Developing a Difficult Airway Response Team (DART) – the Bristol Royal Infirmary Experience

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Background

Management of a difficult airway emergency is challenging, even for experienced clinicians. Outside the operating theatre they can rapidly progress into life-threatening situations which should be managed according to DAS Guidelines¹. A multidisciplinary Difficult Airway Response Team (DART) streamlined for managing such cases is feasible and can standardise patient care as part of the emergency response process². A DART service is therefore being developed in our Trust. Using simulation we aimed to review personnel response, equipment availability and decision making during these emergency scenarios.

Methods

**Project Period:** 4 months (March – July 2017)  
**Location:** UHB – Emergency Department and A700 (ENT Ward)

Four in-situ simulations involving the Emergency Department (ED): Ear, Nose, Throat (ENT); Oral Maxillofacial Surgery (OMFS) and Anaesthesia teams were delivered. A high fidelity mannequin was used. Participants were recruited voluntarily and blinded to scenario content. All scenarios were validated by senior department personnel. A brief occurred after each scenario and participants provided written feedback. New knowledge was progressively assimilated to improve the DART team using the PDSA model. The project was registered as a QI project; no ethical approval was required.

Results

**Scenario A:** Stridor requiring intubation. This scenario established a baseline of current practice within University Hospitals Bristol Trust. The airway was secured at 48 minutes.

**Scenario B:** Ludwig’s angina. A DART ‘cart’ containing advanced airway equipment and intubation drugs was provided to streamline equipment and drug-related delays highlighted in A. A DART ‘card’ with contact numbers was provided to avoid personnel delay. The patient was transferred to theatre at 38 minutes for an awake fibre optic intubation.

**Scenario C:** Supraglottitis requiring front of neck access. The DART cart and card were provided as before in B. The airway was secured at 34 minutes.

**Scenario D:** Post Thyroidectomy haemorrhage requiring clot evacuation and intubation. The medical emergency number was activated contacting the DART team directly. The improved DART card contained clinical advice as this was previously highlighted as an area of educational need. The airway was secured at 21 minutes.

Conclusions

A streamlined team response during life-threatening airway cases is paramount in order to reduce delays in treatment, decision making and airway securement. We have shown that the implementation of a DART service can help facilitate this process and promote interdisciplinary teamwork. We aim to “go live” once funding is secured for additional equipment.

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