Sequential simulation of a patient journey

Abstract

Objectives: To develop an intervention for educating pharmacists (community and hospital) about integrated care and their role in implementing it.

Methods: We developed a sequential simulation derived from a patient's journey, the key scenario featuring a community pharmacist. The scenarios were designed with input from pharmacists and patients, and emphasized the effect operating in silos can have on the patient.

Evaluation: Evaluation was by questionnaire, field notes and analysis of video material. 21/37 (56.7%) participants responded to the questionnaire. 19/21 expressed that they felt the event was a good or excellent educational experience, and had improved their confidence in their capability to improve patient care. 19/21 said their knowledge and understanding of integrated care had been enhanced. The sequential simulation was appreciated as a way of visualizing integrated care, with 19/21 describing it as good or excellent. Further themes were identified through video-analysis and field note analysis.

Conclusion: Sequential Simulation is a novel and practical approach to present current care pathways, aiming to generate a mutual focus, create participant empathy and bring the conventionalities of integrated care to life. We consider this approach helpful in preparing frontline staff to participate in integrated care.
**Background**

Integrated care is joined up care around the needs of a patient – ‘person-centered coordinated care’. [1] In order to achieve integrated care, front-line staff are required to work more collaboratively, including with patients, and across organizational boundaries. [2] The World Health Organisation define integrated care as managing and organising health services to ensure patients get the care they need. [3] In order to ensure a smooth transition into this form of collaborative working, education of integrated care is essential. [4] However, there is surprisingly little published about this. [5] This paper introduces, in the form of a workshop case study, an approach to achieving this for pharmacists. However, the concept could be used for any professional group or patients, as previously conducted by the authors for General Practice receptionists, and young asthmatic patients and the associated multidisciplinary teams. [6, 7]

Pharmacists are highly trained professionals and are the third largest healthcare profession in the National Health Service. They possess many skills, aside from simple dispensing. Despite this, in the increased national focus on more integrated care, pharmacists seem to remain on the periphery. Community pharmacists in particular are ideally placed at the heart of the community to facilitate a more patient centered integrated approach to care. Our workshop (See Box 1) aimed to educate pharmacists about integrated care, discuss and co-design aspects of the patient’s pathway that pharmacists can improve, and thus help pharmacists to feel valued members of the integrated care service.
Simulation is usually characterised in terms of single clinical encounters, whereas clinical care is a continuum. [8] The concept of Sequential Simulation (SqS) aims to rebuild this longitudinal characteristic of care by depicting scenarios from real patient experiences. Its focus is on the representation of key aspects of the experience, aiding reflection on the roles which teams and individuals undertake and discussions on how current practice can be changed or improved.

Distributed Simulation (DS) has been developed at the Imperial College Centre for Engagement and Simulation Science (ICCESS) [9]. Distributed Simulation (DS) is a realistic, yet portable and affordable, simulated environment that can be set up in a variety of non-clinical areas. [9] The fundamental basis is to recreate the major characteristics that make up a clinical setting, rather than mirroring every facet. This therefore decreases cost and increases movability, whilst maintaining the clinical legitimacy (Figure 1). [10] This approach is important as it enables simulation to be more accessible; it can be undertaken anywhere and not just in simulation Centre’s or hospitals.

**Figure 1:** Sequential Simulation using Distributed Simulation.
An example of Sequential Simulation (SqS) portrayed through Distributed Simulation (DS) – depicting scenes of the patients home, the GP reception and the pharmacy.
Box 1. Workshop Design

A Sequential Simulation (SqS) of short scenarios from a patient's healthcare experience in the community was simulated, starting in their home and transitioning between the General Practitioners practice and the community pharmacy. The scenarios were developed by taking examples of real patients' stories (Patients and Users Group of the NW London Integrated Care Programme) and creating the context in the format of a storyboard with final input from both patients and pharmacists. Members of the group participated in each event, ensuring that the solutions devised were acceptable to them as patients.

The scenario developed was that of an elderly frail woman who had recently been discharged from A&E following a fall. Laura (the elderly frail patient) hadn't been feeling well since her discharge, however only a locum was available to see her at her GP surgery. She visits her local pharmacist after her GP appointment. The pharmacist had concerns in regards to the new medications she had been prescribed by both the hospital and the locum GP. The pharmacist couldn't get through to the GP surgery and asks Laura to return the next day. Laura was confused, anxious, tired and in pain. After returning home Laura is feeling alone and unsupported and phones for an ambulance.

A standardized patient (professional actor) was used to play the role of the patient. Real professionals including a pharmacist from the audience were used for the other roles. All professionals were briefed on the conditions in which they were working in the scenario, e.g. no direct access to General Practitioners. A narrator set the scene and summarized the outcome for the patient. The scenarios were designed to show the consequences of fragmented care based on the authentic experience of patients. The Sequential Simulation (SqS) was designed to highlight that clinicians often work in silos, focusing on individual interactions with their patients, without appreciating the impact of their actions throughout the patient's journey.

Following the Sequential Simulation (SqS), participants in groups of 6-8 took part in facilitated table discussions. Each table included participant pharmacists (community and hospital), patients and clinicians (nurses, GP's & a geriatrician). The potential ways an adverse series of events could have been handled differently or avoided altogether to improve the patient's pathway were examined. The suggestions were then incorporated into a repeat Sequential Simulation (SqS) that was played out after a short break.

Study Participants and Setting

The workshop was sponsored by London Pharmacy Education and Training National Health Service, and was held in their education suite. Participants were recruited from across North West London. 20/37 (40%) of attendees were pharmacists, 15 from hospitals and 5 from community pharmacies. The others consisted of doctors, nurses, managers, and patients. This mix of participants enabled the focus to be on pharmacists, but with enough members from other professions and patients to ensure multiple perspectives and rich discussion.

