

# Case Study Report of SIMTEGR8 Workshop 4: Rapid Response - Falls

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<b>Purpose of report</b>	To document and reflect upon the process of using a computer simulation model in order to promote debate and make changes to patient pathways
<b>Organisations involved in Case Study</b>	Healthwatch Leicestershire and Leicestershire County Council
<b>Structure/Format of Event</b>	2 ½ hour workshop
<b>Aim of Event</b>	To review the computer simulation of the patient pathway to the Rapid Response – Falls intervention; test scenario's about future improvements to the scheme; make recommendations of future actions to the Step Up Step Down Programme Board
<b>Date of Event</b>	29 <sup>th</sup> September 2015, 13.00 -15.30
<b>Aim of SIMTEGR8</b>	To assess the effectiveness of using a SimLean methodology to stimulate debate and action that will improve patient pathways

## Context of Event

The SIMTEGR8 project is collaboration between Loughborough University, Healthwatch Leicestershire and Leicestershire County Council. The project uses computer modelling and simulation techniques as an analysis tool of the patient journey through four selected healthcare interventions by which Leicestershire County Council hope to reduce emergency hospital admissions, especially for frail and older people. The assessment process uses a set of workshops in which a computer simulation of the patient journey is shown to delegates in order to stimulate discussion and use as an exploration tool to test the effect of different variables in the journey. The primary concern is to develop a healthcare service that ensures a high level of care as well as good efficiency. This report is the outcome of the fourth of those workshops:

**Falls** – support from East Midlands Ambulance Service for people who fall at home or in the community.

This workshop was facilitated by the Loughborough University Research Associate and the simulation consultant from SIMUL8 Corporation who are attached to the project. The participants invited to the workshop were staff of Leicestershire County Council, NHS clinical leads for the service and representative of services linked to Falls in order to provide a wide range of skills, experience and knowledge to inform the debate. The workshop was structured using a SimLean methodology:

First the approximate model is explained and run to illustrate the agreed process (Model Understanding)

This is used as a the basis of a discussion of whether the model represents what happens in reality (Face Validation)

The discussion then moves on to issues that have been revealed by running the model (Problem Scoping)

Finally ways of resolving the issues are suggested (Improvements)

In order to capture their thoughts and actions, cards (Appendix 1) were given to the delegates for them to write down their personal aims and outcomes for the workshop. Similarly, coloured paper was distributed to record the inaccuracies or points of interest that they found with the model. At the close of the session delegates were asked to complete the “aims” cards; to fill in other about the actions that they would take after the workshop and to rank their experience on a Likert scale.

### **Description and account of workshop**

There were 12 people attending the workshop, 2 from Loughborough University, 1 from SIMUL8 Corporation and 8 from the case study organisations. These included representatives from Leicestershire Healthwatch, Leicestershire Social Services, Leicestershire Partnership Trust (LPT) and University of Leicester Hospitals (UHL). No-one from East Midlands Ambulance Service (EMAS) attended. Many of the delegates to this workshop had either attended the morning workshop (7-Day Services) or one of the previous workshops (Night Nursing or OPU).

At the start of the workshop delegates listed the information that they hoped to gain from attending. The hopes are summarised below:

- To be informed
- To clearly understand the evaluation of the service and patient pathway
- To discover ways that health and social care can reduce admission and ensure that preventative services are targeted
- To produce actions that will improve the scheme

The process maps of the pathways “Before” and “After” the intervention that had been drawn up by the LCC systems analyst were then presented to the delegates. These were then overlaid with a simplified and clearer version to ensure that there was an agreed understanding between the modeller and the delegates of the progress of the patient journey through the intervention. This was in order to verify that the simulated model was based on valid data, although approximate, and the reality of the service in action. The process maps were considered to be a correct reflection of patient pathway by the delegates.

However, it was noted that the process map did not show certain details about the periphery of the patient pathway. For example, there were other routes that could be pursued post discharge; they need not lead to the unscheduled care team and referral could be through means other than 999. A flaw in the process map was identified as it did not include any mechanism to define or identify frequent fallers. It was found that some of this information is gathered at Single Point of Access (SPA) but sometimes the GP is contacted directly therefore that piece of information is not recorded.

The computer simulation was then run and considered to be a reasonable depiction of the patient pathway. The modeller asked the delegates whether they considered that the data used for the model was correct and they believed that it was. This could not be verified as a certainty because none of the delegates attending had direct experience of providing the Falls service. The discussion which occurred after the presentation of the model featured the training for EMAS staff, as the Falls service is dependent on the ambulance crew attending a call being able to correctly administer and interpret a diagnostic test. It was stated by one of the delegates that the number of avoided admissions appears to have plateaued despite more staff being trained. The model was then run again in order to test different percentages of fully trained ambulance staff.

