the various participant contributions are presented further.

Table 3 - Key themes

| Topic | Theme |
|---|---|
| Motivation for use | Personal Interest |

| | |
|---|---|
| | Role requirement<br>Supporting others |
| Accessing the package | Usability<br>Structure<br>Accessibility |
| Features of the package | Resource variety<br>Content |
| Virtual patients | Application of learning<br>Reflection |
| Outcomes | Change to practice<br>Attitudinal shift<br>Sharing information |

**Motivation for use**

Participants reported using the package for a variety of different reasons. All the participants had an interest in SDM prior to using the learning package and stated that they felt involving patients in the decision making process was important for effective patient care. None of the participants suggested that they were sceptical of or averse to SDM prior to commencing the package.

*"I think I wanted to learn more about it and I think I recognised how relevant that side of things was … through my professional training it was all around, you know, implementing interventions and there's a scientific basis to do that in the right way. However, one of the interesting things when you work with real people is that they don't always follow those guidelines to the tee...trying to understand the individual and the person...the shared decision making stuff just really underpins that and facilitates it I think." P12*

While the participants were already ostensibly bought into the idea of SDM, many commented on its absence from their formal training so far.

*"...there was nothing actually purely about decision making for the patient … no formal training."* P3

Many of the participants commented that they were interested in the package for their own practice, but also to support their colleagues' practice.

*"...it was mainly about supporting the healthcare professionals' skills and competencies that we were particularly interested in."* P8

Participants also reported how they had initially heard about the learning package. Some participants had come across the learning package via promotional materials, whereas others were referred to it by their manager (or other senior colleague) or had seen it as directed reading in other SDM resources. This led to specific comments regarding the promotion of the learning package.

*"...the only thing is you need to promote more, to more people...we are a massive [number of] people working in surgeries...to say, OK, you should do that and it [your shared decision making] will be better."* P5

**Accessing the package**

All participants reported that the package was easy to access via the links on the NICE webpage, could be worked through using any electronic device, and the open-access nature of the resource

meant there were no barriers to its use. It was reported that having easier transitions between the modules would have improved the access, but the current design was not seen as detrimental to its usability.

*"...a kind of 'move on to the next section' button...if you're just doing one bit at a time, that's fine ... But also, sometimes it's quite nice to go 'oh I've finished, I'll just go straight to the next [module]..."* P10

Whilst some participants completed the learning package in one go, the majority of participants reported completing the learning package in chunks as and when they were able to find time. This was noted by participants as a particular benefit of the learning package. Participants also reported that the package was learner-centred, and being able to choose which sections to complete at a given time was helpful for their learning.

*"Because it was in bite sized chunks, it was easy to like skip something if I felt I was already familiar with that. That's great, you know, being able to kind of tailor the learning was really nice about the package."* P7

With regards to the recorded videos, it was mentioned that allowing the option of speeding up or slowing down the video may help aid accessibility and usability.

*"I couldn't find a way of speeding up the video and some of them, probably quite rightly, were reasonably slow...when you're pushed for time, if you can listen to the same amount of information in a slightly shorter time that sometimes is helpful."* P10

**Features of the package**

When considering features of the learning package, participants commented on a number of areas. The majority of participants reported that the inclusion of a variety of resources, such as text, activities, reflections and videos in the learning package catered for those who like to learn in different ways and helped keep individuals engaged. Participants also reported that the inclusion of references and directed reading into the learning package allowed them to access additional, evidence-based resources if they wanted further information.

*"I suppose the bottom line is that we know [with] text heavy e-learning people get fatigued quite quickly, and what I particularly liked about the package was the variation in activities. I absolutely loved the quick tap on the notes. They're sort of like post it notes. I thought that was inspired...and that was just a really quick, engaging thing...I didn't want to just see all text."* P1

Further exploration of participants' thoughts on the variety of learning resources emphasised the benefit of having video clips demonstrating consultation skills.

*"I suppose sometimes it helps you to think... exactly what words would I use and what are the effect of different ways of saying the same sort of thing and subtle differences, which were seen in the scenarios. But also, I suppose, pointed out in some other learning like, 'I think you should do this' or 'what I need you to do is this'." P10*

Increasing the number and range of consultation demonstration videos was suggested by participants, to show that even with complex or uncertain patients the use of effective consultation skills is key for shared decision making to take place. Additionally, some participants also reported that the addition of collaborative peer discussions may aid individuals' learning experiences.

