Letter to the Editor

A “threepenny” CPR manikin

Sir,

Manikins are essential in teaching and practicing CPR. Industry has provided them in different degrees of complexity. Costs are directly proportional to sophistication and in some cases it might be a limiting factor especially among poor people.

Training programs in emergencies have been developed for humble populations, and have included the use of a CPR dummy made with simple materials – in comparison with more elaborate commercial equipment, acceptable results have been achieved.1,2

Following this line, we have developed a two-piece training manikin that anybody can make using cheap and easily available elements.

The head is made of a disposable 2–31 plastic bottle with a painted face (hair, eyes, nose and mouth) on its surface. A hole is drilled in the middle of the mouth to enable ventilation. The lung is a 20 cm diameter party balloon tied to the spout of the bottle (Fig. 1A).

The thorax is a disposable 5l plastic jug with both ends cut off. A spring capable of being compressed 5 cm under a 40–45 kg weight3 is welded to metal plates and secured with nuts and bolts through wooden discs to the jug. The trainee exerts compressions over the wooden disc seen in the middle of the partially transparent thorax. An inferior costal rim is painted on the external surface of the jug, and a xiphoid appendix is depicted in red to avoid being compressed (Fig. 1B).

For classic CPR, the head and thorax are used together (Fig. 1C). To perform respiration, one rescuer hand tilts the forehead back and the other rises the posterior part of the neck (opening airway manoeuvre). During insufflations the trainee is instructed to watch to see if the balloon inflates – a surrogate for observing if the victim’s thorax rises during inspiration. The head is not needed to practice “Hands Only CPR”.3

The advantages of this dummy include are that disposable plastic containers are easily available and replaceable, the spring costs less than three US dollars, and the rest of elements are inexpensive.

Fig. 1. (A) Manikin components: (1) spring – metal plates – wooden discs set. (2) Disposable plastic jug. Ends must be removed (dashed lines). (3) Disposable water bottle with painted face and a hole drilled in its mouth (light blue oval). (4) Party balloon. (B) Assembled “thorax”. Both jug ends have been removed and the spring set is fixed to the carcass with nuts and bolts. An “inferior costal rim” is painted in black and the “xiphoid appendix” in red. (C) “Head” and “thorax” set put together. (For interpretation of the references to color in this text, the reader is referred to the web version of the article.)

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Conflict of interest statement

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References


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