Case Study Report of SIMTEGR8 Workshop 3: 7-Day Services in Primary Care

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Purpose of report	To document and reflect upon the process of using a computer simulation model in order to promote debate and make changes to patient pathways
Organisations involved in Case Study	Healthwatch Leicestershire and Leicestershire County Council
Structure/Format of Event	2 ½ hour workshop
Aim of Event	To review the computer simulation of the patient pathway to the 7-day services intervention; test scenario's about future improvements to the scheme; make recommendations of future actions to the Step Up Step Down Programme Board
Date of Event	29th September 2015, 9.30 -12.00
Aim of SIMTEGR8	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 in order to assess ways that the patient journey can be improved for four selected healthcare interventions which Leicestershire County Council anticipate will reduce emergency admissions to hospital. A crucial part of the assessment process is a set of workshops which look in detail at the patient journey and use a computer simulation to stimulate discussion about the best way to ensure that the patient is treated not only with good care but also with the utmost efficiency. This report is the outcome of the third of those workshops:

Seven-day services in primary care - pilot schemes in both Clinical Commissioning Groups to test how their localities can offer services and support on a seven day basis to patients with complex needs.

This workshop was facilitated by the simulation consultant from SIMUL8 Corporation and the Loughborough University Research Associate attached to the project. The workshop participants were staff of Leicestershire County Council, NHS clinical leads for the service and representative of services linked to 7-Day Services. 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) and paper were given to the delegates for them to write down their personal aims and outcomes for the workshop, and to record the inaccuracies or points of interest that they found with the model. At the close of the session delegates were asked to fill in cards about the actions that they would take after being at this meeting and to rank their experience on a Likert scale.

Description and account of workshop

There were 13 people attending the workshop, 3 from Loughborough University, 1 from SIMUL8 Corporation and 9 from the case study organisations. These included representatives from both East and West Leicestershire Clinical Commissioning Groups (CCGs) which had taken slightly different approaches to the 7-Day Services intervention. Representatives from East Midlands Ambulance Service (EMAS), Leicestershire Social Services, Leicestershire Partnership Trust (LPT) and University of Leicester Hospitals (UHL) had also been invited in order to provide a wide range of skills, experience and knowledge to draw upon. No-one from EMAS or UHL attended.

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

- To discover what has been done so far

- To find ways of collaborative working

- To gain a better understanding of the model, data and the reality of the pathway

- To discover feasible methods of operating a 7-day service within budget and with current resources

- Better insight into the effectiveness of commissioned services and how SIMUL8 can help

- To understand the contribution and integration of Health and Social Care and Community Therapy service to 7-days service

- To find what clear actions can be taken to improve and evaluate the service

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. This was in order to verify that the simulated model was based on valid data and the reality of the service in action. The process map used and therefore the simulation shown at the workshop was built using data from East Leicestershire Clinical Commissioning Group (CCG) because data from West Leicestershire had not been available to the modeller at the time. East Leicestershire had chosen to pilot the 7-day services scheme for 7 months only and was currently assessing their findings. However, the West Leicestershire CCG has decided to continue their pilot of 7-Day Services using a slightly different strategy. This provides an interesting comparison between the two parts of the county.

The process maps were 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 through the intervention. A delegate asked whether the percentage of the population which was taken for the simulation was based on the 2% of individuals most at risk of admission or the population as a whole. The modeller informed the workshop that it was based on the 2% of individuals most at risk; as captured by the Step Up Step Down

Dashboard. The delegates asked questions about the operational hours of the service, the referral points (such as self-referral) and the condition of the patient. These questions were amply answered by the project lead of East Leicestershire 7-day service, who then provided a comprehensive description of the service.

The "Before" pathway was considered to be generally right, however, the "After" pathway was thought to be not so accurate. The 7-day service project lead from East Leicestershire emphasised that much of the service was built around unquantifiable soft systems, which the modeller agreed was not possible to express in the simulation. The workshop passed to the second stage when the simulation was run. The participants were interested in the source of the data used for the model - it had been gathered from the GP practices that had participated in the East Leicestershire 7-day service. The discussions surrounding the presentation of the model revolved around the exact definition of an avoided admission, comparison with real admission data, metrics collected through SPA and trying to piece together the bigger picture. For example, the model does not show the effect of patient care plans: a patient may have a direct route to a consultant.

Improvement

The delegates were judging the process map and the short patient pathway against the entirety of the health and social care services available in Leicestershire. Their concern may be justified by the overlap of each of the interventions being analysed Integrated Response: Night Nursing, Older People's Unit and Rapid Response Service: Falls). For example, East Midlands Ambulance Service has an involvement with each intervention. The suggestion of an integrated model that combines the 4 interventions was greeted with enthusiasm by the delegates.

