



Resuscitation in a diving bell

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**Guidance for an
Incapacitated Diver Rescue
during a
Closed Bell Diving Operation**







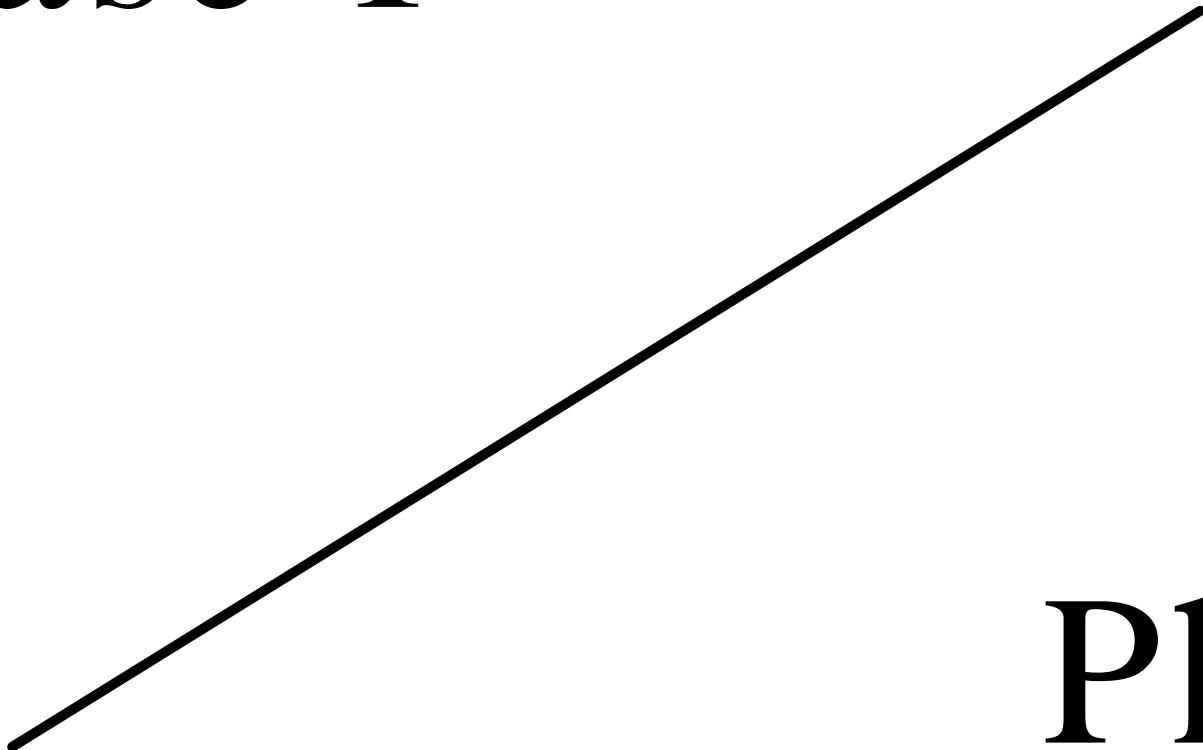




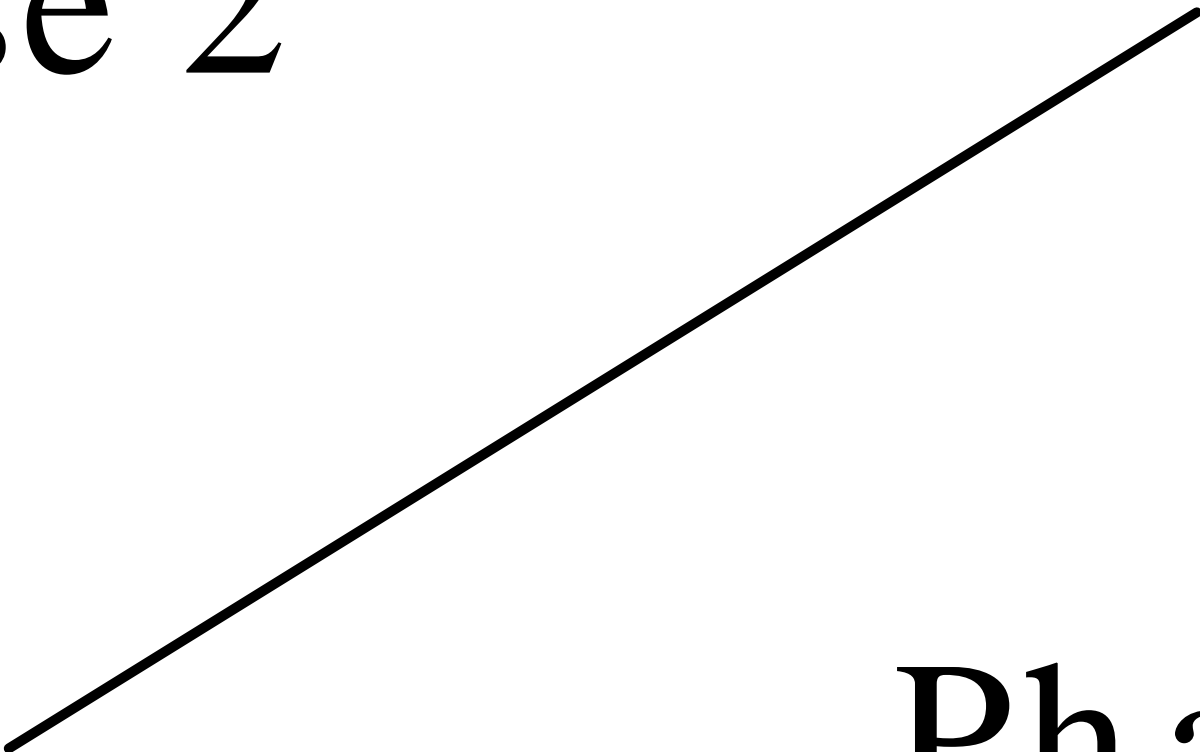
The
best
we
can
do?



