COMPARING THE ACCURACY OF DELIVERY OF A SUSTAINED INFLATION TO INFLATION BREATHS ON A NEONATAL MANNEQUIN

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Aim The Neonatal Life Support (NLS) guidelines currently recommend delivery of five inflation breaths (IB) each lasting two to three seconds.1 In practice, however, doctors often fail to deliver the recommended duration.2 There has been increasing interest in delivery of a sustained inflation (SI=15 s) as initial resuscitation of prematurely-born infants. Our aim was to investigate how accurately neonatal doctors could deliver an SI compared to IB using a resuscitation mannequin.

Methods Doctors were invited to deliver five IB (each five seconds in duration) and a fifteen second SI to a neonatal mannequin. A respiratory function monitor was used to assess the duration of the inflations. Recordings were made after the doctors had the opportunity to practise using the equipment and delivering an SI. All were trained in NLS.

Results Twenty four doctors took part in the study.

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<th>Abstract G199(P) Table 1</th>
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<td>Median (range) duration of IB (seconds)</td>
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<td>2.2 (1.3–3.4)</td>
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The median error for IB was −0.8 s, that is, on average, each inflation was 0.8 s too short and for SI the median error was +0.34 s, that is, on average, each inflation was 0.34 s too long. The magnitude of error was significantly higher for IB than SI (26% versus 5.7% respectively, p=0.001).

To further compare the variability in the two techniques the IB results were divided by three and the SI results by 15. The interquartile range for IB was 0.59 s and for SI was 0.25 s, demonstrating much closer clustering of results around the median for the SI (Table 1).

Conclusions A fifteen second SI was delivered more accurately than three second inflation breaths by neonatal doctors using a mannequin. Studies of neonatal resuscitation should examine the accuracy with which the techniques are applied.

REFERENCES
1. (UK) RC. NLS Guidelines (Resuscitation Council). resus.org.uk

EXPLORING NEW WAYS OF WORKING IN THE NEONATAL UNIT


Aim This project has been commissioned by the London School of Paediatrics/Health Education England to explore new ways of working within neonatal units across London with an aim to provide collaborative recommendations on ways to reduce the dependence of service delivery on the paediatric medical workforce by providing a more stable, mixed, neonatal workforce. Workforce issues are not limited to medical rotas; review of national and local data has found that there is a considerable vacancy across the different professional groups nationally and within London. There is a paucity of qualified in specialty (QIS) nurses and a wide variability in the availability of enhanced and advanced roles in neonatal nursing.

Method Common workforce and service delivery issues already acknowledged by professional bodies were identified during site visits and semi-structured interviews with over half of the London neonatal teams.

Results Units spoke of developing different roles which may support the workforce and these have been explored further. It was clear to see a variance in how units have developed new ways of working within neonatal units across London on April 26, 2021 by guest. Protected by copyright.http://adc.bmj.com/ Arch Dis Child: first published as 10.1136/archdischild-2018-rcpch.194 on 12 March 2018. Downloaded from