Another topic of discussion was the differences in approach between East and West Leicestershire. The representative of West Leicestershire CCG explained the difference of approach. West Leicestershire has chosen to continue the service at a certain level focusing on a breadth of patient care with other health practitioners as well as GPs being involved and the best way to join services together. East Leicestershire decided to focus on depth of knowledge for their response team, that is, GPs only, and the cost effectiveness of that service.

As the simulated model was considered to be broadly right for the East Leicestershire system the workshop turned to discussing ways of capturing metrics and the patient experience. Suggestions included:

- Would you recommend us to a friend?
- How often do patients not manage to access the service?
- Monitoring of missed calls
- Questionnaires of user experience

At the close of the workshop, delegates were asked to read their initial comments on their personal hopes for the workshop and then reflect on what they had learnt. A summary of their answers can be seen below.

- An understanding of the value of simulation modelling
- The need to look at bigger pictures regarding health and social care and how Social Care can support admission avoidance on a greater level
- An awareness, appreciation and understanding of both East and West 7-Days Service Pilots

- Lots of actions to take away
- Hopefully influenced that only "together" we can make a difference
- Therapy needs to be involved in the 7-day working schemes/services

Delegates were then asked to state what actions 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.

Reflection

The participants arrived at the workshop with preconceived ideas of what they could gain from attending. Certain of the delegates had already attended one or more of the previous workshops, for the Integrated Response: Night Nursing, or the Older Person's Unit. On the other hand, there were other delegates who knew very little about the interventions being analysed and who wanted to find out more information. Areas of concern were:

- Gaining knowledge of the intervention
- Co-operative working
- The use of computer simulation
- Cost effectiveness of intervention
- Service improvement

There was a certain amount of engagement with the simulated model, but it was not as sustained or intensive as for the Night Nursing or Older People's Unit. The delegates were quiet and attentive as the process map was being presented; however, some of them looked puzzled. In contrast, all the delegates paid their full attention to the East Leicestershire 7-day service project leader as he gave details about the reality of the operation of the service. Discussion was good but it was mainly focused on the patient pathway and the East Leicestershire 7-Day Service. There was interest shown in the difference of approaches taken by each of the Leicestershire CCGs and that generated some interesting discussion. It was noted that, as in the previous workshops, one or two delegates remained quiet and contributed little to the conversation.

The simulated model was discussed less frequently, but still featured as an important topic. The wider context of the intervention, for example alternative routes or what happens to the patient before or after the intervention, was clearly important to the delegates because it was difficult to steer them away from talking about such details. The simulation was re-run twice to investigate the effect of changing some of the variables, but this did not provoke a great deal of discussion. However, the project lead showed interest in the diagnostic power of simulation as a tool.

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. They appeared satisfied that this was the case. For example those who wanted to know more about the simulated model considered that it "had some gaps but overall captures process"; "I understand how modelling can test assumptions" and "to look at the simulation for planning future modelling". Similarly, the delegates who arrived wanting to know more about the interventions stated that they now had "An awareness of the differing flows of East and West CCGs", "An initial awareness of the GP hub service East" and even

