

# Improving Tracheostomy Care: Progress of the Global Tracheostomy Collaborative

Zhu H<sup>1</sup>, Arora A<sup>2</sup>, Watters K<sup>3</sup>, Harrison J<sup>4</sup>, McGrath B<sup>5</sup>, on behalf of the Global Tracheostomy Collaborative

<sup>1</sup>King's College Hospitals NHS Trust, <sup>2</sup>St Mary's Hospital, Imperial College NHS Trust, <sup>3</sup>Boston Children's Hospital, USA, <sup>4</sup>Royal Children's Hospital, Melbourne, <sup>5</sup>University Hospital of South Manchester

For further information, WEBSITE: [www.globaltrach.org](http://www.globaltrach.org) CONTACT: [GTC@globaltracheostomycollaborative.org](mailto:GTC@globaltracheostomycollaborative.org)

**Problem assessment:** Tracheostomy care is high risk with a high prevalence of adverse events, inconsistent standards and preventable harm.<sup>1</sup> The UK National Confidential Enquiry into Patient Outcomes and Death detailed over 2500 patients with tracheostomy.<sup>2</sup> Complications occurred in 24% of ICU patients and 31% of ward patients. The most serious complications involved tube displacement, obstruction, pneumothorax and major haemorrhage. Over 25% of NHS trusts had no formal training in tracheostomy care.

Exemplar institutions (e.g. St. Mary's, London, UK etc.) have demonstrated that tracheostomy related adverse events can be radically reduced through implementation of tracheostomy care teams.<sup>3</sup>

**Intervention and Strategy for Change:** The Global Tracheostomy Collaborative (GTC) is a multidisciplinary Quality Improvement (QI) collaborative established to improve process and outcomes in tracheostomy care (figure 1, box 1). Participant organizations share data, communicate about experience and progress, and commit to improvement goals. The collaborative rapidly disseminates successful care strategies supported by the GTC website discussion forums, multidisciplinary webinars on key topics and attendance at GTC meetings.

### Box 1: The Five Key Drivers of the GTC

1. Family and patient centred care
2. Coordinated multidisciplinary teams
3. Multidisciplinary education
4. Institution wide protocols
5. Measure improvement using our database

**Measurement of improvement:** Analysis of GTC membership and attendance at the launch meetings was performed. Member hospitals have started prospective data entry on diagnosis, process measures, and outcomes, such as mortality and tracheostomy complications into our secure database. Qualitative interviews were conducted with care teams from 16 member hospitals and surveys were distributed to patients and families.



Figure 2: Qualitative survey comments from site representatives who attended the GTC launch meetings

#### References:

1. Tracheotomy-Related Catastrophic Events: Results of a National Survey. Das P, Zhu H, Shah RK, Roberson DW, Berry J, et al. Laryngoscope, 122:30–37, 2012 .
2. Wilkinson KA, Martin IC, Freeth H, Kelly K, Mason M. On the Right Trach? A review of the care received by patients. UK National Confidential Enquiry into Patient Outcome and Death.
3. Improving tracheostomy care: a prospective study of the multidisciplinary approach. Cetto R, et al. Clin Otolaryngol. 2011 Oct;36(5):482-8.

**Results and effects of changes:** 570 individuals representing over 12 disciplines from 125 institutions attended GTC launch meetings; 1000 additional individuals from over 20 countries attended via web-link. Over thirty hospitals across the world have joined the GTC and many more are in the process of joining. Preliminary data collection has been successful with over 300 new tracheostomy cases entered within the first few months.

In addition, 220 patients and families responded to our survey; 25% did not feel prepared for their tracheostomy, 38% did not have an assessment of home equipment and environment prior to discharge and 46% wish they spoke to another patient or family with a tracheostomy before the surgery.

Qualitative interviews show that member sites face many challenges (figure 2) but many have implemented new practices:

“We constantly evaluate our services, have weekly meetings, have streamlined our care coordination and discharge planning. For example, we're currently developing a protocol for discharging trach patients...”