*"It might be helpful to see quite a challenging encounter with a patient... I think there's the incorrect view that it takes more time and people don't have time, and I think if it could sort of clearly come across of actually well, we know it doesn't, it's about having a different set of skills.... so when the person is saying stuff like "Well, you're the expert, you tell me." How shared decision making can be used in that sense by presenting people with choices; that could be something."* P9

All participants reported finding the learning package useful and felt it could be used by healthcare professionals of any type and level of training. However, some individuals did suggest the inclusion of non-medical examples to allow prospective users to see how the learning would be relevant to them.

*"It felt more specific to people from clinical backgrounds, by which I mean, you know, those who are more likely to be involved in prescribing in some way. So you know, whether it's at the dispensing end or even at the actual prescribing end. I think you could maybe do a slightly adapted version for non-clinical staff."* P6

Two participants suggested that certification for completing the learning package may be helpful for their workplace or Continuing Professional Development (CPD) records.

*"Often your workplace might ask for evidence if you've completed these sorts of things. Erm, so I think you know, formalising it in that sense."* P12

A summary of the recommended changes suggested by participants is featured in table 4.

Table 4 – Recommendations made by the participants for future iterations of the learning package

| **Participant recommendations** |
|---|
| To include a certificate of completion for CPD records |
| A greater range of videos demonstrating the skills required for SDM |
| Inclusion of non-medical examples to improve applicability to non-medical groups |

**Virtual patients**

The first five modules focused on the concepts and theories important for SDM, in addition to illustrative examples. In module 6 there were two VPs which simulated patient consultations; one focused on discussing treatment options for osteoarthritis of the knee, the other whether or not to prescribe a statin for primary prevention. The majority of the participants reported these simulations were useful as they enabled practical application of the concepts being taught.

*"...they were really helpful and really got you thinking about how to approach your questions and your interaction with people to get the best information from them. And, I think that's a good way to learn. So, it [the VPs] was very, very useful." P8*

In addition to the opportunity to apply the skills, the VPs also gave feedback and encouraged repetitive practice and reflection.

*"It's a safe space to be able to make mistakes and have a practice of it…in the avatar bit at the end, there's different options and some of them you think are right and then you'll get feedback and it'll say "Fine, but actually have you thought about this"? So, I think it was trying to give me a bit of a different way of thinking." P11*

It was suggested by one participant that the VPs were a *"real strength of the package"* P9.

*"I really like the scenario ones where you went into the room and you had to then be the practitioner...it was good to do that...I hadn't realised I was sort of pushing the patient in one way or another." P3*

Participants did not report any weaknesses associated with the VPs.

**Outcomes**

Many participants felt that the learning package had a positive impact on their practice in terms of SDM with patients. Some participants were able to pin-point specific things that they had adopted in their practice, specific skills they had taken from the package. One example of the changes in practice suggested were the use of specific acronyms to present options to patients e.g. BRAN.

*"In those discussions I was referring to some of the points that were covered on the NICE shared decision making learning package...like around like the BRAN model." P12*

Other participants suggested whole modules included in the package which had lacked from previous education and training, and practical skills to implement shared decision making in their own practice.

*"I was so interested in the evidence section, it's really helpful…how you present them [statistics] can make quite a big difference in how somebody might make a decision…all your patient decision aids and everything, you think, well, I don't know if you're one of the green faces, the red faces or the yellow faces…and how to sort of convey that but in a way that they can still use the information helpfully to make a decision." P14*Participants also discussed a general shift in their approach to their practice, perhaps focusing on the attitudinal element of SDM.

*"It is a life changing way of having a conversation. You know, that is certainly not the feedback I've ever had before from, you know, 30 years of practice. I mean, people have said, "You're so lovely", "You're so kind", "Thank you for listening to me" - all those kinds of things. But, you know, not to have that kind of massive feedback about it being life changing and life affirming. People saying they've waited years to have this kind of conversation; this is the kind of feedback we're getting every single day."* P11

Some participants felt that the package had an impact beyond their own practice. There was discussion about passing this onto their colleagues to influence practice more widely.

