

*Developing people  
for health and  
healthcare*

**Report on the application  
of the SimPad® system in  
skills and simulation  
facilities in Health  
Education Yorkshire and  
the Humber**



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## Report on the application of the SimPad system in skills and simulation facilities in Health Education Yorkshire and the Humber

This report summarizes the results of the survey carried out to review the use of the SimPad system. The primary outcome of the online survey was to provide an impact evaluation of the SimPad's usability and its users, information on its diverse and/or innovative use and how it could potentially contribute in the future to value-added educational outcomes and consequently improved patient safety. The data would also inform Health Education Yorkshire and the Humber on the fulfilment of the conditions of the original funding agreement, return-on-investment and provide valuable insight to future equipment funding.

### Introduction to the SimPad system

Laerdal Medical UK launched its SimPad system in 2012. This innovative piece of technology was to facilitate a whole new hand-held wireless simulation experience and was principally intended to revitalise Laerdal's low to medium fidelity manikins and specific part-task trainers and take them to a whole new level (Fig.1) It enabled a '*pick up and play*' experience and was their first dedicated wireless steering control. It consists of an intuitive, interactive handheld 5.7" colour touchscreen enabling simulations to be run wirelessly, easily and effectively with the added functionality of a wireless patient monitor. It can be operated in automatic mode using existing predesigned scenarios, or in manual mode; both modes facilitating a range of educational experiences including those using a simulated patient.



The SimPad was marketed as not being *technologically* daunting, if you owned a smartphone, the suggestion was that you could use the SimPad straight out of the box – Laerdal’s anticipation was to create that ‘*great user experience*’ for considerably more of their users.



Fig.2 Workshop 1: SimPad in Pre-hospital

**Context - in the Yorkshire and Humber region**

Over the last couple of years, most organisations across HEYH have received either funded Laerdal SimPad systems +/- the monitor or have purchased them independently.

Early in 2013, a regionally supported two-day open event gave delegates an opportunity to observe and learn through a selection of interactive workshops (Fig.2) The main objective was to help facilitate the integration of their medium fidelity manikins, part task trainers and simulated patients (SPs) with the new technology of the SimPad system. Just over 60 people attended over the two days.

Those organisations submitting bid proposals for specific SimPad funding in early 2013 were asked to outline how they anticipated the system would be used, to explain why the equipment was needed and how and who they thought would benefit from it - their responses are gathered within the word cloud below (Fig3.) greater prominence is given to those words that were used more frequently.



Fig.3

In late 2013 and early 2014, representatives from Laerdal's education team and one of the regional clinical skills advisors facilitated five *free-to-attend* workshops across the region to support users to get started and better understand the full functionality of the system including some basic trouble-shooting and awareness-raising of available software downloads. Over 65 educators, technicians and clinicians attended these sessions.

At the time of writing this report, the HEYH Quality Management System (QMS) online has 39 SimPads listed in organisations across the region, this figure only accounts for those organisations that have gone through profiling and audit. However, another 15 SimPad systems are registered with the supplier but as yet unrecorded on the HEYH QMS.

### **Methodology**

At the beginning of January 2015 a Bristol online survey request was sent out to nearly all of the Acute and Mental Health Trusts and Universities in HEYH, in addition current Leadership fellows, working on relevant Simulation projects in different organisations were included. This amounted to 25 different organisations and 150 people working in a variety of roles: technician, educator/facilitator plus regular faculty members.

The questionnaire was estimated to take no longer than 10 minutes and was originally open for completion over a period of 6 weeks. Representatives from Laerdal Medical UK were consulted and both reviewed and tested content prior to the launch.

### **Limitations**

The survey was entirely voluntary and relied solely on user invitation and participation. Uptake was minimal in the first month, so the survey deadline for completion was extended and a reminder was sent to all original recipients. Those in receipt of both email requests were also asked if they knew of others using the SimPad system in their organisations to forward the survey link to them e.g. Resuscitation departments,

### **Findings**

There were 34 respondents in total, unfortunately 9 were incomplete and so only 25 surveys were valid for analysis.

