Scaling Safety: Adapting a Difficult Airway Program for Regional and Rural Hospitals

Real-world insights on implementing coordinated teams, standardized equipment and protocols to improve emergency airway outcomes across community and rural hospitals

Sarah Pierce has been a speaker for Verathon company, specifically Glidescope product line. All relevant financial relationships have been mitigated.

University of Idaho
School of Health and Medical Professions

Project ECHO

Meet Your Speaker

Sarah Pierce, CRNA

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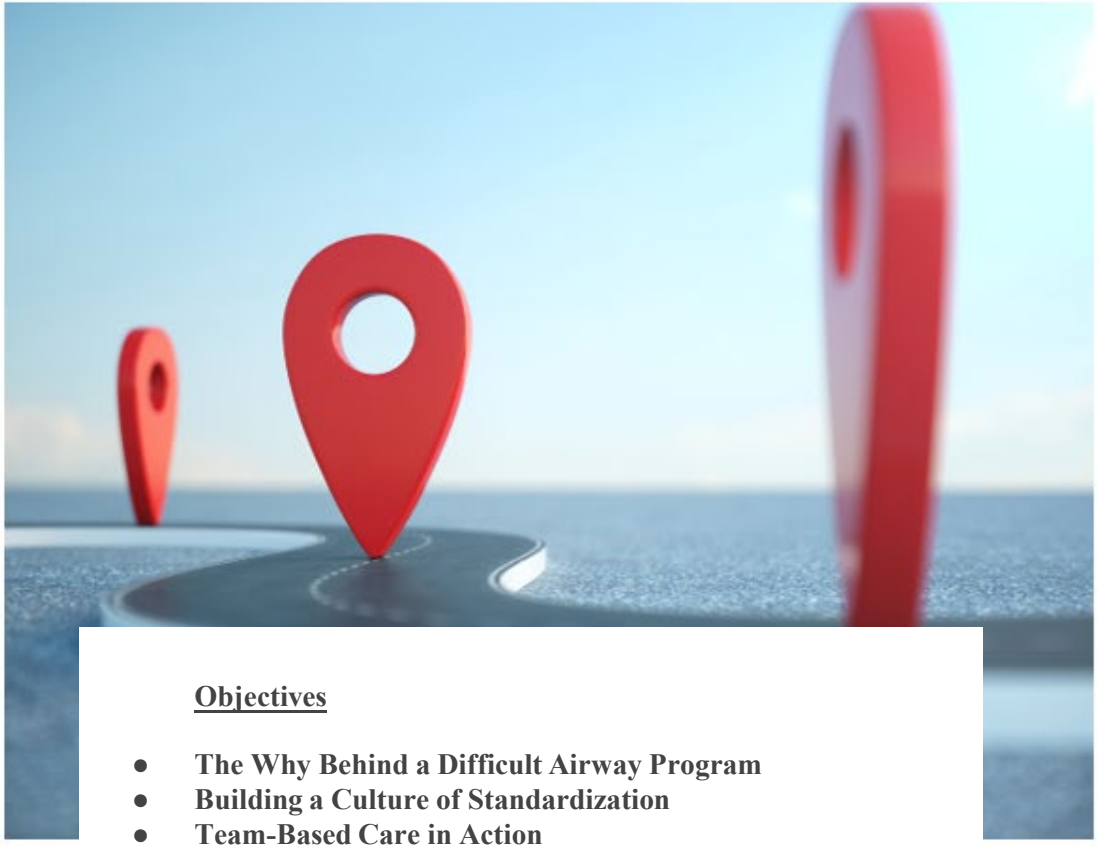
Establishing a Difficult Airway Response Team for a Regional Hospital: A Case Study in the Adoption and Diffusion of Innovations


Scaling Safety: Adapting the DART Program for Regional and Rural Hospitals in Idaho

Sarah Pierce, CRNA



Understanding the Why

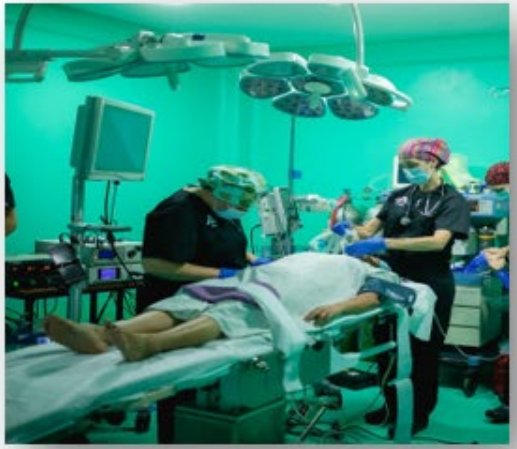
Providing you with a road map on implementation of Difficult Airway Programs by giving you a **purpose** and a **why**.