"Found out about the project as I didn't know anything about it!" The delegates who hoped to find ways of working collaboratively to achieve the optimum patient experience along the pathway thought: that they had discovered "the need to look at bigger pictures regarding Health and Social Care and how Social Care can support admission avoidance on a greater level", that "Therapy hopefully need[s] to be involved, 7-day working schemes/services" and that they had "Hopefully influenced that only 'together' we can make a difference". The only issue that could not be solved at the workshop was cost effectiveness, as that is not part of the aims of the SIMTEGR8 project.
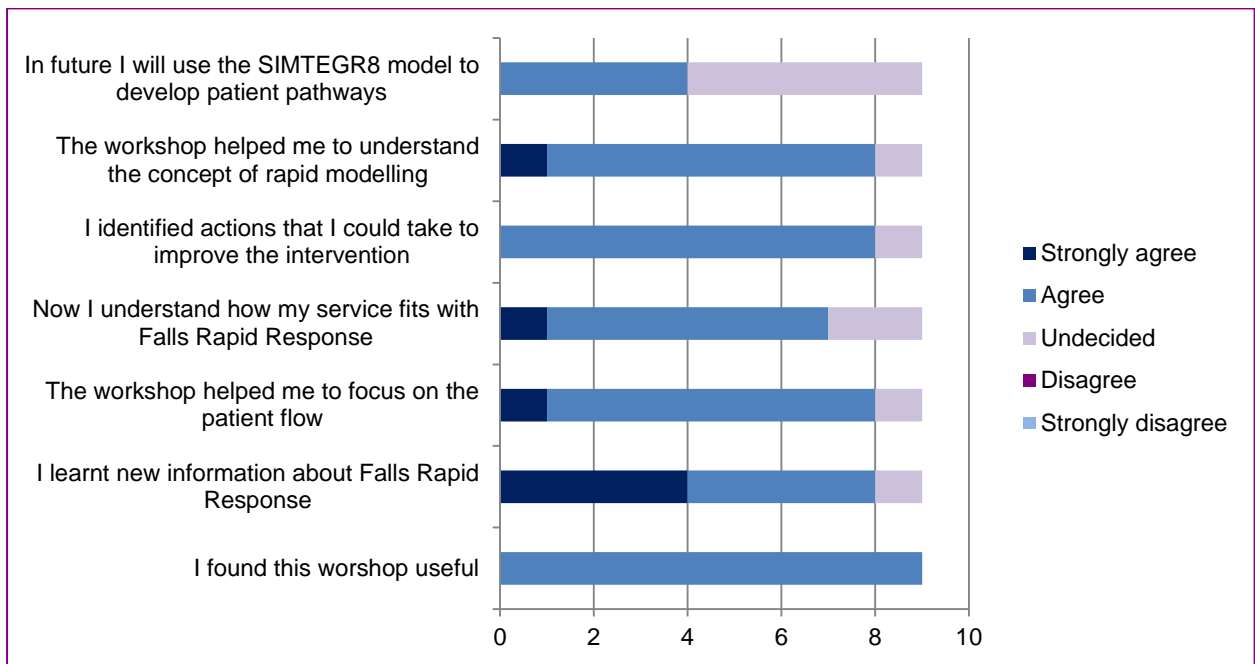
It was found that:

- Delegates were more engaged with discussion when a project lead is there to talk about the reality of the situation
- Key individuals did not attend or were not invited, e.g. General Practitioners, EMAS
- The delegates did not engage with or discuss the computer simulation as much as they had done in the previous workshops
- The four phases of the workshop discussions blended together which produced a flow of ideas rather than an examination of separate concepts

The use of a computer simulation of a patient pathway in this case did lead to discussion about the pathway itself. However, the delegates were not sceptical enough about the simulation to ask provocative questions or to try out a number of various scenarios. They interpreted the concept of filling in the gaps in the pathway as the peripheral routes to and from this particular pathway. They concentrated on "The bigger picture" rather than defining and refining the patient journey as it currently stands. In order to stimulate discussion on ways to develop the simulation and service we should consider the following points:

- Tell the delegates that together we are conducting a system analysis with the simulation as a tool
- Ask delegates whether we have presented and explained the simulation adequately
- Emphasise the "what if?" scenario
- 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?
- Ensure that the visual impact of the model draws their attention

Judging by the positive remarks that the participants made at the end of the workshop and the result of the Likert scale (Figure 29) they found the experience useful and informative and an opportunity to meet others. Four out of the nine people who completed the scale were interested in using the SIMTEGR8 model as a decision making tool and only one person was not certain that they understood the concept of rapid modelling. Therefore it can be concluded that in this case, using a computer model of a patient pathway as a vehicle of change and development has been successful.

Figure 1: Delegate's Opinion of Workshop

Next steps

Use the data that has now 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

- o Their general opinion of the workshops
- o 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

- Definition of 7-day services
- Map 4 models together
- Include a method of capturing patient experience in the new 7-day working
- Discussion around where therapy can contribute to this as at present therapy is a Monday to Friday service
- Expansion of therapy services –integrated working –crisis response
- Ensure that 7-day model is an accurate reflection of all available services to prevent hospital admission
- Discuss in CCG the new model for 7-day working and find out which GP services are involved
- Need to look at how therapy services extend across a 7-day week –impact on health outcomes and admissions to hospital
- [link] west re care plan models for high npk(?) groups
- Link East re MOT(?) pilots and therapy/ nurse involvement
- Find out about set of standards
- Look at five year plan for unscheduled urgent to prevent care
- Look at 7-day community therapy service
- Computer simulation of the model and how [ows] can be used to inform future planning
- Links to wider community services about opps support
- Understand gaps
- Review phone process. Does this need to be more robust?
- Promote SC care sources – 7-day response
- AIM Support best pathways/ actions for patients

Appendix 3

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