Data collection

Data were collected through questionnaires, field notes taken by the working group during the event, and video-recordings of the events.
Participants were asked about their pre and post-event knowledge of integrated care and the value of Sequential Simulation (SqS) in the questionnaires. Descriptive statistics were used to analyse the questionnaire data. This identified any base-line knowledge and any reported learning or understanding that may have taken place due to the Sequential Simulation (SqS) workshop, as well as an understanding of the value of the events to the participants.

Observational (video-recordings), open-ended questions and field notes were collected to explore benefits and understanding gained during the Sequential Simulation (SqS) workshop. Open-ended questions in the questionnaires were also compared to the observed discussions, therefore triangulating the varied data obtained. Thematic analysis of the video data and open-ended questions was conducted by two evaluators.

Results

21 of the 37 of attendees (response rate of 56.7%) at the event completed the questionnaires. Non-respondents were mainly those who were unable to attend the entire day due to work commitments. All attendees contributed to the facilitated and video-recorded discussions.

As shown in Figure 2, all participants agreed that the day as an experience was either good 14/21 or excellent 5/21. 11/21 of participants felt that the simulation had added excellent value to the day, 8/21 said it added good value and 2/21 said average and none poor. The simulation as a discussion was rated highly 16/21 - excellent, (4/21 - good), as was the repeat simulation (15/21 - excellent, 6/21 - good).
19/21 said their knowledge of integrated care had improved due to the event, and 20/21 said they had gained confidence in improving patient care.

**Figure 2. Questionnaire responses.**

Bar chart of workshop questionnaire responses.

The themes identified through thematic analysis of the video data and open ended questions are as follows:

**Sequential Simulation (SqS)**

The simulations were identified as most favorable. For example, one respondent stated that the simulations ‘Really encouraged debate around poor practice and how to improve’, and another stated ‘Simulation illustrated very clearly and importance of a whole systems, co-ordinating approach. As well as ‘Simulation exercise - great for capturing patient experiences’.

**Networking**

The opportunity to network with other pharmacists and healthcare workers was also commented on several times as being the most enjoyed part of the
event. One respondent stated ‘Variety of backgrounds and professionals of speakers’ and ‘Different views from various multidisciplinary Groups and ‘Learning from other professionals on developing into integrated care roles especially those on margins.’ This reveals the multidisciplinary nature of the SqS workshop and its perceived importance in integrating care.

**Role extension**

Many people commented on how enjoyable and useful the discussion following the simulation was, finding the repeat simulation after incorporation of the suggested changes also excellent ‘repeat simulation, very good’. One respondent wanted ‘removal of the information vacuum’ that pharmacists find themselves trying to work in’. This theme was reiterated by several participants. Pharmacists identified that, in order for integrated care to be successful, the following needed to be considered ‘Integration of IT systems to allow pharmacists to more effectively extend their roles would be essential to integrate care’, as well as the extension of their roles including closer working with GPs to optimize medications through regular medication reviews with patients with complex long term health conditions.

**Improvements**

Respondents felt that changes could be made as follows; ‘Include more community pharmacist’; ‘More involvement of other disciplines’ as well as ‘Perhaps structure tables to have localities together to facilitate more networking’. One patient/carer felt that ‘For patients, there needs to be a 'glossary of terms' i.e. list of acronyms like 'MD6' etc. spell them out'.
Discussion

The workshop seemed to be well received, with Sequential Simulation providing a central point for discussion, as well as an opportunity to co-design an approach that would hopefully change the patients’ outcomes. Participants regarded the Sequential Simulation (SqS) approach as an effective method for portraying the need for integrated care. They recognized its importance in aiding the ‘bigger picture’ for discussion. The workshop appears to have helped the pharmacists to see the importance of their role within the wider context of healthcare system, and how crucial they are for integrated care to work. Networking also proved a key component of the workshop.

We believe that simulating a patient journey based on real patient experiences provides an authentic focus to discussions. It encourages reflection, analysis and co-design. Elements of the care pathway can be redesigned based on the expertise in the room. By using an actor to play the role of the patient, professionals tend to respond with empathy to a clinical setting, while still feeling they are in a safe and educational environment. This approach seems to foster contributory, critical and compassionate forms of engagement, where attendees are not just indifferent, but are dynamic, active and empathetic. Through this process they seem more willing to reconsider and challenge their assumptions, as well as responding to the issues generated and what is being presented.

Conclusion

Sequential Simulation (SqS) is a novel and practical approach to present current care pathways, aiming to generate a shared focus, engage the
participants both intellectually and affectively, and bring the conventions of integrated care to life; therefore providing an educational integrated care intervention. The discussions are a chance to recognise events from multiple perspectives, share feelings and ideas, and practice co-producing service reforms with patients and frontline staff. We consider this approach a useful way of helping prepare frontline staff to engage in integrated care.

**Limitations**

Due to the nature of the workshop the study used convenience sampling. Follow up of participants would have provided further evidence of how the workshop had shaped and changed individual and collective practices and the authors suggest that further studies aim to include this in the analysis.

**Ethics statement**

Ethical approval was obtained from the Imperial College Research Ethics Committee (ICREC - Reference ICREC_11_5_8). Informed consent was obtained from all participants.

**Acknowledgements**

This project was funded by North West London Integrated Care Pilot as part of a series of integrated care workshops.

**Disclosure:** The authors declare no conflict of interest.
References