Multiple respondents from 12 of the Acute Trusts completed the survey plus 1 Mental Health Trust, Yorkshire Ambulance Service and three responses from the region's universities. 64% (16) of respondents described their role/title as Practitioners, Educators, Resus Officers with the remaining 36% (9) as Technicians. 34 individuals were also identified as additional users, plus whole teams i.e. Resus

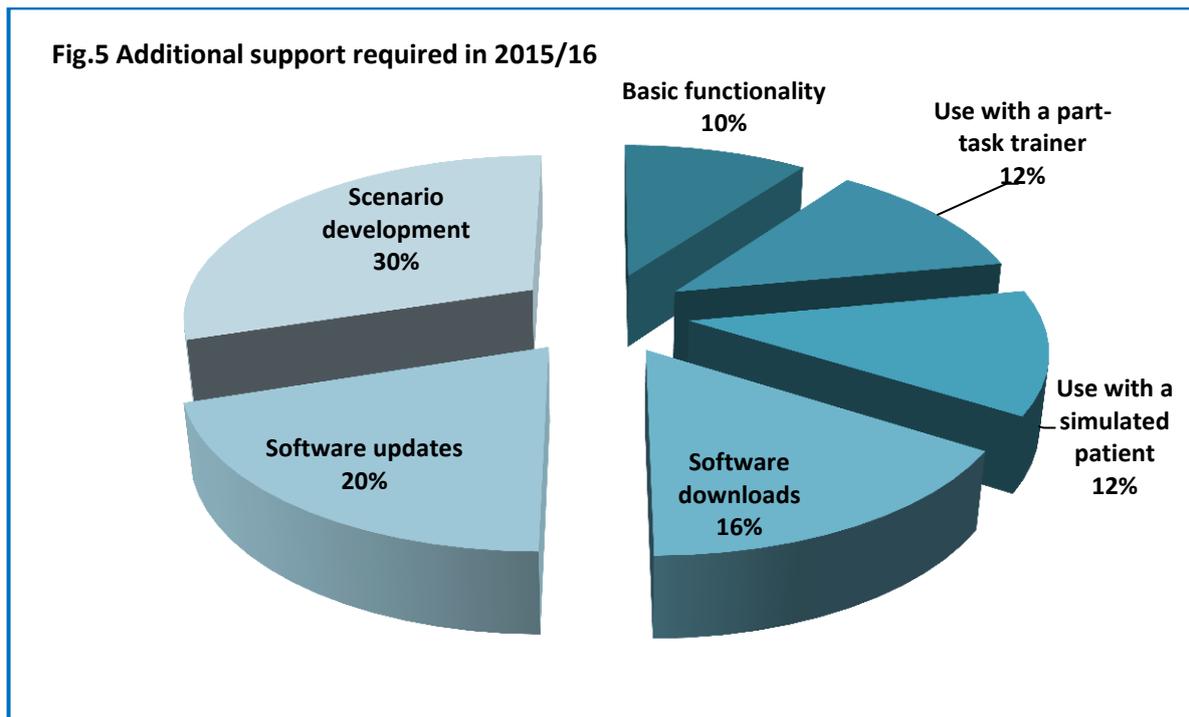
All of the responding organisations and departments (17) had either purchased or received one of the funded SimPad systems; however 6 out of the 17 had not invested in the compatible patient monitor.



Only three out of the 17 organisations had taken out the SimPad Protection Plan with rationale for the decision split between a lack of awareness, and/or cost implication.

Question 12 asked about accessing any of the products and software downloads and/or updates – just under half responded positively, the majority accessing device software updates i.e. SimDesign and SimSuite.

Finally, Fig.5 below identifies the expectation of organisations of the support and education they feel they need in the future to fully benefit from the SimPad system, its functionalities, software and use with other equipment and simulated patients.