Phase 1



Phase 2



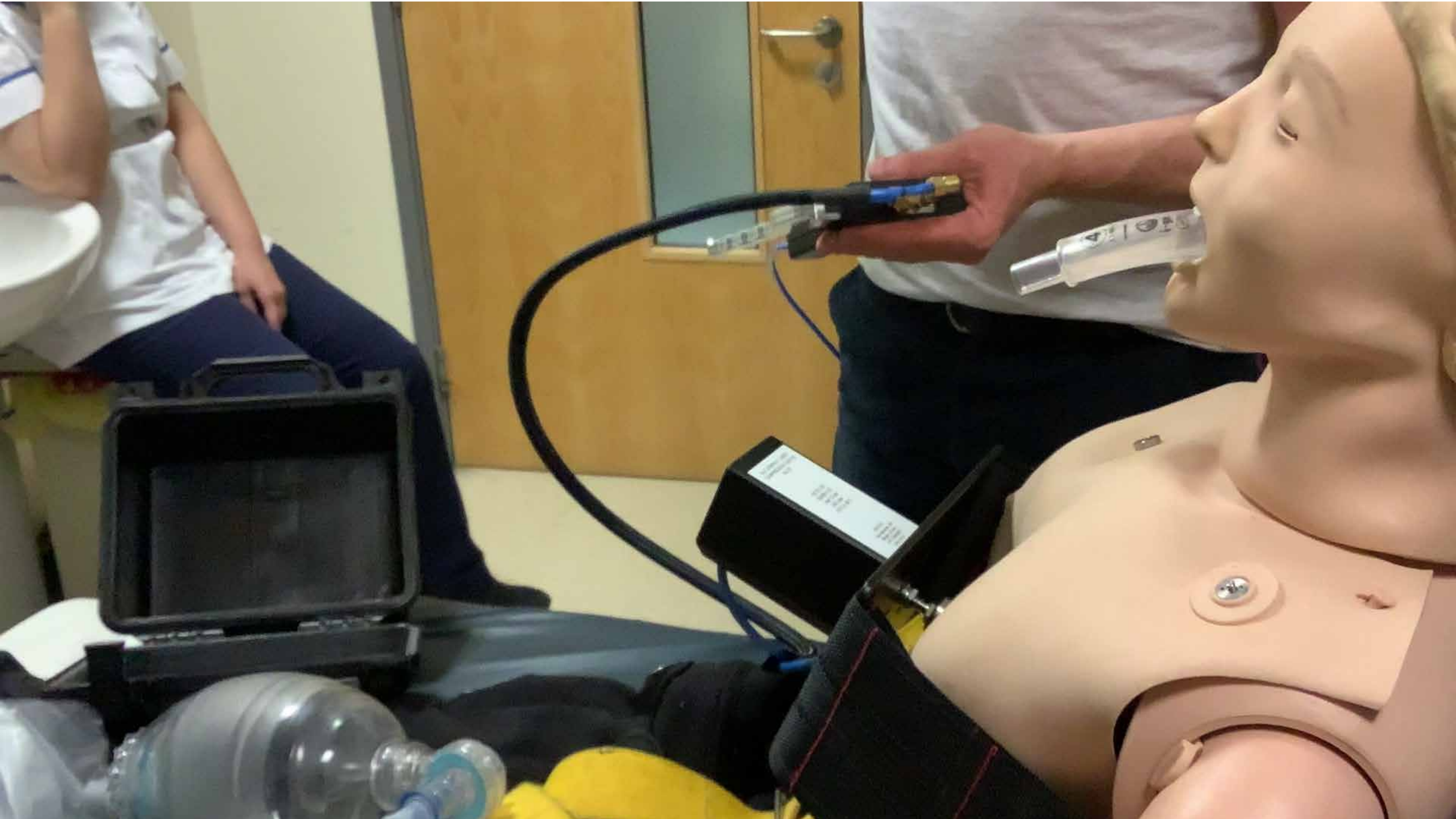
Phase 3

Phase 1









What are we trying to achieve?

