

PEER REVIEW HISTORY

BMJ Paediatrics Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Targeted neonatal echocardiography training: a survey of trainees in a region of England
AUTHORS	Cleator, Alexander James Subhedar, Nimish V

VERSION 1 – REVIEW

REVIEWER	Reviewer name: Dr. Anne Heuchan Institution and Country: Royal Hospital for Children Neonatal Medicine, United Kingdom of Great Britain and Northern Ireland Competing interests: NONE
REVIEW RETURNED	27-Mar-2022

GENERAL COMMENTS	<p>This is a timely survey of grid trainees in neonatal medicine, exploring their views on both training and access to training, in targeted neonatal echocardiography (TNE) from a large English training deanery. The authors highlight that TNE in critically ill infants is recognised internationally as a vital clinical skill with established training programmes in the US, Australia and many parts of Europe. Neonates are unique both in their risk of undiagnosed congenital heart disease and the challenge of transitional circulations from foetal to new born life. Additionally, critically ill preterm and term infants often require complex respiratory and cardiovascular support. Whilst diagnosing and managing congenital heart disease, and understanding the pathophysiology and management of preterm circulations, are requirements of the Royal College of Paediatric and Child Health (RCPCH) sub speciality neonatal training curriculum there is no requirement or scope in the training curriculum for developing skills in TNE.</p> <p>This well constructed survey of neonatal grid trainees on training in TNE provides an important insight into specialist neonatal trainee's views. Whilst disappointingly only 50% of neonatal grid trainees replied almost all of the responders (48) wanted to develop TNE as a skill and would welcome a formal training syllabus. Strikingly half of the respondents felt that training in TNE should be compulsory. Trainees are motivated and would be willing to invest study budgets and to travel within the deanery for training but also highlighted the role of more recent training modalities such as online modules and echo simulation. However bedside teaching and echo review would still be critical and major obstacles highlighted include finding consultants to supervise and time for training.</p> <p>Training syllabuses in TNE should be developed to meet trainee requirements and the evolving requirement of the speciality and its patients. A recent pilot has been delivered following the proposed UK framework¹ but also highlighted the need for significant trainee time and consultant supervision². Deaneries, individually or collaboratively, should continue to promote this approach and refine a syllabus. However without the support of the RCPCH, recognising the need for expertise of TNE within the speciality and incorporating this as an option into neonatal grid training programmes, it is less likely that deaneries and NHS trusts or boards will support the time for trainees and consultants to provide the teaching and training</p>
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	<p>required.</p> <p>1. Singh Y, Gupta S, Groves AM, et al. Expert consensus statement 'Neonatologist performed Echocardiography (NoPE)'-training and accreditation in UK. Eur J Pediatr. 2016;175(2):281-287.</p> <p>2. Heuchan AM, Patel N, Hunter L, Montasser M. Neonatologist performed echocardiography (NoPE): A pilot programme and perspective for delivering training and maintaining accreditation in the UK. Volume 16 (6) 1-5, 2020.</p>
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REVIEWER	<p>Reviewer name: Dr. Karel Allegaert Institution and Country: University Hospitals Leuven, Belgium Competing interests: NONE</p>
REVIEW RETURNED	25-Mar-2022

GENERAL COMMENTS	<p>This letter describes the results of responses of trainees on a questionnaire related to neonatologist guided 'functional' echocardiography to document their willingness/interest, perceived burdens and barriers. The findings are suggested to be useful to subsequently design such a training.</p> <p>Overall, the relevance or 'impact' of this work is perhaps rather limited, as we assume that all guidelines rather suggest a centralized approach, to facilitate the logistics and to eg provide access online or otherwise to teachers and teaching material.</p> <p>At least, the authors should try to provide some information on how the questionnaire has been constructed ? Was this based on an existing tool, or developed. In the second setting, we do need some reflecting on the validity of the questionnaire (like eg face validity, how has this been constructed)</p> <p>Secondly, I'm somewhat wondering why the approach suggested reads very 'loco-regional' while accreditation is likely rather at the national level ?</p> <p>Finally, have the trainees consented on the analysis and reporting of the data. This likely does not need a formal EC/IRB assessment, but still some information on their awareness is in my opinion relevant.</p>
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VERSION 1 – AUTHOR RESPONSE

Dear Editor in Chief, Associate Editor and Reviewers,
Many thanks for your constructive comments about our research letter titled "Targeted neonatal echocardiography training: a survey of trainees in a region of England". Based on your comments, we have made the following changes:

1. Supplementary file / Appendix

Please be informed that this should be in PDF Format
Response – we have converted this into PDF format

Editor in Chief Comments to Author :

Abstract add "48 out of 91 trainees (53%) completed the survey."
Response - We have added "48 out of 91 trainees (53%) completed the survey" to our abstract

Be more cautious in your conclusions. It is possible that only trainees keen on TNE responded. Rephrase the sentence "Our data was overwhelmingly positive, demonstrating that 96% (46/48) of trainees want to learn and develop TNE as a skill with 94% (45/48) of them highlighting that a formal training programme would be welcomed."

Response - We have rephrased the sentence and changed it to "Our data demonstrated that 96% (46/48) of the responding trainees want to learn and develop TNE as a skill, with 94% (45/48) of them highlighting that a formal training programme would be welcomed"

You need to highlight that of the trainees that responded, the majority were keen to learn TNE.

Response - We have added to our final paragraph, highlighting this important possibility - "The authors recognise the likelihood that trainees interested in TNE were more likely to respond to this survey. Despite this, the results demonstrate that interested trainees are motivated to access a formal, structured TNE training programme."

