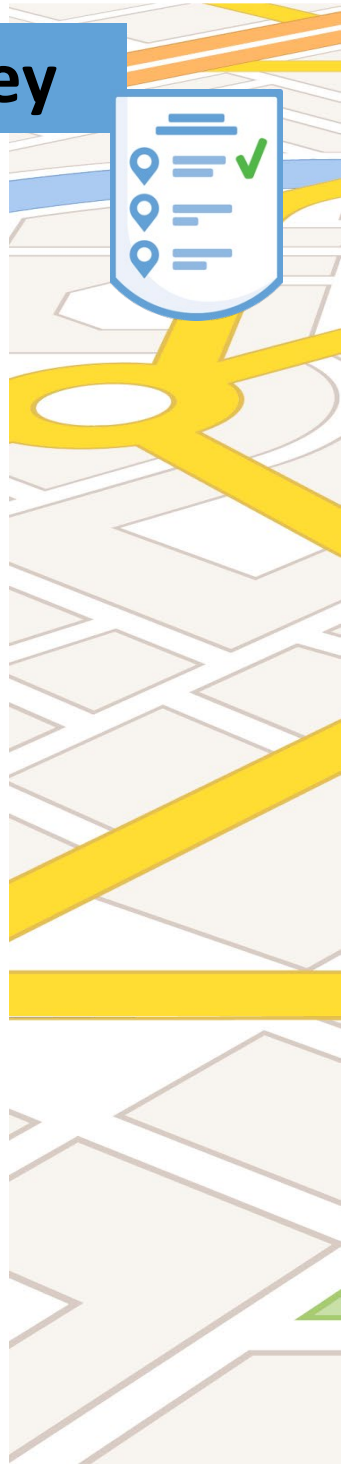
The Roadmap to Success:

Airway Safety

HSAG HQIC

Preparing for Your Journey



An adequate airway is the route for air to get into and out of the lungs. Failure to maintain and/or provide an adequate airway may result in insufficient oxygenation, increasing the likelihood of patient mortality and morbidity.

Any successful journey begins with planning and preparation. Three key areas should be addressed before beginning any quality improvement or patient safety initiative.

Leadership Commitment

The success of a project can be determined by the level of commitment and support from leadership. It is important for hospital leaders to communicate a consistent, frequent message in support of the project. The executive project champion can establish accountability, dedicate resources, and break through barriers.

Project Champion

It is important to have a person(s) who is a significant influence with frontline staff, physicians, and other key personnel. Frequently, we think of a physician as a champion as they are instrumental in garnering provider buy-in and practice change. However, depending on the project, it can be any key personnel with the authority and skills to influence change, lead by example, and assist in essential messaging of the goals and vision for a project.

Multidisciplinary Project Team

The project team should consist of representatives from key areas throughout your facility with the skills, knowledge, and experience in their fields of expertise. A team member should possess strong communication skills, have a collaborative mindset, and show a commitment to change. It is vital to **have representation from frontline staff who will be impacted most by the change**. It is also important to keep the size of your team manageable. Remember, a team can have ad hoc members whose role is to provide expertise in a specific area for a short period of time.

For more information on team forming, access the following resources at www.hsag.com/hqic-quality-series:

- Quality and Safety Series Video on Team Forming
- Quality Improvement Workbook

Airway Safety Basics—Step 1

Recruit executive sponsorship and charter a multidisciplinary airway safety team or roll into an existing committee.

Rationale: An adequate airway provides a route for air to get into and out of the lungs.

	Strategies to Implement	Tools and Resources
☐	Charter a multidisciplinary airway safety team concentrating on assessment, intubation, care of intubated patients, extubation, and care of patients recently extubated. • Recruit a physician champion. • Consider members from the emergency department (ED), intensive care unit (ICU), operating room (OR), anesthesia, respiratory therapy, clinical education, quality management, patient safety, patient/family councils, and information technology.	• SMART goals: https://www.hsag.com/hqic/quality-series/#_SMART_Goals
☐	Identify airway management barriers and develop an action plan.	
☐	Consider outcome metrics[1] of airway management adverse events, such as: • Delayed airway. • Failed airway. • Multiple attempts. • Tube malpositioning. • Unplanned extubation.	
☐	Consider process metrics[2] of adherence to protocols.	
☐	Develop SMART[3] goals.	