Objectives

- **The Why Behind a Difficult Airway Program**
- **Building a Culture of Standardization**
- **Team-Based Care in Action**
- **Changing the Conversation from Reaction to Prevention**

A Decade of Difficult Airway Response Team

Lessons Learned from a Hospital-Wide Difficult Airway Response Team Program



Driven by Purpose: Transforming Tragedy into Purpose

The story of Dr. deTar on our Medical Mission to Guatemala

Driven by Purpose: Transforming Tragedy into Purpose

The story of Seth Farwell, Navy Seal

Seth Farwell

U.S. Navy SEAL

An airway tragedy took Seth. His legacy drives every life we protect.

Seth's son

The legacy that drives us

What Can We Learn From the Literature

> *Difficult or failed airway management is a major contributor to patient morbidity and mortality, including potentially preventable adverse outcomes such as airway trauma, brain damage or death.*

Management of difficult tracheal intubation: a closed claims analysis · Anesthesiology, October 2019; 131(4):818–829

What We Can Learn From the Literature

>1/3 of CICO emergency claims had delayed surgical airway access

1/5 of claims cite systems failures — assistance, equipment, communication

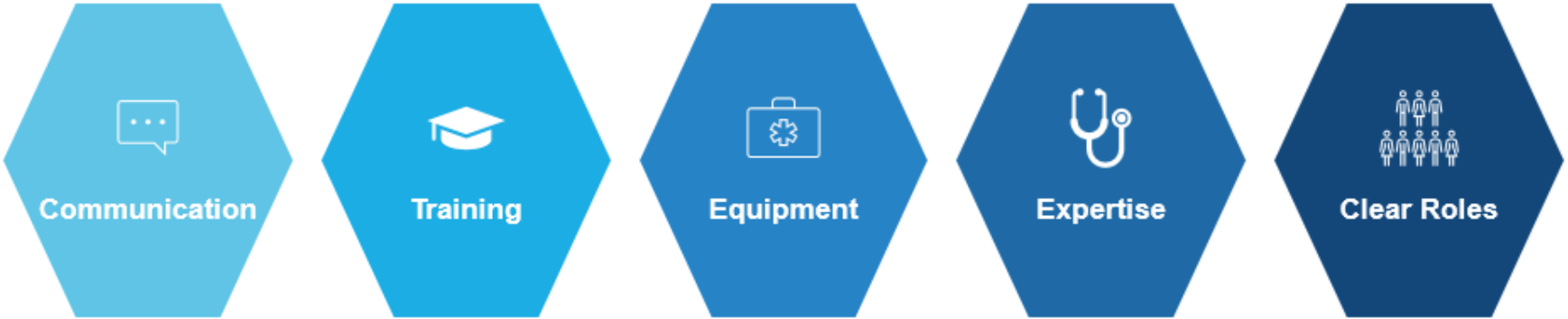
73% of 2000–2012 claims exhibited judgment failures

Gaps Missing difficult-airway carts & surgical airway equipment caused delays

Management of difficult tracheal intubation: a closed claims analysis · Anesthesiology, October 2019; 131(4):818–829

What We Can Learn From the Literature

Comprehensive review of adverse airway events revealed recurring system failures:



What We Can Learn From the Literature

Human Factors and Non-Technical Skills: Important Drivers of Difficult Airway Management Outcomes

Situational Awareness

Being aware of passage of time, having a back up plan, preparedness, calling for help

Communication

Closed-loop callouts, communication of passage of time, and shared mental models across the team

Teamwork

Defined roles, mutual support, and coordinated action when the plan fails

What Can We Learn From the Literature

> *Inadequate airway planning and judgement errors were contributors to patient harm. Our results emphasize the need to improve both practitioner skills and systems response when difficult or failed tracheal intubation is encountered.*

PRACTITIONER SKILLS

SYSTEMS RESPONSE

Management of difficult tracheal intubation: a closed claims analysis · Anesthesiology, October 2019; 131(4):818–829


Be The
Change

Building the Team

Develop a team of stakeholders that is multidisciplinary

- Leadership
- Clinicians
- Board of Trustees

Take initiative to the board of directors, C-suite executive level

- Chief Financial Officer
- CEO
- CNO

Incorporate key administrative leaders

- Legal team
- Hospital Legal Counsel

Create a program that can grow and is sustainable

Getting Administrative “Buy In”