*"I have to say I'm passing on all this wisdom when we speak about shared decision making and I've told them about the "shut up and listen". So it's sort of filtering through."* P7

## DISCUSSION

The aim of this research was to evaluate the user experience of NICE's SDM learning package. All the participants in the study were positive in their overall impressions of the learning package, with the ease of use, interactive elements, and VPs all key strengths. To improve the learning package, it was proposed that successful completion could result in a certification for continuing professional development records. While the "bitesize" nature of the package was reported as an advantage, it was also proposed that strategies to help learners engage with the package in a shorter timeframe could be useful for professionals who are particularly pressed for time.

The interactivity of the package and the different media used were reported as positive features as they helped maintain users' interest and provided an opportunity for better engagement by considering different learning preferences. The inclusion of videos demonstrating key skills was

especially well received by participants as they enabled users to see how to engage in person-centred consultations in practice. The first step in Peyton's 4-step approach to teaching a skill involves demonstrating the skill, followed by deconstruction, which was achieved through the descriptions surrounding the video(s) and explanation of what went well and what could have been improved for the key skills [24]. Participants also indicated that the VPs had supported Peyton's third and fourth steps of comprehension and performance.

A challenge facing the adoption of SDM in routine practice is that many currently practicing professionals will not have been taught about SDM in their undergraduate training; indeed, communication skills training was not a big part of all undergraduate or postgraduate training historically [25]. This means that some professionals might not have had any formal training in SDM. Furthermore, any training that registered professionals undertake must be able to fit alongside their busy clinical practice; one of the greatest barriers to CPD activities is frequently reported to be time [26, 27]. A key advantage of the learning package was that it was broken into "bitesize" chunks that users could easily come back to. When designing educational materials, the results of this evaluation suggest that particular attention should be paid to how the materials might be used by busy working professionals.

Although many studies highlight the need for training healthcare professionals in SDM [18, 28], the form this training should take is less clear. The theory of deliberate practice suggests that learners need the opportunity to practice their skills repeatedly and receive personalised feedback on their efforts [20]. This evaluation found that VPs were a particularly useful part of the package as they permitted users to engage in this practice-feedback loop; after consulting with the VP, the user received personalised feedback which they could then try and improve by having another attempt. In addition to supporting a practice-feedback loop, the VP also provided a stimulus for reflection. Participants stated that the choices presented by the VP and the feedback received at the end triggered a reflective process. This aligns with Kolb's reflective learning cycle in which learning can be viewed as a continuous process grounded in experience, within which previously learnt knowledge can and should change based on new experiences [29]. Although reflective learning is a cyclical process, ideally learners start with concrete experience [29]; findings from this evaluation suggest that the VPs could provide this, as well as the active experimentation phase. Users can repeat the VP simulation based on their previous experience and feedback; hence applying their learning and creating a new experience, allowing them to re-enter the reflective learning cycle. Consideration could be given to implementing a formal framework to scaffold this reflection for learners.

All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. This demonstrates the benefit that training in SDM can have. A key barrier to the implementation of SDM in practice is "unconscious incompetence" [17, 18, 19]; the belief that they do SDM well, when in fact they do not or not optimally. For many professionals, there could be a disconnect between their self-assessment of their need for SDM training and their actual need. The results of this study suggest that VPs could be a useful way to promote reflection and create some cognitive dissonance; this can help users identify their current performance and plan to improve. Future studies could explore how this package could be promoted to professionals who are unconsciously incompetent.

This evaluation explored user's views and experiences of a SDM learning resource aimed at a multi-disciplinary audience. It is the first evaluation of a SDM learning package which included VPs. The participants were from a variety of different professional backgrounds providing an insight into how the package was perceived by different groups. Although people from a range of different

professional backgrounds participated, there was a preponderance of pharmacists. Views from medical professionals were limited as only one surgeon participated in the study. General practitioners have an important role in facilitating SDM; the absence of their views is a limitation of this research. Many of the participants also used the package with a view to promoting SDM within their organisation and/or supporting colleagues, rather than their own practice with patients. The results therefore provide an insight into the participant's experience, rather than being generalisable to all users. The small sample size is also acknowledged; results may not be representative of the experiences and views of all professional groups. Study limitations also include the voluntary recruitment of participants which may have resulted in interviewing those specifically interested in shared decision making. This evaluation was primarily focused on the first level of the Kirkpatrick model of educational evaluations; the learners' reaction to the package [30]. While the evaluation did explore participant-reported impact on practice, future research could measure any impact on practice directly.