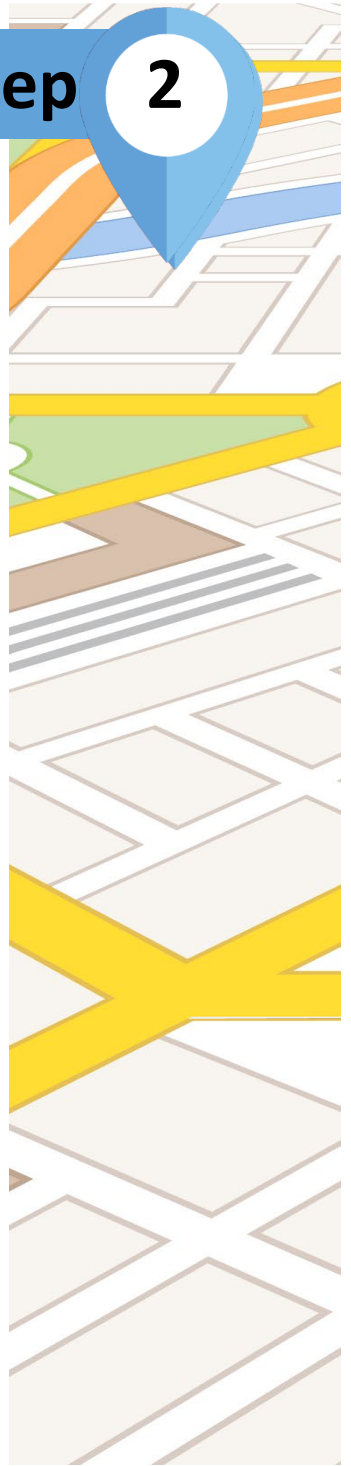
1. Outcome metrics: results
2. Process metrics: depend on your processes
3. SMART = Specific, Measurable, Attainable, Relevant, Time-bound

Airway Safety Clinical Care—Step 2

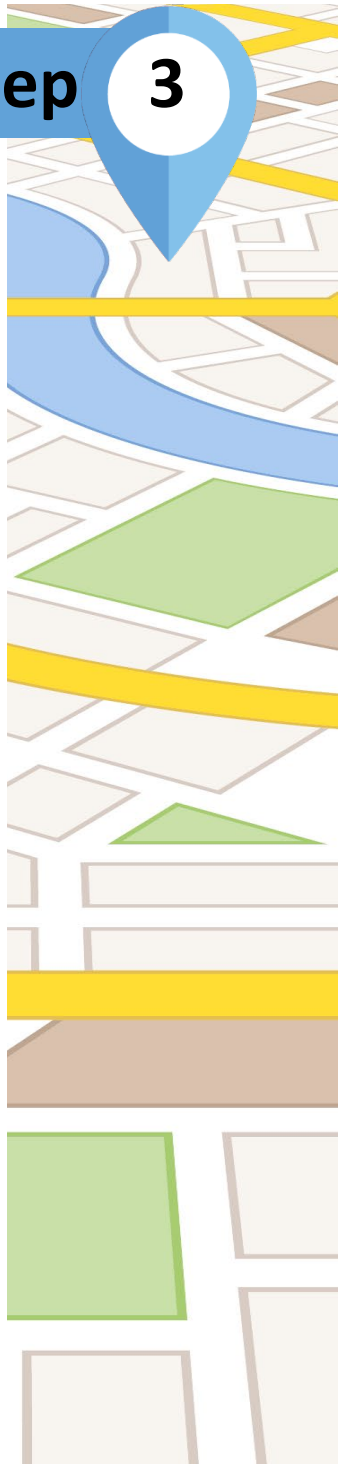
Develop and implement standardized tools and processes to improve airway management.

Rationale: Standardized tools and processes ensure patients are evaluated and treated appropriately.