Early investment

- $500,000
- Show how investment compares to single closed claim

Sell standardization as a pillar of safety — hospital-wide commitment

- Engage all stakeholders in selection of equipment
- Show benefits of equipment as they apply to the medical specialty

Help administration see standardization as an investment in patient safety

Prevention equals a cost savings

Sustainability

How to create a program that can grow and is sustainable

Involve the hospital foundation

- Collaborate with the philanthropic arm of hospitals
- If there are financial limitations to purchasing, help look for resources

Utilize grateful patient giving

Partner with medical schools

Look for grants to apply for

Building a Culture of Standardization

A problem that exists throughout all specialties in the hospital

- Disorganized, inconsistent airway equipment
  - Excess clutter
  - Multiple devices
  - Inconsistent stocking

Building a Culture of Standardization

The Solution:

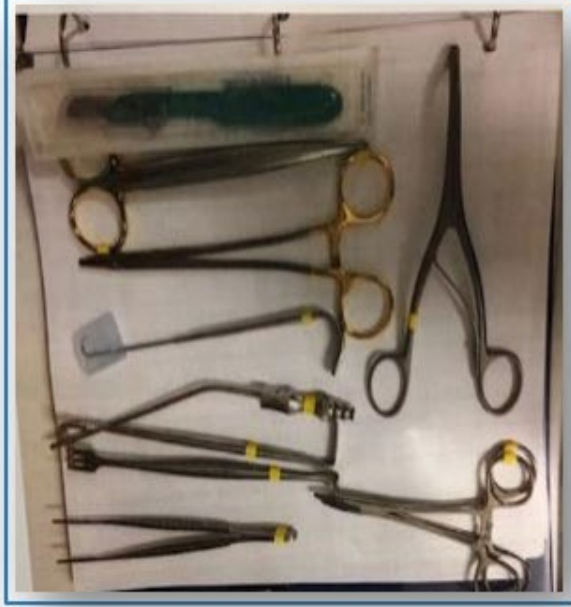
- Consistent equipment
- Dual sign off for stocking
- Locked cart
- Daily sign off on video laryngoscope device

Building a Culture of Standardization

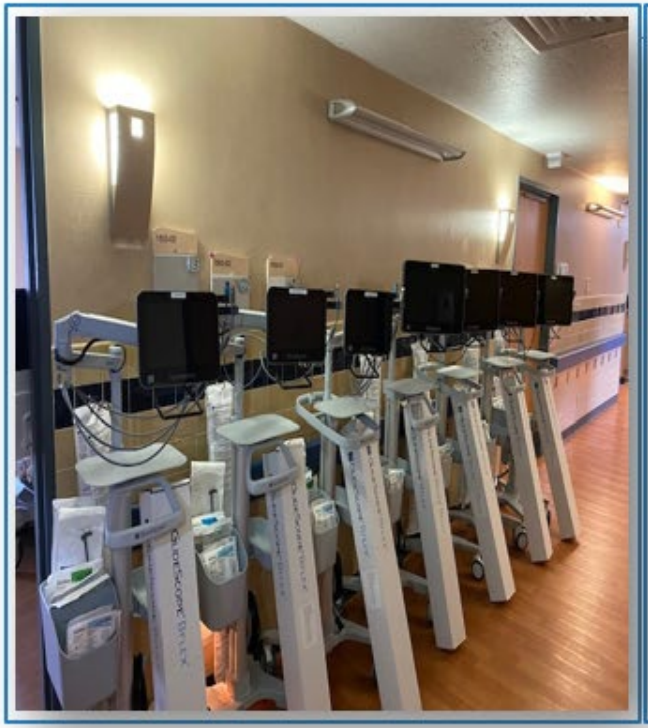
Assessment of Equipment and Adaptation for Success

Old System

New Mini Surgical Tracheostomy Sets



Building a Culture of Standardization



Building a Culture of Standardization

Single VL/Bronch device for entire institution is KEY

Making sure you can get house-wide adoption of a single device is imperative

Building a Culture of Standardization

Buy in from all specialties is imperative

This slide shows anesthesia, intensivist, pulmonologist and ENT managing a difficult airway in the OR

Building a Culture of Standardization

Roll-out of our DART program was in 2020

…..Just in time for COVID

Prevention

- Risk reduction through prevention
- Goal is for standardization throughout your hospital system
- Identification of difficult airways
- Early multidisciplinary team involvement
- Call for help early
- Change in culture and communication

Additions to the DART Cart & Utilization

The DART Cart was utilized 135 times in 2024

…and utilized 129 times in 2025.

Team Based Care in Action

What airway equipment will work best for all disciplines?