Depth of compressions: 5- 6cm

Rate: 100- 120bpm



Standard CPR

Depth: 98%
Depth: 5.5cm
Rate: 92%
Rate: 117bpm

Lucas

98%
5.4cm
98%
101bpm

NCCD

100%
5.9cm
5%
95bpm

Hot water suit

Standard CPR, suit closed

- Depth 68%

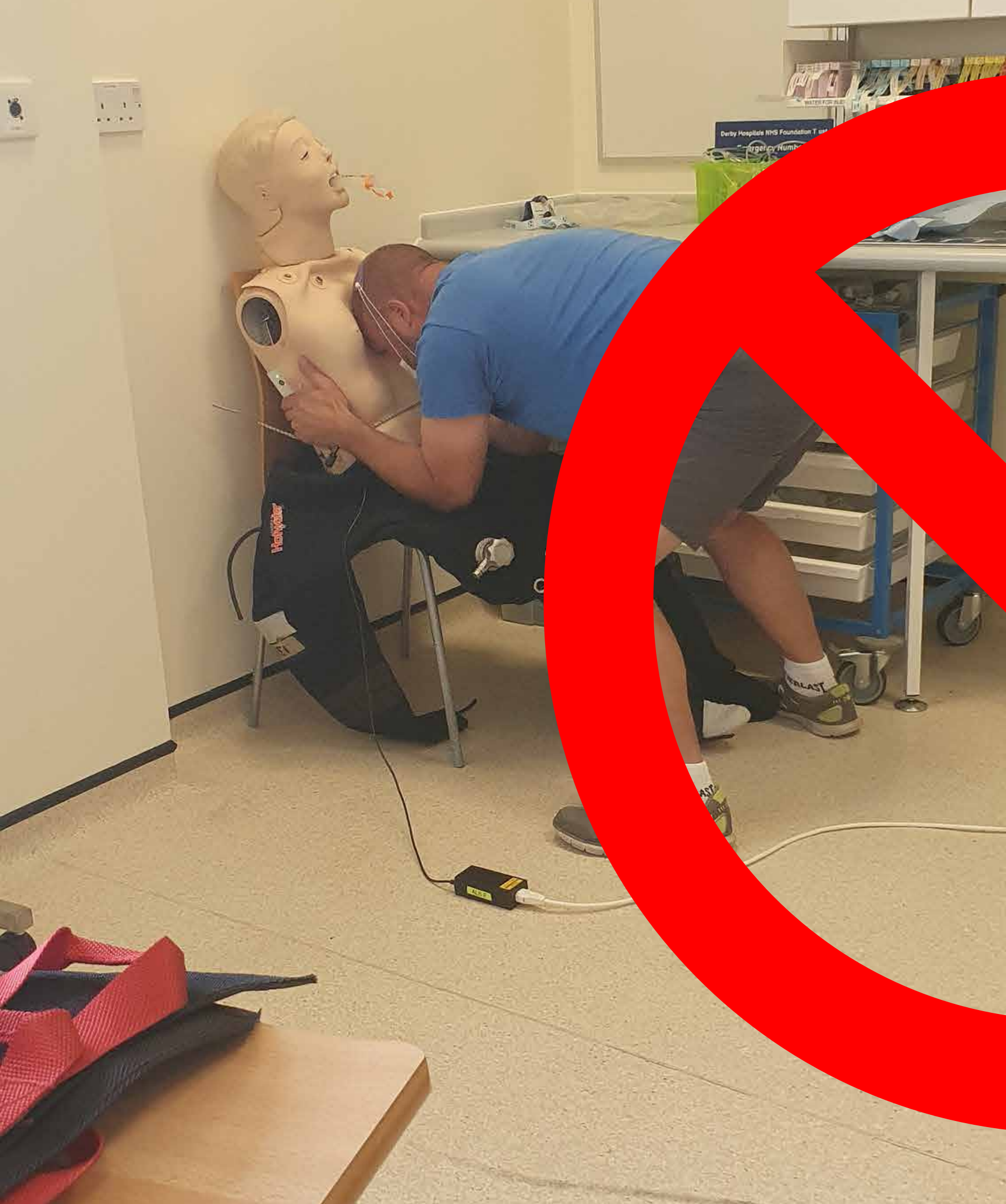
Standard CPR, suit open

- Depth 100%

mCPR, all suit positions

- both devices worked well
- application affected by suit, failed attempts for both devices





...d to chest CPR

Depth: 32% (0- 80)

Rate: 95%

Position: 100%

Prone knee + chest C

- Positioning impossible
- Compress is ineffective





Knee to chest CPR is:

