

# Resusci Anne Simulator

## 'Annie' moves onto a new dimension

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### Introduction

I was kindly asked by Laerdal Medical UK to conduct a 'users' review of their new Resusci Anne Simulator or 'RAS'. The RAS is a full body manikin clearly descended from of Resusci Anne but has better legs, being plastic moulded - rather than foam. In addition to a 'standard RA, it incorporates the following; a new airway head, a BP arm with a cuff (right arm), an IV arm (left arm), chest skin for monitoring, bendable legs, vocal capabilities, heart and lung sounds, all controlled by a wireless remote handheld 'heartsim'. The requisite 'shell suit' has also been updated.

### First Encounters

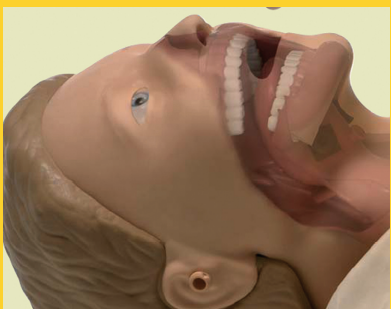
I first met with the RAS whilst attending the ERC meeting in Budapest and as a recent purchaser of the Laerdal SimManÖ, I was duly impressed by her comparable versatility and low cost. However, trade stands do not enable one to put such products fully to the test.

Prior to preparing the manikin for formal use I needed to familiarise myself with her operation, which I preferred to do without reference to the manual (to genuinely examine ease of use and it is what blokes do). I began by assembling the manikin, pressurising the 'lungs' with the hand pump and switching on both the manikin and the wireless handset. My practical assessment commenced the fundamentals; airway management; ventilation; and chest compression. Later, in the training room I would move onto assess LMA insertion, intubation, defibrillation and peri-arrest issues, utilising the BP cuff and voice facilities, prior to unleashing her on the ILS candidates.

Resusci Anne Simulator as the patient RAS was utilised conventionally during two ILS Courses here at the Hammersmith Hospitals, with participants all from a critical care or an acute medical background. The RAS was used in all of the practical ILS stations to very good effect, with all groups having the opportunity to interact with 'her' prior to the scenario stations in the latter part of the course, which was where I expected 'her' to flourish. Due to the time and practical limitations we did not use the preloaded scenarios, preferring to use an 'ad-hoc' approach akin to using the old style Heartsim.

### Conclusions

Resusci Anne Simulator sees 'Annie' move into a new dimension for resuscitation training. She is a versatile, comparatively inexpensive manikin that is ideally placed for the range of skills



teaching demanded by courses like the Resuscitation Council (UK) Immediate Life Support Course. It is easy to use and offers a considerable improvement to realistic teaching of skills associated with resuscitation. I would also consider it to be a very useful manikin for many skills components required during ALS courses. I was only able to utilise the main functions of the manikin within the time frame afforded to me. I am sure that this manikin will provide a significantly useful addition to our increasingly realistic armoury of educational aids.



### Acknowledgments;

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Peri-Arrest Functions	Evaluation
<b>Breathing</b>	Subtle, but demands close observational skills. Maintained throughout session (>2hours) without need for 'top up' with the hand pump. Quite compared to using a compressor!
<b>Breathing &amp; Vocal sounds</b>	Very effective, added realism, sufficient range of sounds & noises for the ILS course.
<b>BP arm</b>	Very effective, added realism, brachial pulse perhaps too high on inner aspect of the arm making palpation impossible during BP recording. Good control afforded by the handset.
<b>ECG monitoring</b>	Well placed connectors, clear signal
<b>IV arm</b>	Did not prime and use for the ILS Course.
<b>Radial pulse</b>	Unanimously found to be easy to 'occlude', however very useful addition for 'live' patient.
<b>Pupils</b>	Not used in the context of the ILS Course.
Cardiac / Respiratory Arrest Functions	Evaluation
<b>Airway management</b>	<ul style="list-style-type: none"> <li>• Significant improvement, great feel when opening airway using both head tilt / chin lift &amp; jaw thrust.</li> <li>• Angle of mandible is well defined</li> <li>• Feel and realism for insertion of both oropharyngeal and nasopharyngeal airways is improved.</li> <li>• Distance for sizing both oropharyngeal and nasopharyngeal airways is perhaps a little long.</li> <li>• Handset enables enhanced simulation of bag-valve-mask ventilation (not used).</li> <li>• Enables insertion of laryngeal mask &amp; combitube. LMA insertion much improved on</li> <li>• Intubatable trachea with single bronchus with good anatomical airway landmarks.</li> <li>• Tube insertion added realism to the scenarios. However it is not designed for teaching intubation skills.</li> </ul>
<b>Chest compression</b>	Maintains the standards that many of us will be used to, although I felt that there was a 'smoother', less 'mechanical' feel to compression.
<b>Defibrillation</b>	<ul style="list-style-type: none"> <li>• Standard Laerdal stud connectors are present, however I opted to utilise the larger brass clip on plates for manual defibrillation.</li> <li>• ECG simulation via the hand set is as versatile as all previous versions</li> </ul>
<b>Carotid pulses</b>	<ul style="list-style-type: none"> <li>• Carotid anatomy is improved and aids realism</li> <li>• Triggered by palpation and independent of any air bulbs, which again assists realism</li> <li>• Pulse volume is variable via hand set control</li> </ul>
<b>Support material</b>	<ul style="list-style-type: none"> <li>• High quality supporting materials housed in sturdy folder</li> <li>• Incorporates 'hard copy' of the in built scenarios</li> <li>• PC links (not used) enable the user to pre-programme their own scenarios, which would further enhance the realism and overall quality of education delivered with this manikin</li> </ul>