## **Improvement**

The discussion about the process map revealed that although the patient journey that we had analysed was not incorrect, it may have been only part of the pathway for the intervention. This could have been due to the use of an outdated process map; an updated version is now available which can be used to improve the current model. Prevention of falls was an important issue to many of the delegates, and they considered that falls prevention should somehow figure in the model because support is being given at an earlier stage. Similarly, at the end of the patient pathway, it was suggested that the journey could end with the social care that the patient may receive, for example the number of individuals that are admitted to care homes.

Delegates returned to the theme of repeat fallers, stating a concern that falls may not be properly recorded. However there is the potential to measure repeat fallers through a new dashboard for quality of data which will soon be installed at SPA. This could be a source of more comprehensive data. As in the workshop for the 7-Day service the delegates were keen to see an integrated simulation model for the four interventions being analysed as part of the SIMTEGR8 project and were interested in the cost benefits of the service.

## **Reflection**

The participants were primarily asked to write down the expectations they had for the workshop in order that the workshop and methodology could be measured against these aims. As stated above, certain of the delegates had attended more than one previous workshop; however it was a new experience for a few people. The issues that they hope to be dealt with in the workshop included:

- Information and a basic understanding of the project
- To find out the current situation in Health and Social Care
- To have a clear understanding of the Falls service
- To gain actions that will improve the Falls service

In this workshop the delegates showed little engagement or an interest in discussing the model. Although they identified what they considered to be gaps in the process map, for example different routes that could be taken if an individual has fallen and requires help, or the type of care that can be offered once the patient has been discharged. It seems that the delegates considered that they were seeing a very small part of the patient pathway for Falls and felt that it could be extended.

However, when the simulation was presented they verified what they saw and did not dispute the data that was used to compile the model. They did not offer their thoughts but did answer direct questions that the modeller asked. The discussion turned to the capture of data, although they could not dispute the accuracy and source of the data that was used, the delegates felt that many more people are falling but the data is not currently being captured. The patient pathway was talked about more frequently than the model and related services were mentioned more times than the Falls service.

When the workshop was drawing to a close the delegates re-read the cards on which they had written their anticipated outcomes for the workshop to assess whether their aims had been met. It was at this point that a delegate who had been quiet throughout the discussion stated that she felt that she could not comment on the service because she was from one of the alternative fall prevention pathways. This was a missed opportunity to compare the benefits and disadvantages of both pathways. However, returning to the delegates' initial aims in order to ensure that the workshop had met those aims had a positive outcome. For

example one delegate found a way to complete an action from a previous meeting. The delegates' reflections on what they had learnt are summarised below:

- More informed about the patient pathways
- Discovering more issues about the project
- Actions to take away

Delegates were then asked to state what actions that they intended to take to improve the service and to write down these actions on postcards. The resulting list and an example of the card used can be seen in Appendix 2 and 3. The postcards will be sent to the delegates at a point in the future to remind them of their intended actions. It is expected that they will then send the card back to the researcher with the actions that they have managed to achieve. The actions covered the issues of:

- Data quality
- Fall prevention
- Improvement of process map
- Putting actions into reality
- Collaborative working

It was found that:

- Delegates did not easily engage with the simulation or the discussion

- Key individuals did not attend who could have given a more informed view of the service

- The delegates did not engage with or discuss the computer simulation as much as they had done in the previous workshops

- The scope of the service may not have been properly reflected in the process model or the simulation.