Associate Editor

Comments to the Author:

Some more detail is needed on the methodology as highlighted by one of the reviewers.

Response - we have added details to our methodology (see reviewer's comments below)

It would be good if there was some sharing of this development with other areas in the UK and beyond; it is very narrowly focussed at present. Perhaps the authors could indicate how others outside of the local deanery could benefit from this project.

Response - The authors recognise the importance of this point and we have suggested, as best possible within the 600-word limit, how this work might drive further projects and collaboration within the UK, working ultimately towards a national TNE syllabus. We have added "Similar local projects could lead to deanery collaborations and a refined national syllabus, promoting the importance of expertise in TNE within the specialty." to the final paragraph.

Likert should be spelled with a capital!

Response - we have changed likert to Likert

Dr. Karel Allegaert, KU Leuven, Erasmus MC Sophia

Comments to the Author

This letter describes the results of responses of trainees on a questionnaire related to neonatologist guided 'functional' echocardiography to document their willingness/interest, perceived burdens and barriers. The findings are suggested to be useful to subsequently design such a training.

Overall, the relevance or 'impact' of this work is perhaps rather limited, as we assume that all guidelines rather suggest a centralized approach, to facilitate the

logistics and to eg provide access online or otherwise to teachers and teaching material.

At least, the authors should try to provide some information on how the questionnaire has been constructed ? Was this based on an existing tool, or developed. In the second setting, we do need some reflecting on the validity of the questionnaire (like eg face validity, how has this been constructed)

Response – We have added that the questionnaire was developed by both authors for the purposes of this project and therefore, only has face validity. “The 2 authors developed an original online survey (appendix 1), comprising a mixture of Likert scale, multiple choice and free text questions”

Secondly, I’m somewhat wondering why the approach suggested reads very ‘loco-regional’ while accreditation is likely rather at the national level ?

Response – Important local work is happening with a view to eventually collaborating our work across deaneries. We have added “Similar local projects could lead to deanery collaborations and a refined national syllabus, promoting the importance of expertise in TNE within the speciality.”

Finally, have the trainees consented on the analysis and reporting of the data. This likely does not need a formal EC/IRB assessment, but still some information on their awareness is in my opinion relevant.

Response – The trainees were aware that their responses would be used as data in this project. We agree that this does not need a formal EC/IRB assessment.

Dr. Anne Heuchan, Royal Hospital for Children
Comments to the Author

This is a timely survey of grid trainees in neonatal medicine, exploring their views on both training and access to training, in targeted neonatal echocardiography (TNE) from a large English training deanery. The authors highlight that TNE in critically ill infants is recognised internationally as a vital clinical skill with established training programmes in the US, Australia and many parts of Europe. Neonates are unique both in their risk of undiagnosed congenital heart disease and the challenge of transitional circulations from foetal to new born life. Additionally, critically ill preterm and term infants often require complex respiratory and cardiovascular support. Whilst diagnosing and managing congenital heart disease, and understanding the pathophysiology and management of preterm circulations, are requirements of the Royal College of Paediatric and Child Health (RCPCH) sub speciality neonatal training curriculum there is no requirement or scope in the training curriculum for developing skills in TNE.

This well constructed survey of neonatal grid trainees on training in TNE provides an important insight into specialist neonatal trainee’s views. Whilst disappointingly only 50% of neonatal grid trainees replied almost all of the responders (48) wanted to develop TNE as a skill and would welcome a formal training syllabus. Strikingly half of the respondents felt that training in TNE should be compulsory. Trainees are motivated and would be willing to invest study budgets and to travel within the deanery for training but also highlighted the role of more recent training modalities

such as online modules and echo simulation. However bedside teaching and echo review would still be critical and major obstacles highlighted include finding consultants to supervise and time for training.

Training syllabuses in TNE should be developed to meet trainee requirements and the evolving requirement of the speciality and its patients. A recent pilot has been delivered following the proposed UK framework¹ but also highlighted the need for significant trainee time and consultant supervision². Deaneries, individually or collaboratively, should continue to promote this approach and refine a syllabus. However without the support of the RCPCH, recognising the need for expertise of TNE within the speciality and incorporating this as an option into neonatal grid training programmes, it is less likely that deaneries and NHS trusts or boards will support the time for trainees and consultants to provide the teaching and training required.

1. Singh Y, Gupta S, Groves AM, et al. Expert consensus statement

'Neonatologist performed

Echocardiography (NoPE)'-training and accreditation in UK. *Eur J Pediatr.*

2016;175(2):281-287.

2. Heuchan AM, Patel N, Hunter L, Montasser M. Neonatologist performed echocardiography (NoPE): A pilot programme and perspective for delivering training and maintaining accreditation in the UK. *Volume 16 (6) 1-5, 2020.*

Response – We are very grateful for the reviewer’s expertise in this field and her affirming the importance of this work. She has highlighted the eventual aim of driving this to a national, collaborative project and striving towards RCPCH recognition of the importance of TNE training in neonatology. If appropriate funding, training and support can be released for TNE training programmes, it will improve care for generations of new-borns to come.

VERSION 2 – REVIEW

REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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VERSION 2 – AUTHOR RESPONSE

VERSION 3 – REVIEW

REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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REVIEWER	Reviewer name: Institution and Country: Competing interests:
REVIEW RETURNED	

GENERAL COMMENTS	
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VERSION 3 – AUTHOR RESPONSE