Variable

- 50% of providers achieved $< 12\%$ to depth

Teachable

- 41% depth - - $> 91\%$ depth with instruction

Safe

Sustainable



NCCD seated

Depth: 100%

Rate: 98%

NCCD whilst moving - - >
seated/lying/seated

- Depth 99%, Rate 95%



Phase 2



A



5 Rescue breaths

B

Phase 3















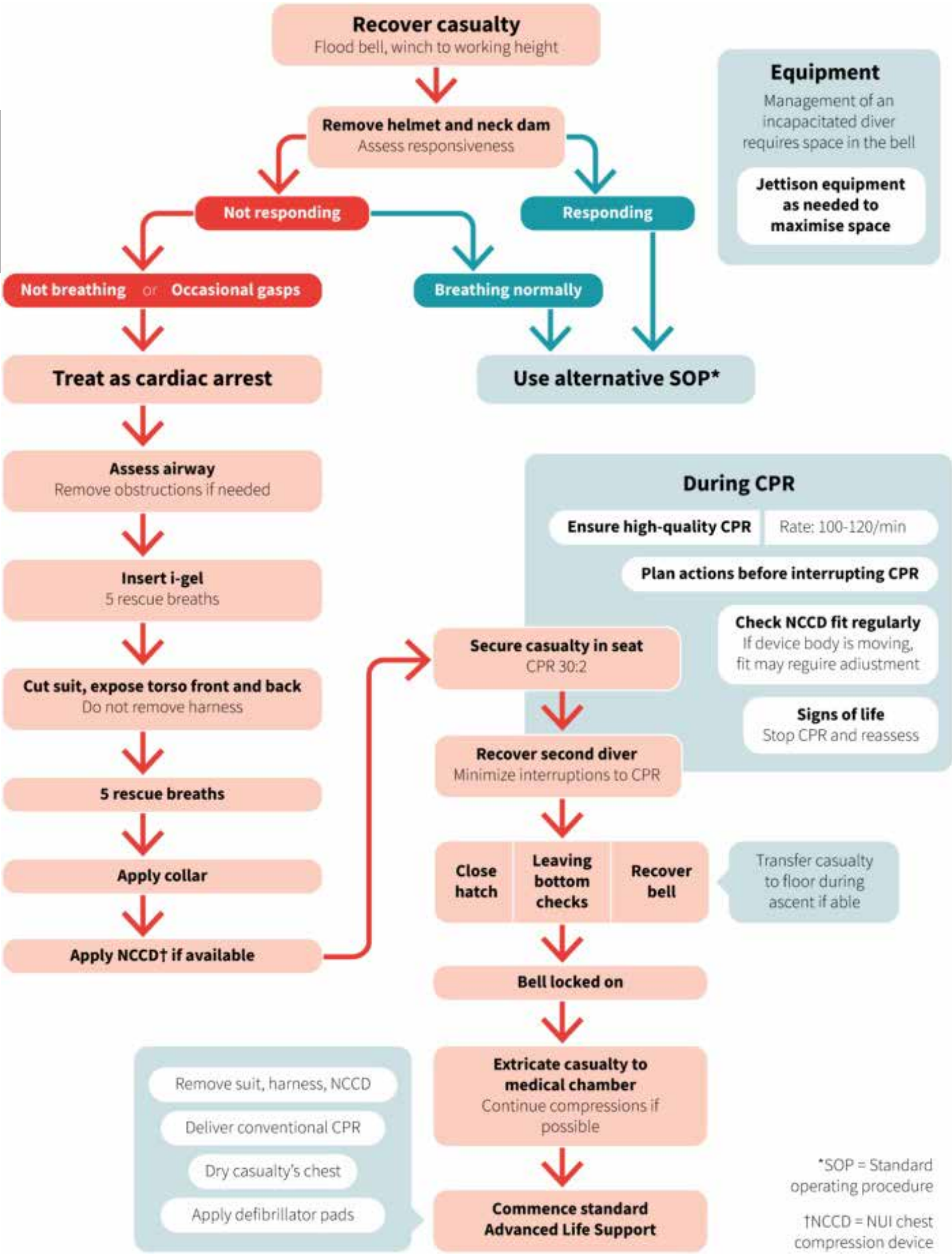
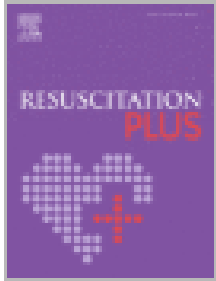




Clinical paper

Development of an algorithm to guide management of cardiorespiratory arrest in a diving bell



Graham Johnson ^{a, b}  , Andrew Tabner ^{a, b}, Nicholas Tilbury ^a, Alistair Wesson ^c,
Gareth D. Hughes ^a, Rebecca Elder ^d, Philip Bryson ^e



THE QR CODE
GENERATOR

Letter to the Editor

Upright CPR: A novel approach to delivering chest compressions to a seated casualty in a diving bell

Andrew Tabner  , Graham Johnson, Nicholas Tilbury, Alistair Wesson, Gareth D. Hughes, Rebecca Elder, Mari Östin, Philip Bryson



Does it work?

Outcomes:

- Will be poor: cardiac arrest survival to discharge in the UK
<5% even in a hospital setting
- Will never tell the whole story: duty of care, second victim



