

Introduction

The reorganisation of health services and the delivery of the 'hub and spoke' Model of Care for Adult and Paediatric Critical Care necessitates transfer of critically ill patients between hospitals to a facility that meets their clinical needs^{1,2}. Transporting critically ill patients is an integral part of the role of doctors and nurses in Intensive care, Anaesthesia, Emergency Medicine and Paediatrics. In excess of 1200 adult and 450 paediatric critical care inter hospital transfers occur per annum^{3,4}. Training for transport is recommended by the Intensive Care Societies (ICSI, AAGBI, ESICM), yet most critically ill patients in Ireland are transferred by multidisciplinary teams with no formal training/education or processes to adhere to. Trained transfer / retrieval teams have lower rates of morbidity, mortality and adverse clinical events⁵. Recognising this deficit, a modified Delphi study was chosen to develop an education programme for the transport of critically ill patients.

Delphi Process

The expert group were chosen representing those involved in transporting critically ill patients, namely the critical care specialties and the National Ambulance Service.

The initial statements were derived from feedback from semi structured interviews of critical care stakeholders, review of international training programmes and a literature review of training.



Round 1 condensed 60 statements into 34 learning objectives

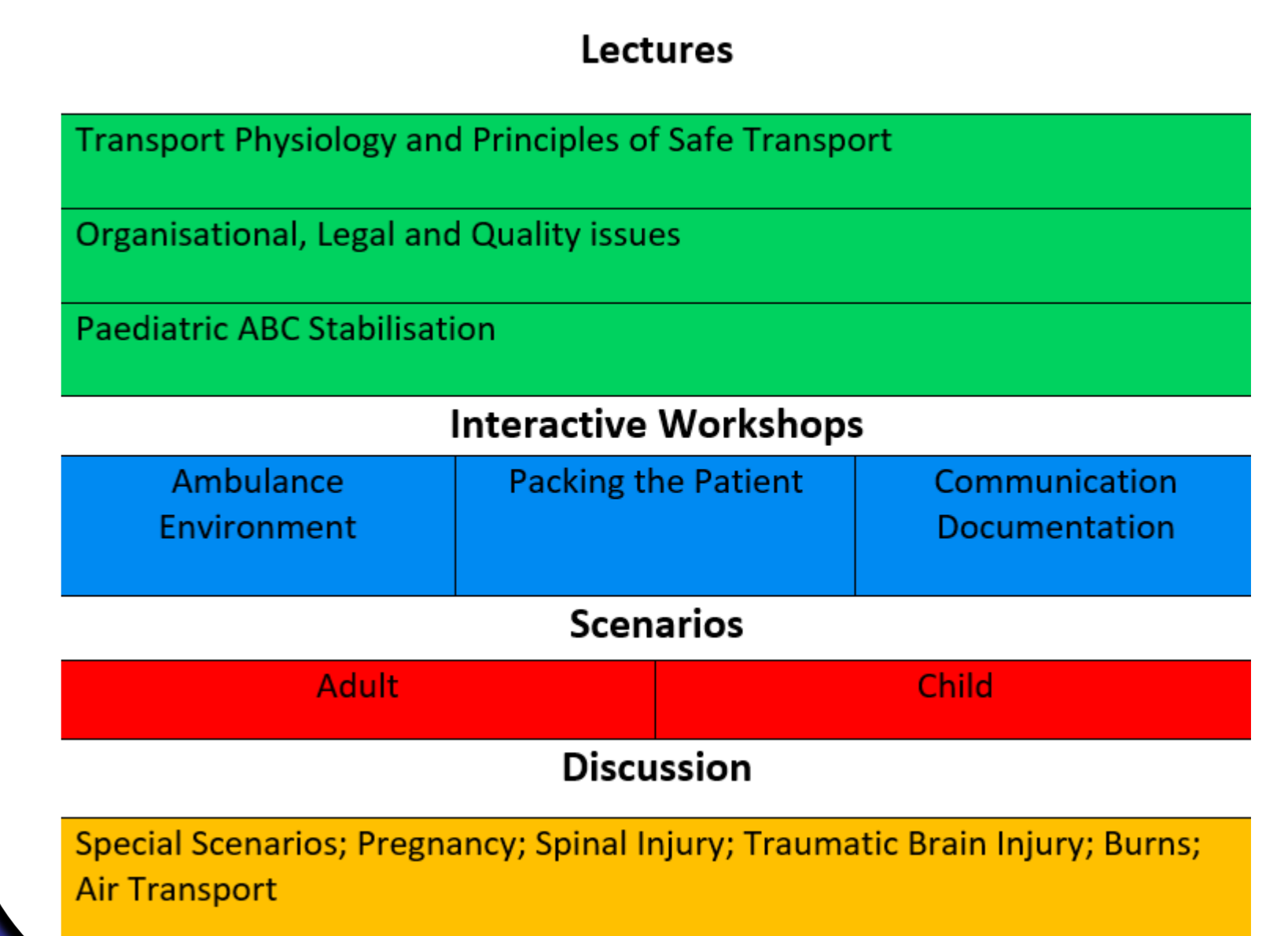


Round 2 requested prioritisation and allocation of learning objectives into categories.