## CONCLUSION

The NICE SDM learning package was viewed favourably by the participants in the study. The bitesize structure enabled busy professionals to fit their usage of the package around their own schedules and the different formats for presenting the information kept them engaged. The inclusion of VPs was reported as a strength of the learning package as they allowed individuals to practice and reflect upon their SDM skills. All participants commented that the learning package was useful with some specifying clear changes to their practice, and the subsequent benefit these changes have had on patient care. Participants made minor suggestions to improve the usability and accessibility of the learning package.

## FUNDING STATEMENT

The learning package that was evaluated was created by the authors of the paper and funded jointly between the National Institute for Health and Care Excellence and the Keele University School of Pharmacy and Bioengineering.

## AUTHORSHIP STATEMENT

Study conception: all authors. Study design and development: all authors. Data collection and analysis: SJ, JT. Drafting of manuscript: all authors. Critical review of manuscript and reviewed and approved the final version of the manuscript: all authors. SJ takes responsibility for the overall content as guarantor.

The design of this learning package, but not the findings from this study, were previously presented as a conference poster [31].

## PATIENT AND PUBLIC INVOLVEMENT

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research. Patients were involved in the design of the learning package that was evaluated in this research.

## COMPETING INTERESTS

The package featured virtual patient simulations which SJ and NM were directly involved in developing. Keele University continues to develop similar simulations for a range of external organisations – none of the authors of this paper have received any financial reward for these

simulations. Both SJ and JT have produced non-promotional educational materials on shared decision making for Astra Zeneca; they personally did not receive remuneration for this work, but their employer, Keele University, did. SJ and JU are advisors to a non-promotional research project funded by Pfizer exploring shared decision making in antimicrobial stewardship. JU and AH were involved in the development of the NICE guideline on SDM, which formed the basis of the educational package. LN and KM do not have any competing interests to declare.

## REFERENCES


1. NICE, 2021. SDM Guideline. NG 197.
2. Sandman L and Munthe C. Shared decision making, paternalism and patient choice. Health Care Anal. 2010;18(1):60-84. PMID: 19184444
3. Elwyn, G. Shared decision making: What is the work? Patient Educ Couns. 2021;104(7):1591-1595. PMID: 33353840
4. Coulter A and Collins A, 2011. Making shared decision-making a reality. London: King's Fund.
5. Sandman L and Munthe C. Shared decision-making and patient autonomy. Theor med bioeth 2009;30(4):289-310. PMID: 19701695
6. Elwyn G, Tilburt J, Montori V. The ethical imperative for shared decision-making. European Journal for Person Centered Healthcare 2013;1(1):129-131. DOI: http://dx.doi.org/10.5750/ejpch.v1i1.645
7. Chan SW, Tulloch E, Cooper ES, et al. Montgomery and informed consent: where are we now? BMJ 2017; 357:j2224. PMID: 28500035
8. Reyes-Hadsall S, Drake L, Han JJ, et al. Shared Decision-Making, Therapeutic Choice, and Decisional Regret in Patients With Alopecia Areata. JAMA dermatology 2022;158(10):1187-1191. PMID: 35976667
9. van Esch TE, Brabers AE, Hek K, et al. Does shared decision-making reduce antibiotic prescribing in primary care? J Antimicrob Chemother. 2018;73(11):3199-3205. PMID: 30165644
10. Hess EP, Hollander JE, Schaffer JT, et al. Shared decision making in patients with low risk chest pain: prospective randomized pragmatic trial. BMJ 2016;355:i6165. PMID: 27919865
11. General Medical Council. Decision making and consent. General Medical Council, Manchester, 2020.
12. Nursing and Midwifery Council. The Code. Nursing and Midwifery Council, London, 2024.
13. General Pharmaceutical Council. Standards for pharmacy professionals. General Pharmaceutical Council, London, 2017.
14. van Dulmen S, Roodbeen R, Schulze L, et al. Practices and perspectives of patients and healthcare professionals on shared decision-making in nephrology. BMC nephrology 2022;23(1):1-13. PMID: 35864466
15. Haugom EW, Stensrud B, Beston G, et al. Experiences of shared decision making among patients with psychotic disorders in Norway: a qualitative study. BMC psychiatry 2022;22(1):1-11. PMID: 35300633
16. NHS, 2022. GP Patient Survey.
17. Driever EM, Stiggelbout AM, Brand PL. Do consultants do what they say they do? Observational study of the extent to which clinicians involve their patients in the decision-making process. BMJ open 2022;12(1):e056471. PMID: 34987047
18. Joseph-Williams N, Lloyd A, Edwards A, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. BMJ 2017;357:j1744. PMID: 28420639
19. Kruger J and Dunning D. Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. J pers soc psychol. 1999;77(6):1121.

