# Integration of a Difficult Airway Response Team into a Hospital Emergency Response System

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**KEYWORDS**

• Difficult airway response team • Multidisciplinary • Difficult airway patient
• Rapid response system • Medical emergency teams • Rapid response teams

**KEY POINTS**

- Specialized equipment must be readily available during difficult airway responses and customized to specialty departments of the rapid-response system teams.
- The otolaryngologist contributes both nonsurgical techniques, such as rigid and flexible endoscopy, and surgical techniques that provide a valuable addition to a difficult airway response team.
- The collaboration between the Anesthesiology, Otolaryngology—Head and Neck Surgery, General Surgery, and Emergency Medicine departments includes highly experienced personnel with unique skills in securing a difficult airway.

## INTRODUCTION

Hospital emergency response teams have evolved and expanded dramatically during the last couple of decades to provide acute care services well beyond the code team that traditionally responded to cardiopulmonary arrests.[1–3] Some of these teams are highly specialized focusing on specific disease states, such as, for myocardial infarction, the heart attack team (HAT) or, for strokes, the brain attack team (BAT). Others, such as the physician-led medical emergency team (MET) and the nurse-led rapid

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response team (RRT), address more general problems and respond to any deteriorating patient regardless of the disease process driving the deterioration.

Although there has been controversy regarding the effectiveness of this strategy, the accumulating evidence finds the MET-RRT intervention to be at least a moderately effective patient safety strategy. Reductions in the incidence of cardiopulmonary arrest and probable reductions in hospital mortality have been seen.[4–6] Its implementation has become nearly universal in Australian, Canadian, United States, and United Kingdom hospitals, as well as common in many other countries. Although there remain many questions regarding how to best implement MET-RRT programs and how to best optimize the afferent and efferent limb, as well as many others, this safety strategy is likely to remain and become as much the standard of care as cardiac arrest or code teams.[4,5]

The International Society for Rapid Response Systems, which grew out of the MET-RRT movement, has proposed that the panoply of emergency response teams that could exist within a hospital be described under the umbrella of a rapid-response system (RRS) that addresses all patient emergencies. A hospital's RRS could include a MET, an RRT, a BAT, a HAT, a code team, a massive transfusion team, and/or a difficult airway response team (DART) as well as any other teams the institution deems appropriate for their patient population. In some hospitals with more restricted resources, many of these teams may overlap. Regardless of how the hospital implements such a system, it is crucial to have clear processes and protocols for activating the correct team for the circumstance.

Although many of these types of emergency teams have become more ubiquitous, the DART remains perhaps less common than the others.[7] This may be a function of the greater number of publications regarding the MET-RRT strategy compared with the DART or because of the influence of drivers such as the Institute for Healthcare Innovation's 100K and 5 Million Lives campaigns,[8] and the Joint Commission's Patient Safety Goal #16.[9] Regardless of the reason, the DART approach and its treatment algorithms are particularly important to the overall RRS because a difficult airway may be encountered in any one of these scenarios. Patients are routinely intubated during cardiopulmonary arrests. Reports in the literature demonstrate that most MET-RRT activations are either specifically for respiratory distress (tachypnea, desaturation, dyspnea, or bradypnea) or on arrival to the patient bedside the team finds respiratory distress is a major part of the clinical scenario, requiring noninvasive or invasive ventilatory support.[10–28] Code teams and MET-RRTs are likely to encounter patients with difficult airways and need to know how to activate a DART response, if available, or have the ability to summon the appropriate expertise, absent a structured DART. If the hospital does have a structured DART program, the other teams that make up the RRS should be empowered and comfortable in activating it as soon as the situation requires airway control or any type of invasive mechanical ventilation.

A DART program was implemented at Johns Hopkins Hospital in 2008 in response to a consensus opinion that a more comprehensive management of the difficult airway is needed in patients outside of the operating room. DART was implemented with the goal of establishing a centralized response from airway experts and mobilizing specialized equipment used to secure the airway to the patient's bedside in the setting of a difficult airway. This article describes the DART program at Hopkins: how it is organized, what services contribute to it, and how it integrates into hospital management of the difficult airway patients outside of the operating room. DART was implemented with the goal of establishing a centralized response for at-risk patients and depicts systems put in place for management of difficult airway patients.