Consensus was achieved following 2 rounds into subject topics and learning objectives.

Pilot Programme

The agreed subject topics were arranged using Bloom's learning domains: cognitive, affective and psychomotor.



Delivering the Programme

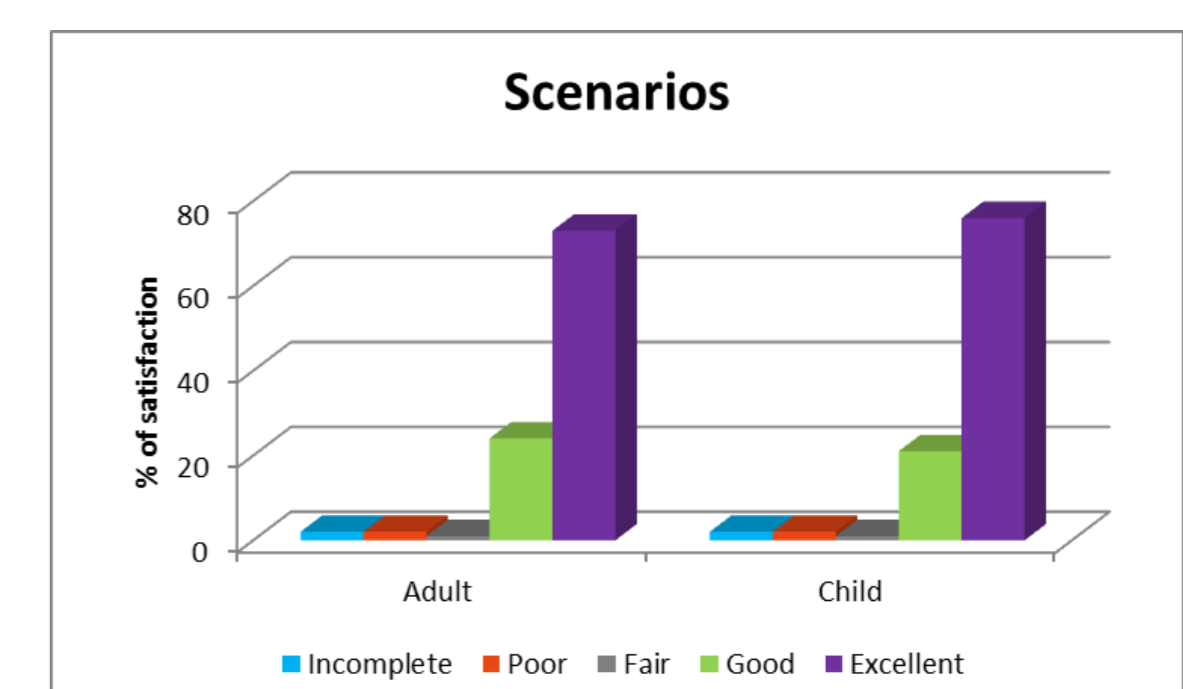
