

Megacode Kid: A Review

Ann Baker, Resuscitation Service Manager, Countess of Chester Hospital, Chester
email: Ann.Baker@coch.nhs.uk

We were asked to evaluate Megacode Kid by Laerdal Medical. The manikin has been in the department since September 2003 and we have taken it to a number of different courses that we teach on, to widen the user group.

The Megacode Kid is a full body manikin approximately 6 years of age. The airway is able to be intubated, shocks up to 300 joules can be delivered through the chest zap studs. ECG leads can be attached to the ECG snap on chest studs.

The arm can be primed with fluid for cannulation and IV access and the right leg can be used for I/O access. We did not set up the system to drain the fluid out or use the arm for venepuncture / cannulation.

Once the Vital Sim unit is connected the handset can be used to set up breath, heart and bowel sounds. A Pulse can be generated by squeezing the red bulb attached to the manikin.

Initial Impressions

It is an impressive piece of kit, the Vital Sim is very easy to connect and it was great fun using the handset to change all the different breath sounds. The vocal category is the most disconcerting as the manikin will vomit, cough, cry, breath fast and say yes or no at the touch of a button. Heart and bowel sounds were there but not used. The breath sounds and volume can be set for each lung, on auscultation the sounds are realistic.

Using it in Practice

We have used the manikin on a number of external courses GIC, APLS, PLS and in the department for SHO education and Nurse Practitioner update. It is portable enough to use in Scenario Training in the clinical environment.

Connecting the Vital Sim to the manikin is easy and setting the initial rhythm and sounds on the handset is self-explanatory. There are constraints whilst using the handset and leading the scenario teaching. Moving between the categories e.g. change rhythm, decrease respiratory rate and change the breath sounds means you have to stop interacting with your student and look at the handset to make changes.

The conclusion was that it was too complicated for APLS and PLS courses and best used by 2 people which is very labour intensive and not practical here. On an APLS / PLS course there are not enough faculty to have 1 person exclusively changing the clinical signs.

Laerdal Medical contacted us and asked how it was going, although we thought it was very impressive we were not able to use it to its full potential.

Solution

Pre-set scenario's can be programmed in. This involved the representative of Laerdal Medical coming to the department and programming some scenarios in. This seemed quite a complicated task to programme each key treatment point. We found that there is a limit of 10 events for each scenario (although that will be increased in the next model).

Mock Teaching / Testing Sessions

We then tried to run a scenario using the programmed scenario, which was really difficult, as we had set up each key treatment point as a time to press the 'event' key.

Even Better Solution

Re-programmed handset with scenario's with 2 – 3 events that changed the clinical picture. This works really well, it is time consuming to programme the scenario's in (these could be part of the package). Once they are on the handset and the event is marked on the paper copy the handset is very easy to use.

Conclusion

This manikin is not a child Sim Man, nor does it cost as much. The Vital Sim box is easy to connect and the handset is easy to use if the scenarios are pre-set. It is a lot more realistic looking than the previous model.

It would be good if the Vital Sim could generate a carotid pulse as reaching over to squeeze a red bulb as your student watches you takes something away from the fidelity of the manikin. Once we programmed some of the scenarios, teaching went a lot smoother.

Quotes from APLS / PLS Instructors

'It's a very good manikin but a bit too complicated for me'

'I think its great, really like the lung sounds although the wheeze does sound inspiritory'

'Once I got used to it I found it quite easy to use'

'It is very good, can the box generate chest movement and a pulse to make it realistic'

'Like the vocal effects, reasonably easy to use'



Session	Number of Instructors	Comments
Small group teaching e.g. SHO education	2	Works really well 1 instructor leading scenario 1 instructor using the handset to change clinical picture
Small group teaching e.g. SHO Education	1	Difficult to use
APLS / PLS Course	2	Instructor education to use the handset needed everytime Most instructors declined to use the Vital Sim and attached another rhythm simulator
Scenario teaching in clinical area	1	As small group teaching