	Strategies to Implement	Tools and Resources
☐	Develop and implement processes for identifying patients with difficult airways.	• Academic Life in Emergency Medicine—LEMON Assessment for Difficult Airways: https://www.aliem.com/mnemonics-for-difficult-airway/ • Whiten CE. 10 rules for approaching difficult intubation—Anesthesiology News, 2018: https://www.anesthesiologynews.com/download/TenRules_ANAM18r_WM.pdf • American Society of Anesthesiologists—Difficult Airway Algorithm. https://www.researchgate.net/figure/ASA-difficult-airway-algorithm-a-Invasive-airway-access-includes-surgical-or_fig14_289965142 • Life in the Fastlane. Extubation Assessment in the ICU: https://litfl.com/extubation-assessment-in-the-icu/ • American Nurse—Top 10 care essentials for ventilator patients: https://www.myamericannurse.com/top-10-care-essentials-for-ventilator-patients/ • Patient Safety Movement, Actionable Patient Safety Solutions—Safer Airway Management: https://patientsafetymovement.org/wp-content/uploads/2016/02/Safer-Airway-Mgmt.pdf • Patient Safety Movement, Actionable Patient Safety Solutions—Unplanned Extubation: https://patientsafetymovement.org/wp-content/uploads/2017/11/UE.pdf • Society of Critical Care Medicine—ICU Liberation Bundle. B Element: https://www.sccm.org/Clinical-Resources/ICULiberation-Home/ABCDEF-Bundles • Society for Airway Management—Unplanned Extubation Awareness and Prevention: https://www.airwaysafetymovement.org/sam
☐	Identify intubation equipment, including alternative equipment for difficult airways, and place the equipment on airway carts.	
☐	Develop and implement protocols for: • Intubation. • Care of intubated patients. • Extubation. • Care of recently extubated patients.	
☐	Address barriers your team identified during Step 1.	
☐	Offer education for providers and staff.	



Engage and Involve the Patient and Family—Step 3



Include the patient/family in the patient's care where possible.

Rationale: Shared decision-making can improve patient outcomes.

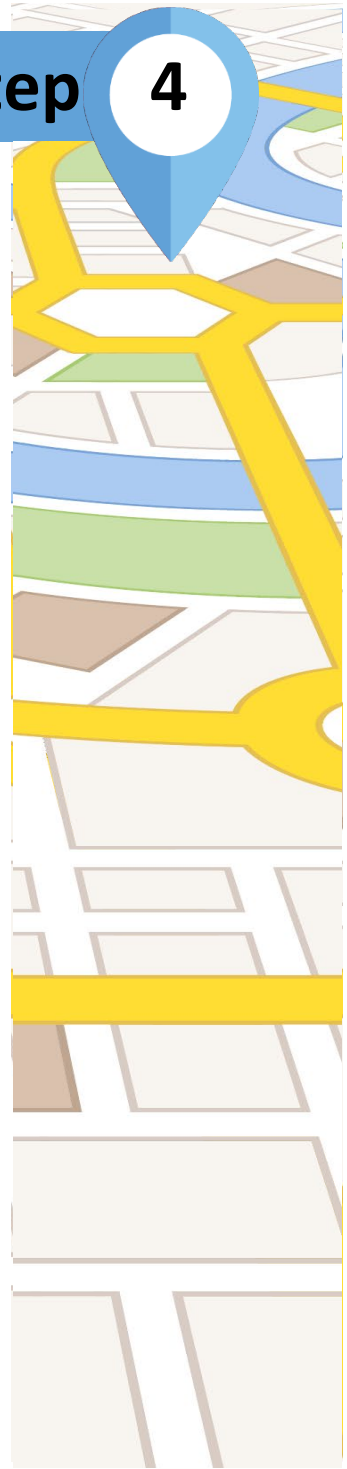
	Strategies to Implement	Tools and Resources
☐	Keep the patient/family informed regarding the patient's condition and care.	• AHRQ—Working With Patient and Families as Advisors: https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/engagingfamilies/strategy1/Strat1_Implement_Hndbook_508_v2.pdf • Society of Critical Care Medicine—ICU Liberation Bundle. F Element: https://www.sccm.org/Clinical-Resources/ICULiberation-Home/ABCDEF-Bundles • HSAG—Teach-Back: https://www.hsag.com/teach-back/
☐	Actively involve the patient/family and maintain a clear understanding of the patient/family comprehension of the illness, healthcare goals, and their culture.	
☐	Use teach-back for all patient/family education.	
☐	Include patient/family in shift huddles, bedside reports and/or multidisciplinary rounds.	
☐	Include a patient family advisor (PFA) on your airway safety team.	