20. Ericsson KA, Krampe RT, Tesch-Römer C. The role of deliberate practice in the acquisition of expert performance. Psychological review 1993;100(3):363-406. DOI:10.1037//0033-295X.100.3.363
21. Association of American Medical Colleges. Effective Use of Educational Technology in Medical Education: Summary Report of the 2006 AAMC Colloquium on Educational Technology. Washington, DC: AAMC 2007; p7.
22. Denzin NK and Lincoln YS. The SAGE Handbook of Qualitative Research. 2018, 5th edn., p19, 20, 98, 108-112. Los Angeles: Sage
23. Naeem M, Ozuem W, Howell K, Ranfagni S. Demystification and actualisation of data saturation in qualitative research through thematic analysis. Int J Qual Methods 2024, 23. doi:16094069241229777.
24. Romero P, Günther P, Kowalewski KF, et al. Halsted's "see one, do one, and teach one" versus Peyton's four-step approach: a randomized trial for training of laparoscopic suturing and knot tying. J surg educ 2018;75(2):510-515. PMID: 28801083
25. Cegala DJ and Lenzmeier Broz S. Physician communication skills training: a review of theoretical backgrounds, objectives and skills. Med Educ 2002;36(11):1004-16. doi: 10.1046/j.1365-2923.2002.01331.x. PMID: 12406260.
26. Ikenwilo D and Skåtun D. Perceived need and barriers to continuing professional development among doctors. Health Policy 2014;117(2):195-202. PMID: 24836019
27. Reis T, Faria I, Serra H, et al. Barriers and facilitators to implementing a continuing medical education intervention in a primary health care setting. BMC health serv res 2022;22(1):638. PMID: 35562695
28. Légaré F, Ratte S, Stacey D, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. Cochrane database of syst rev 2018;(5). PMID: 20464744
29. Kolb, D.A. Experiential learning: Experience as the source of learning and development. FT press 2014.
30. Kirkpatrick, D. and Kirkpatrick, J. Evaluating training programs: The four levels. Berrett-Koehler Publishers 2006.
31. Thompson J, Jacklin S, Hutchinson A, Norburn L, Maddock K, Maskrey N and Underhill J. The creation of an online learning resource to support the implementation of the nice shared decision making guideline. In Pharmacoepidemiol Drug Saf 2022;31:7-7.

## Shared Decision Making Interview Guide

### Interview Guide

- ☐ Interviewer introduces themselves.
- ☐ Explain the process and purpose of the interview.
- ☐ Elicit any questions regarding the evaluation.
- ☐ As the participants have already completed a consent form, double-check that they are still happy to proceed with an interview and for it to be recorded.
- ☐ Reiterate withdrawal procedure/timeline
- ☐ Ask for the participant to state their name at the beginning of recording.

1. **Introductory questions**
    a. Could you tell me a little bit about your role in practice?
    b. Where did you hear about the learning package?
    c. What made you want to use the learning package?

2. **Usage of the package**
    a. How did you access the package?
    b. Which sections of the package have you accessed?
    c. How did you use the package?

3. **Thoughts about the package**
    a. What were you expecting from the package before you started it?
    b. What did you think of the learning package after you used it (partly/fully)?
    c. Which elements of the package were the most challenging?
    d. Was there anything surprising about the package?
    e. Are there any changes that you would suggest for the package?

4. **Impact on clinical practice**
    a. Has the package had any impact on your clinical practice?
    b. Which elements of the package were the most useful for supporting your clinical practice?

Thank the participant for their time.

Ask the participant if they have any final questions.