### Discussion

The responses from the survey suggest that the majority of participants are still in the very early stages of using the SimPad system and understanding the full extent of its functionality. Its unique selling point of *'pick up and play'* could be for the majority, more of a *'pick up, work it out and play'*. This could also explain the low number of responses to the survey; anecdotal evidence suggests that some educators/facilitators, even though they took delivery of their SimPad systems, monitors etc over a year ago, are still daunted by the technology - perhaps it was just too early for them to evaluate its usefulness!

*'only just learning to explore its possibilities'*

As shown in Fig.3 on page 3, the scenarios most used with the SimPad are Resuscitation Council (UK) set scenarios for ALS, ILS and PILS, this could indicate that Resuscitation departments are the super-users – although in the survey, Resus officers, ALS Instructors and even reference to *whole* Resus departments only made up a smaller proportion of the respondents. It is more likely to be attributed to the SimPad's compatibility with life support manikins i.e. the ALS Simulator, Megacode Kelly and SimJunior and latterly the Resusci Anne Simulator with QCPR feedback using the SimPad.

We know that using the SimPad system provides a one-stop solution to the psychological fidelity limitations of using a simulated patient. However, only 60% are using the technology for this purpose. One of the practical reasons for this could well be the fact that not all organisations have the patient monitor which really does add to the realism of an SP scenario. It could also reflect the lack of understanding of the product prior to purchasing; many people thought the SimPad system actually included the patient monitor!

The bid proposals in 2013 asked organisations to outline how and who they thought would benefit from the SimPad, in Fig.2 the top five most frequent answers were *COMMUNITY, ASSESSMENT, IN-SITU, DELIVERY and ENABLE*. The survey results indicate that perhaps expectation was too high. Two years on, although it has definitely enabled and enhanced delivery for educators and technicians, it is still very much in the process of benefiting from its use for assessment or in-situ, and disappointingly - use in the community is still a vision!

There is evidence of both every-day and innovative use - yet 10% of respondents feel they still need support for basic functionality and 30% for scenario development. Easy access to Laerdal's software is vital, feedback suggests that some of it is not particularly user-friendly and that needs to be addressed if users are to work towards being more self-sufficient and capable of creating their own scenarios and uploading procedural skills or previous paper-based checklists. Awareness of support through other routes should be better promoted, the Simulation User Network SUN supports free access to a Discussion forum about technical and practical SimPad topics.

The overall results seem to confirm that whereas some organisations and their educators have embraced the SimPad and all that it offers, for the majority they are still struggling with the technology, despite the initial event, the subsequent workshops and continued assistance – most users are unaware of its full potential as a valuable training resource and still need substantial on-going support. This survey suggests that it would be beneficial to both the manufacturer and the customer if an evaluation of the learning and preparation/instruction for use is completed prior to and/or following purchase.

## Recommendations

- ❖ The results from the survey should be shared across HEYH to facilitate ideas on future uses for the SimPad system and more collaborative working
- ❖ Utilise the HEYH Skills and Simulation Conference in July 2015 to reach a wider audience with an opportunity to provide on-the-spot trouble-shooting, gain more feedback on use and the support still required.
- ❖ Suggest incorporation of a basic SimPad training session into faculty development courses delivered across HEYH
- ❖ Gather regional and nationally created SimPad resources for a one-stop shop online (hosting TBC) including relevant HEYH Apprentice Technician videos
- ❖ Raise awareness of and encourage SimPad users to access various online blogs and communities for questions and additional support e.g. Simulation User Network <http://simulation.laerdal.com/forum/forums/130/ShowForum.aspx>
- ❖ Repeat survey in January 2016 to determine if the actions taken in response to the previous survey results were effective and include questions specific to return-on-investment

## Conclusion

Whereas the results from the Bristol Online Survey have somewhat met the primary outcome of providing an impact evaluation of the SimPad's usability and its users and information on its diverse and/or innovative use, it has *not* provided proof of the fulfilment of the conditions of the original funding agreement or return-on-investment. The repeat survey planned for 2016 needs to reflect this pre-requisite in its design and relevant questions.