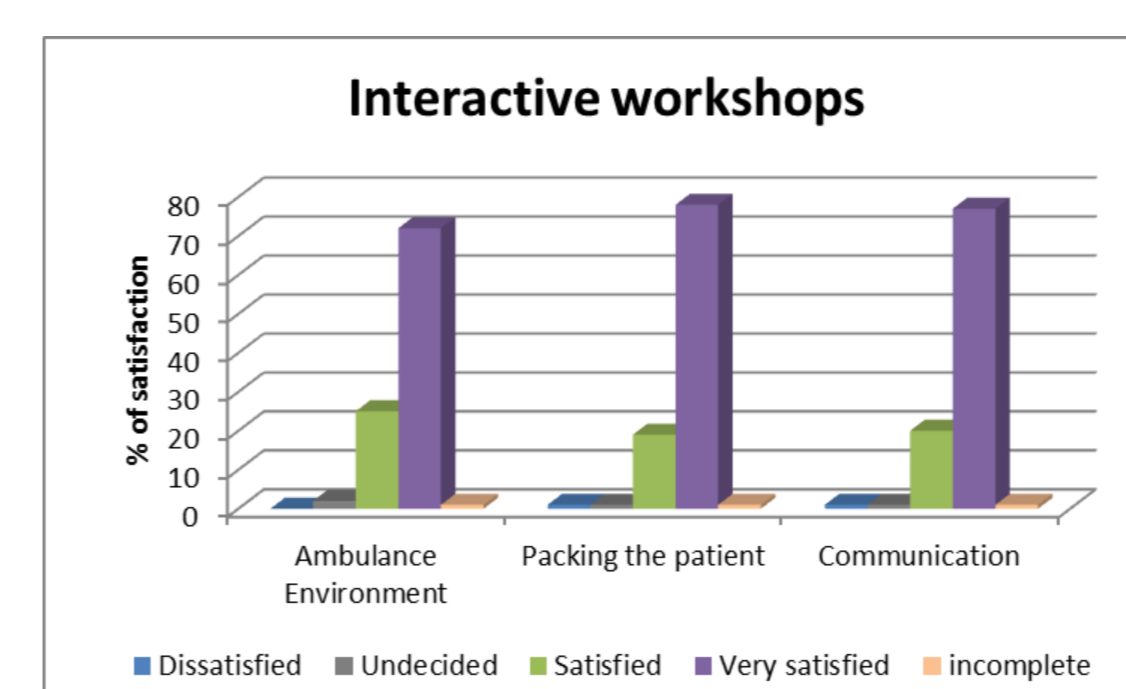
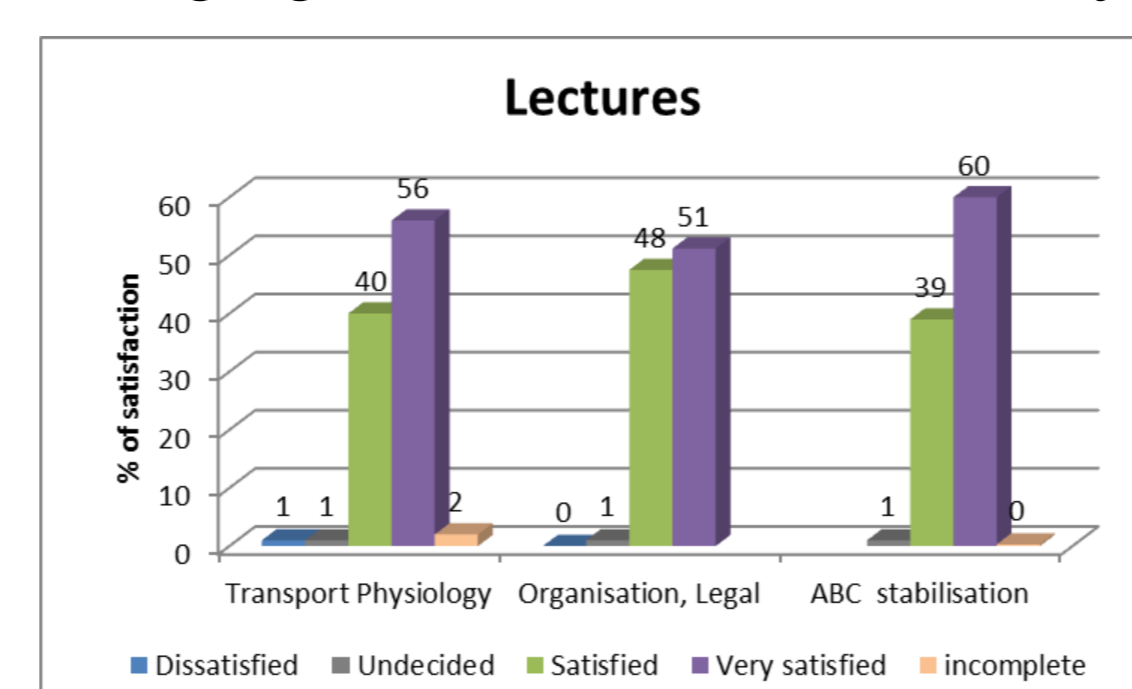
The programme was developed as a pilot with annual evaluations. The course achieved accreditation from College of Anaesthetists and Nursing Midwifery Board of Ireland.