Ensure Your Process is Stable—Step 4

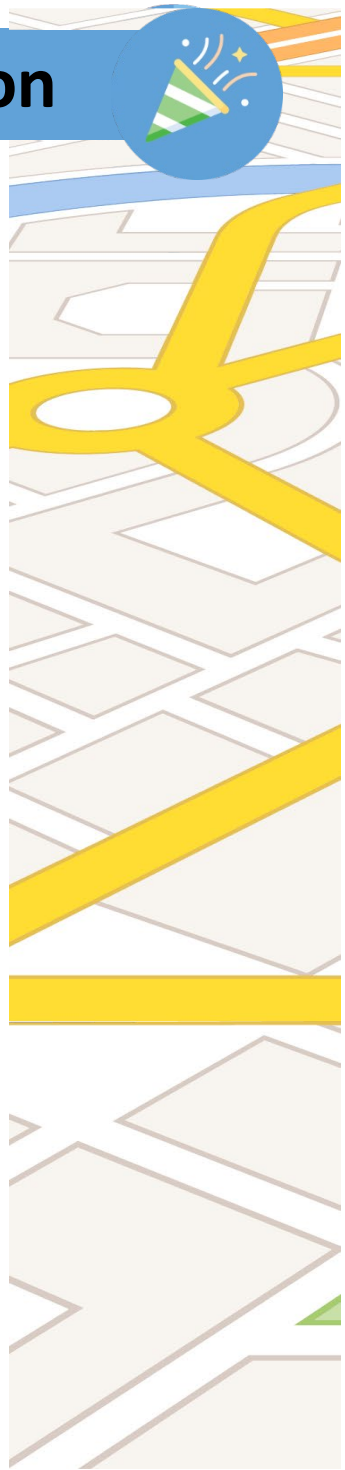
Monitor processes and outcomes with immediate feedback to stakeholders.

Rationale: Monitoring processes helps to ensure reliable, effective, and safe care is provided.

	Strategies to Implement	Tools and Resources
☐	Evaluate processes and outcomes based on the metrics determined in Steps 1 and 2.	• HSAG—5 Whys Worksheet: https://www.hsag.com/hqic/quality-series/#__Whys
☐	Provide immediate feedback to providers and staff for successes and failures.	
☐	Update protocols as needed.	



Your Final Destination



Now that you've reached your destination, it is important that your efforts are not futile. One of the most challenging aspects of quality improvement and change is sustaining the gains. These key tactics will help you ensure ongoing success.

Ensuring Your Process Is Stable

Most projects involve monitoring of both process and outcome measures. These data play an important role in identifying when you've achieved change. It is important to review your data to identify and address special cause variation; recognize positive trend changes (six to eight data points at or above goal); and achieve predictable, consistent results.
Remember: *"Every system is perfectly designed to get the results it gets."*—W.E. Deming

For more information on data, variation, and change, access the following resources at www.hsag.com/hqic-quality-series:

- Quality and Safety Series Video on Data, Variation, and Change

Control Plan/Sustainability Plan

A control or sustainability plan is a method for documenting the key elements of quality control that are necessary to assure that process changes and desired outcomes will be maintained. At a minimum, this plan should include ongoing monitoring of process steps that are critical to quality, frequency of monitoring, sampling methodology, and corrective actions if there is noted variation.

For more information on control and sustainability plans, access the following resources at www.hsag.com/hqic-quality-series:

- Quality and Safety Series Video on Control and Sustainability Plans

Project Hand-Off

Depending on the size of your facility and resources that are available, it may be necessary to hand off your project to a "process owner." A process owner is a person or department responsible for monitoring a process and sustaining the changes according to the control or sustainability plan. The person or department should be the entity that will most significantly experience the gains of the improved process or project.

Tools and Resources:

- 5 Whys Worksheet: https://www.hsag.com/hqic-quality-series
- Academic Life in Emergency Medicine. LEMON Assessment for Difficult Airways. https://www.aliem.com/mnemonics-for-difficult-airway/
- AHRQ: Working With Patient and Families as Advisors: https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/engagingfamilies/strategy1/Strat1_Implement_Hndbook_508_v2.pdf
- American Nurse. Top 10 care essentials for ventilator patients. https://www.myamericannurse.com/top-10-care-essentials-for-ventilator-patients/
- American Society of Anesthesiologists Difficult Airway Algorithm. https://www.researchgate.net/figure/ASA-difficult-airway-algorithm-a-Invasive-airway-access-includes-surgical-or_fig14_289965142
- Difficult Airway Society. DAS Difficult intubation guidelines-overview. https://das.uk.com/files/das2015intubation_guidelines.pdf
- Life in the Fastlane. Extubation Assessment in the ICU. https://litfl.com/extubation-assessment-in-the-icu/
- Patient Safety Movement Actionable Patient Safety Solutions. Safer Airway Management. https://patientsafetymovement.org/wp-content/uploads/2016/02/Safer-Airway-Mgmt.pdf
- Patient Safety Movement Actionable Patient Safety Solutions. Unplanned Extubation. https://patientsafetymovement.org/wp-content/uploads/2017/11/UE.pdf
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- Society for Airway Management. Unplanned Extubation Awareness and Prevention. https://www.airwaysafetymovement.org/sam
- Teach Back: https://www.hsag.com/en/medicare-providers/care-coordination/teach-back/

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