Need buy in from all disciplines: anesthesia, ENT, emergency medicine and intensivists

Dual-view platform as a shared learning tool: everyone sees, learns and works together

Team Based Care in Action

Multidisciplinary airway training expands beyond the walls of the hospital

The pre-hospital team is an extension of your hospital care of the difficult airway patient

From Reaction to Prevention

Annual Multidisciplinary Training

Mindset shift from **reactive** to **proactive**

From Reaction to Prevention

Annual Multidisciplinary Training

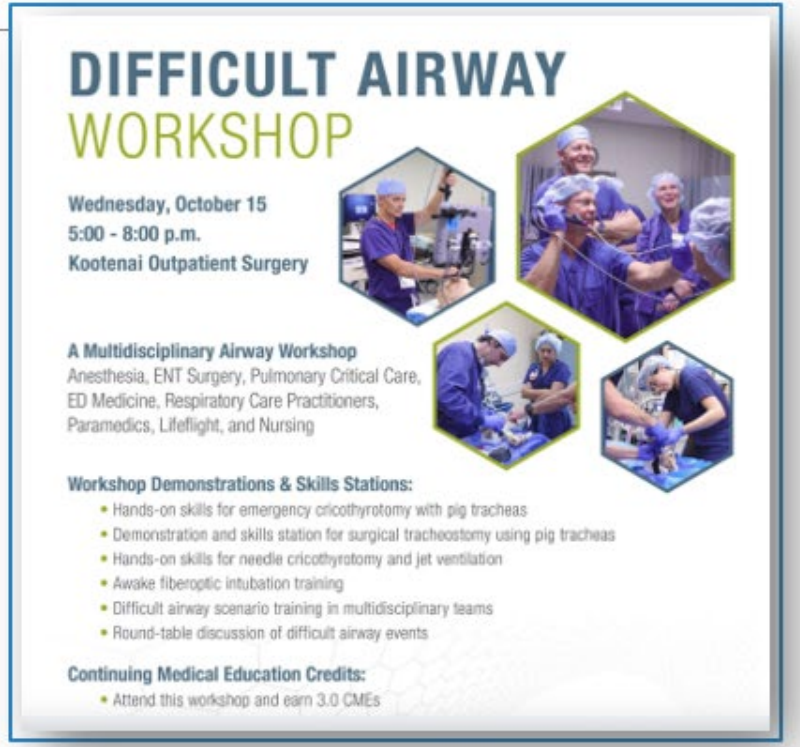
Attendees:

- Anesthesia
- Intensivists
- Respiratory Therapists
- Surgeons
- Nurses
- Emergency Medicine Physicians
- Rural Family Medicine & ED Physicians
- Paramedics
- Lifeflight

From Reaction to Prevention

Expanding education beyond one organization

- Pullman Hospital
- Gritman Hospital
- Wood River Hospital (St Luke's), Sun Valley ID
- Fairchild Air Force Base
- Bonners General Hospital
- Kootenai County EMS & rural EMS
- Post Falls Emergency
- Critical access hospitals, SMCVH



Where We Started

Grassroots beginnings — small teams, shared commitment.

How Far We Have Come

From a handful of learners...

to this.

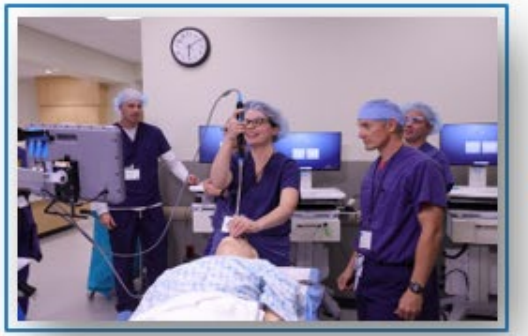
A full class of multidisciplinary clinicians — showing just how far the program has grown.

Adaptation and Progress

House-wide standardization

The progressive adaptation of consistent practice across the hospital.