The inaugural training date was hosted in the Midlands Regional Hospital, Tullamore on the 15th October 2015.

Over 2 years, 20 training days were delivered to 369 members of the multidisciplinary teams across the country.

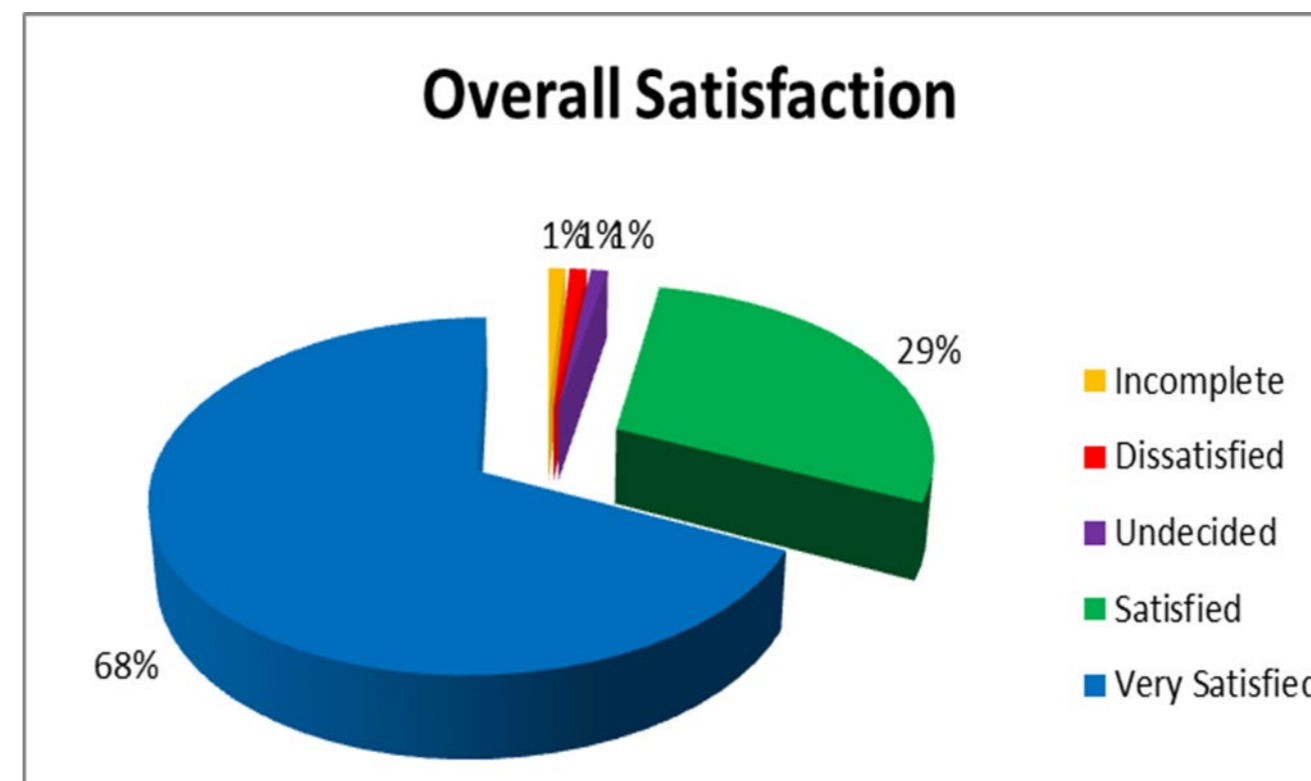
Participant Evaluation

Participants were asked to score their level of satisfaction on each constituent using a 4 point likert scale ranging from dissatisfied to very satisfied.



Evaluation forms were collected from all participants at the end of the training day.

There was a 89% response rate.



"Made me more aware of being prepared for the unexpected" Letterkenny 2016

"All staff from ED, ICU and paediatrics need to attend" Wexford 2017

Annual evaluation of the programme

The annual evaluation was undertaken by the Education Committee of the National Transport Medicine Programme. The participant evaluations and feedback were reviewed. The prominent issues highlighted were:

- All staff responsible for the transport of critically ill patients should be trained.
- Paediatric and adult have similar but different training needs.
- Need to incorporate local hospital transport policies and guidelines.

Recommendations for future development

- Consideration should be given to the inclusion of a module on transporting the critically ill patient on all ICU, ED and paediatric courses.
- Additional option to deliver a paediatric specific or adult specific training programme.
- Further development of transport guidelines incorporating local policies.
- Additional evaluation, using a wider stakeholder group, is required to assess improvement in efficacy of the programme and the impact on patient outcomes.

REFERENCES

- 1 HSE (2014) *Model of Care for Adult Critical Care*.
- 2 HSE (2010) *A New National Model of Care for Paediatric Healthcare in Ireland*.
- 3 Murphy, A.M. and Dwyer, R. (2016) 'National Survey of Adult Inter-hospital transfers in Ireland' Poster presented at Intensive Care Society of Ireland, 11th June, Aviva Stadium, Dublin.
- 4 PICANet (2016) *Annual Report*. University of Leeds, University of Leicester, UK.
- 5 Droogh, J.M., Smit, M., Hut, J., Absalom, A.R. Ligtenberg, J.J. and Zijlstra J.G. (2015) 'Transferring the critically ill patient: are we there yet?', *Critical Care*, 19 (1) doi:10.1186/s13054-015-0749-4
- 6 Hsu, C. & Sandford, B. (2007) 'The Delphi Technique: Making Sense of Consensus' *Practical Assessment, Research & Evaluation*, 12 (10) pp 1-8