**Messages for others:** Multidisciplinary tracheostomy care is inherently complex and our baseline research demonstrated global and regional variability in care standards. QI methodology is well suited to tracheostomy care and the GTC is an exemplar of the process. Through international multidisciplinary collaboration between institutions, disciplines, patients and their carers, we aim to improve the quality and safety of care for this vulnerable group.

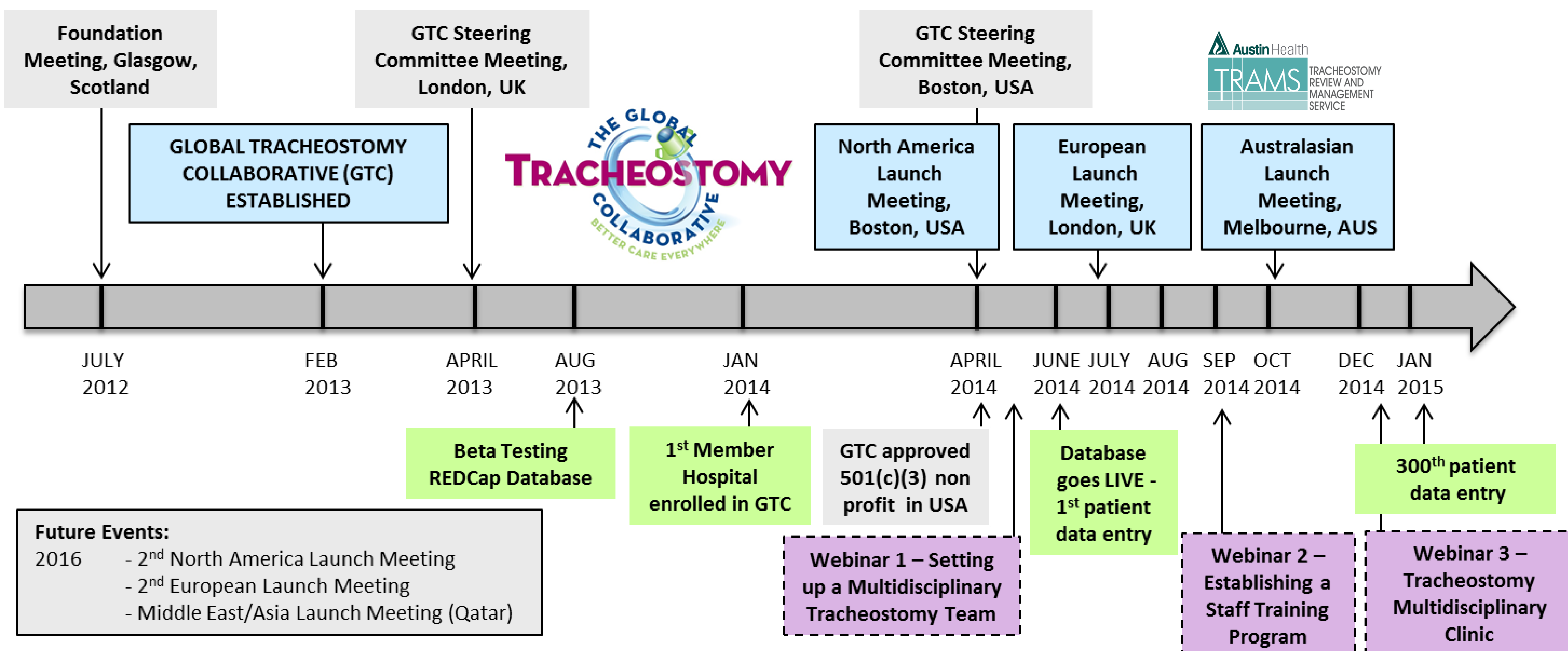


Figure 1: The Global Tracheostomy Collaborative Timeline July 2012 to January 2015