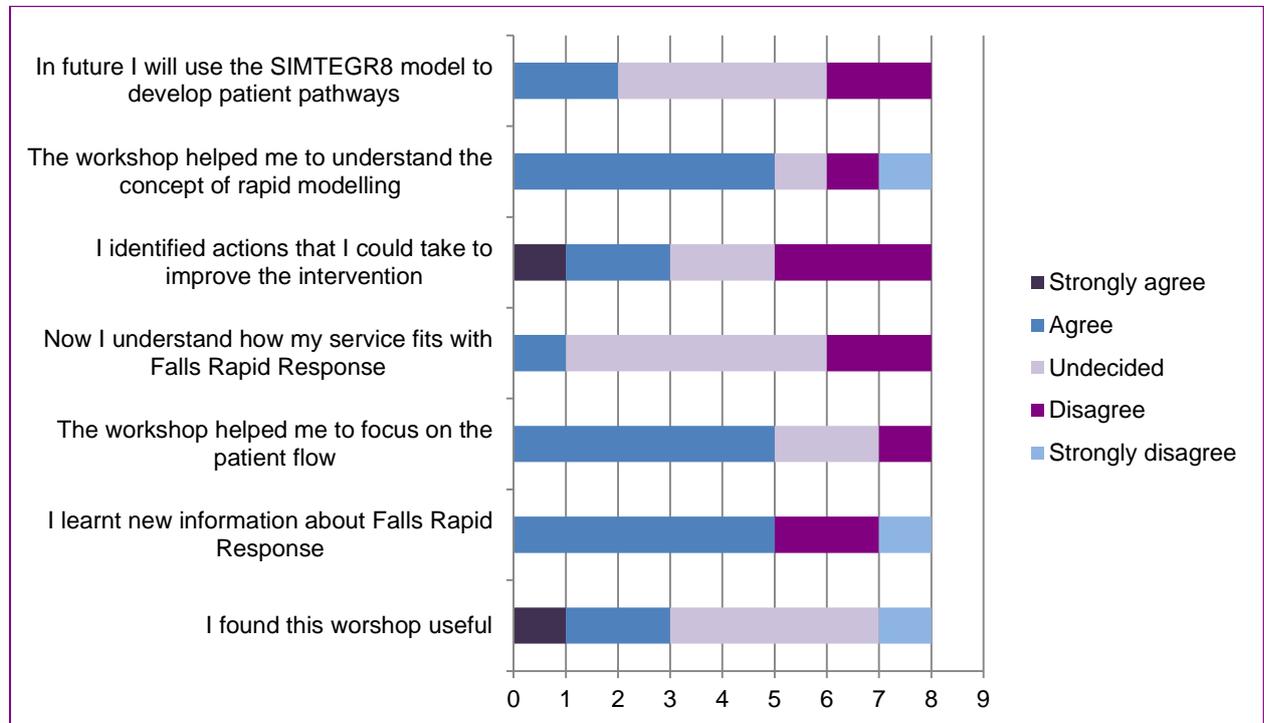
The patient pathway and issues relevant to the pathway was discussed but this was centred more on the inaccurate process map rather than the computer simulation, which seemed incidental to the workshop. However, the delegates were not sceptical enough about the simulation to ask provocative questions or to try out a number of various scenarios. It appeared that some of the delegates did not feel an involvement with the workshop because they considered that they had little to contribute. As for the 7-Day services, the delegates wanted to see the full context of the small part of the service we were analysing. Learning points to consider are:

- Ask delegates whether we have presented and explained the simulation adequately
- Each step of the process could be questioned, not only confirming that this is what happens, but is this the right way? Is there a better way?
- Ask the delegates who are quiet what is their involvement or attachment to the service
- Ensure that the visual impact of the model draws their attention
- Have a back-up plan of discussion topics should there be no dispute over the accuracy of the model

The Likert scale (Figure 29) that the delegates completed at the close of the workshop showed that many of them were undecided about the relevance of the workshop to their own posts, although 5 out of 8 delegates found that it helped them to understand the concept of rapid modelling and 2 thought that they would use the SIMTEGR8 model as a development tool. As the level of disengagement at the workshop was high, 3 delegates could not identify

actions and only 1 delegate understood how their service fitted with Falls, the question should be asked whether the right delegates had been invited. In this case, using a computer model of a patient pathway as a vehicle of change and development was not successful. However, the patient pathway was examined and actions to improve the service were gathered.

**Figure 1: Delegate's Opinion of Workshop**



**Next steps**

Use the data that has since been provided to improve the process model and simulation

Ensure that the workshop attendees include key individuals who have in depth knowledge of the intervention being analysed

Consider refining the methodology of the workshop sessions to be appropriate for patients and to focus discussion on the specified patient pathway

Follow up the delegates to discover

- Their general opinion of the workshops
- Whether they have completed their actions

## Appendix 1

### ***Sample of card given to delegates to record personal aims***

This is what I hope to gain from this workshop	This is what I did gain from this workshop
I consent to a follow up phone call: Phone no	

## Appendix 2

### ***Actions noted by participants***

- Look at quality checking data
- My interest is in fixing patients at the front door to [al??]
- Also working nursing at residential homes to share the falls and [newton] programme and teach others to deliver in terms of balance training and environmental assessment. Happy to discuss further if there is opportunity
- Run the patient workshops to help improve the process map
- Understand better the SPA service and links to the falls pathway
- Work with the partners as part of the project
- Work with my colleagues on the patient user workshops. What promotion is needed internally?
- Understand the data from all sources
- Provide timely intelligence to inform further development and commissioning
- Feed actions back to the project manager and into BCF wider action plan
- Brief the falls project manager and develop a new action plan
- Consider how csc may be able to consider preventing falls, e.g. mini FRAT

### **Appendix3**

#### ***Sample of card given to delegates to record actions***

I will take this action to improve 7 day services

This is what I have achieved to improve 7 day services