Training together changes the culture



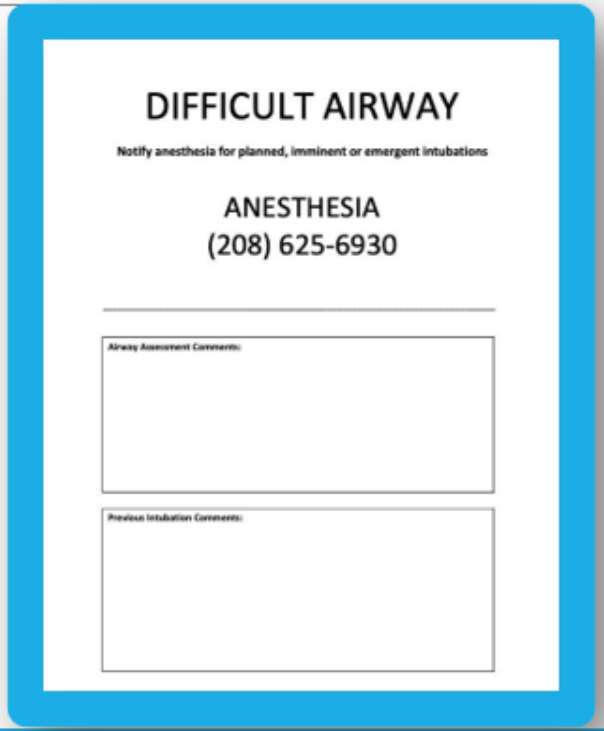
Training together across specialties

Team-based care in practice

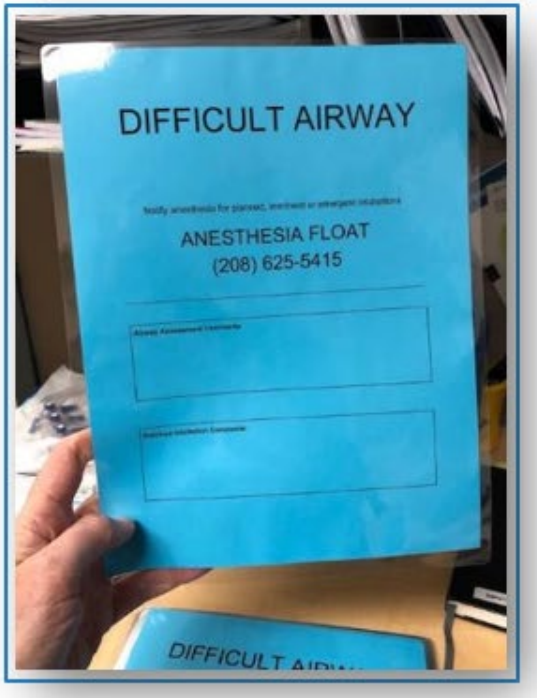
From Reaction to Prevention

Labeling of patients = Proactive Approach

- Helps ensure the video laryngoscope gets utilized on difficult airways
- Ensures that proper clinicians are at bedside to proactively manage a difficult airway



Prevention



KEY PRACTICE

Call anesthesia for planned, imminent and emergent intubations

— Difficult airway sign is posted above the bed of any patient that is identified by a provider or nurse as a potential difficult airway.

Adaptation and Progress

Developing a culture of safety evolution of teamwork with the airway

- Normalizing the use of VL on first attempt
- Encouragement to call for help
- Round table discussions
- Planning for airway management
- Team approach

"It is helping create a culture of collaboration between specialties and patient safety that extends way beyond just the rare but potentially devastating scenario of a difficult airway."

-Dr. Erik Gilbert, ENT Surgeon

2025 DAS Guidelines

Adaptation and Progress

Drivers to decrease unexpected difficult airways

Why?

- Better identification of difficult airways
- Proper planning and training for all providers involved in difficult airway management
- Standardized equipment
- Proactive vs. reactive
- Standard of care for VL with all intubations

Changing the Culture

No amount of preparation can prevent all tragic outcomes. But group efforts like this course create an environment that makes them much less likely. Similar tragic outcomes and many near misses have been averted because of this event.

Dr. Erik Gilbert
ENT Surgeon

The collegial atmosphere and hands-on training was second to none. Skill stations in multiple rooms with knowledgeable instructors. I hope we continue this for years to come — there were takeaways I look forward to sharing at our EMS Division meeting.

Andrew
Paramedic, Kootenai County EMS

Changing the Culture

This is an incredible story and excellent work for patient safety. You have obviously made an impactful difference for your patients and your hospital system. I am immeasurably humbled by your experience — it would be a nice addition to our online portal and APSF Newsletter as a review article for how to improve a system-based issue.

Steven Greenberg, MD
Editor, APSF Newsletter

APSF Newsletter — Anesthesia Patient Safety Foundation

Turning Purpose into Progress

Purpose: Turning loss into leadership and meaning

Progress: Redefining safety and culture through standardization and multidisciplinary training

Call to Action

> *When you build a culture of safety, you're not just preventing one bad outcome — you're improving care for every patient who comes through the door.*
>
> **— Sarah Pierce**

Standardize care

Prevent adverse events

Sustain education

If I can do this… you can do this. Be the change.

Closing Message

> *If your difficult airway program saves even just one life… it is enough.*
>
> — Sarah Pierce

This is the purpose.

The Seth Farwells are the purpose.

SETH FARWELL