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# DASH1A QI PROJECT

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NORTHERN  
RESCUE





EARLY, SAFE,  
OPTIMAL  
PATIENT  
CARE THAT  
SAVES LIVES



**NORTHERN  
RESCUE**



# ORGANIZATION: NRHL (NORTHERN RESCUE HELICOPTER LTD)

2

ACTIVE PROGRAMS

1,057

TRANSPORTS  
2024 YEAR TO DATE

1,601

TRANSPORTS  
2023 ANNUAL TOTAL

## TRANSPORTS BY PATIENT TYPE

(ROLLING 12 MONTHS THROUGH JULY 2024)



122

NEONATAL



158

PEDIATRIC



1,272

ADULT

## TRANSPORTS BY MODE

(ROLLING 12 MONTHS THROUGH JULY 2024)



1,334

ROTOR  
WING



218

SURFACE



0

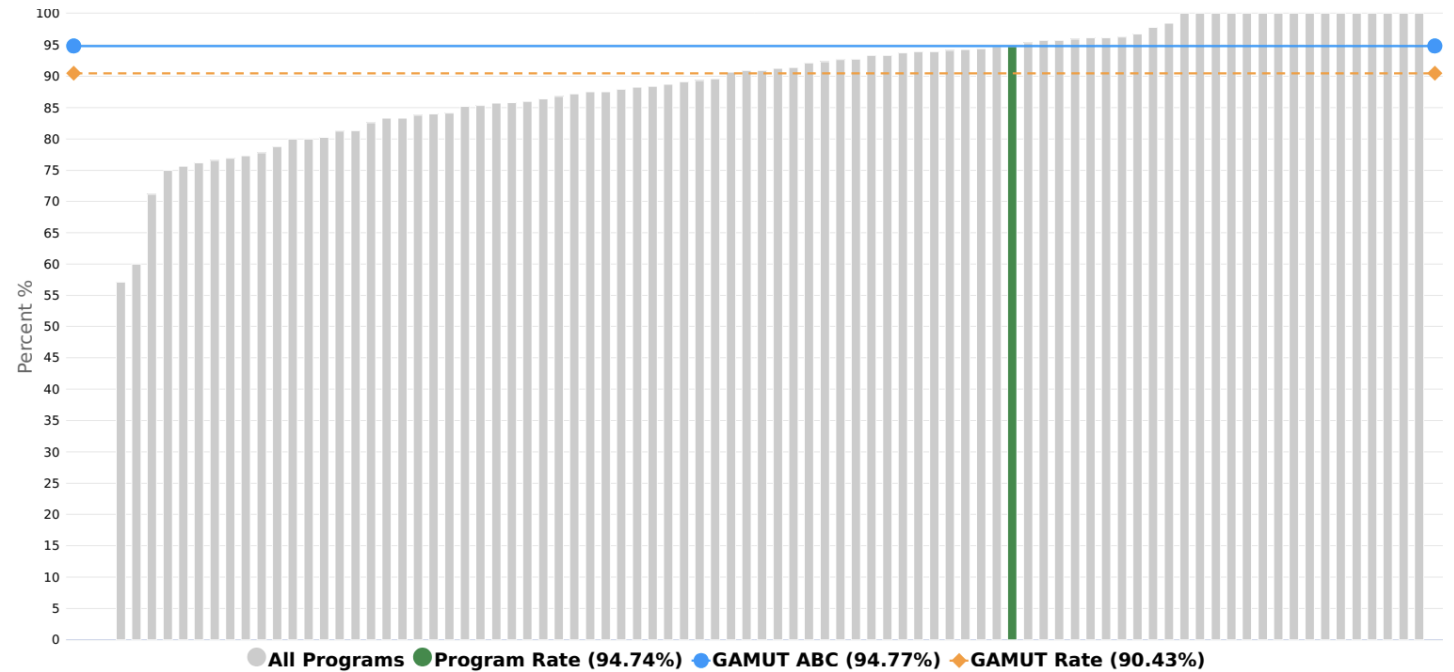
FIXED  
WING



**Collaborative Performance** | Time Period: January 2023 - December 2023  
 Program: Auckland





## INTA : First attempt ETT intubation success - adult ↑



Program 12-month rate: 18/19 (94.74%)  
 95% confidence interval: [84.70% - 100%]  
 GAMUT 12-month rate: 5474/6053 (90.43%) (data from 87 programs)  
 GAMUT 12-month Achievable Benchmark of Care: 94.77%

# Definitive airway “sans” hypoxia/hypotension on the 1<sup>st</sup> attempt

 **NUMERATOR:** Number of patient contacts during the calendar month with successful advanced airway device placement during 1st airway attempt by the transport team WITHOUT associated hypoxia or hypotension within 10 minutes of intubation medication administration

 **DENOMINATOR:** Number of patient contacts during the calendar month with an advanced airway device placement attempted by the transport team

 **NOTES:**

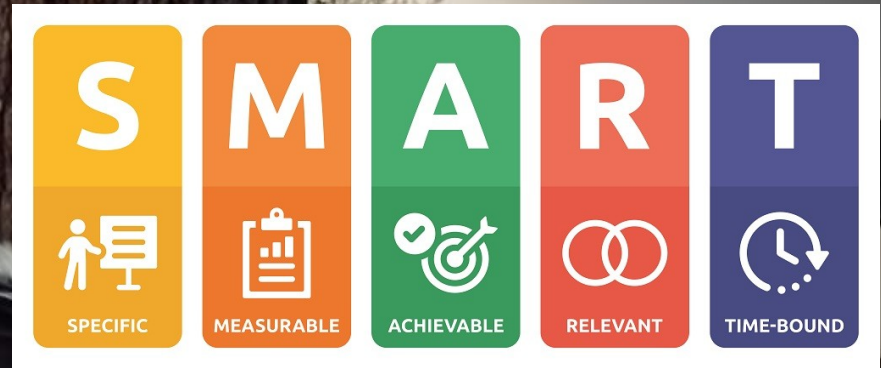
- If intubation meds are not used, use the time of laryngoscopy
- An attempt is the insertion of a laryngoscope or airway device past the lips
- Hypoxia is O<sub>2</sub> sat NEWLY falling below 90%
- Hypotension is systolic BP NEWLY falling below 90 or <5th % ile for neo/peds
- Patient with existing hypoxia/hypotension prior to intubation medications are given are EXCLUDED from the numerator and denominator

Organization Summary - DASHA : DASH 1A - adult  
 Time Period: January 2023 - December 2023  
 Organization: NRHL (Northern Rescue Helicopter Ltd)



## DASHA : DASH 1A - adult ↑

Program	Numerator	Denominator	Rate	12 Month Trend	Icon
GAMUT ABC	1835	1989	92.26%		😊*
GAMUT	4525	5538	81.71%		😊
Auckland	15	20	75.00%		😐
ORGANIZATION	50	74	67.57%		🔍
Northland	35	54	64.81%		🔍



68%



80%

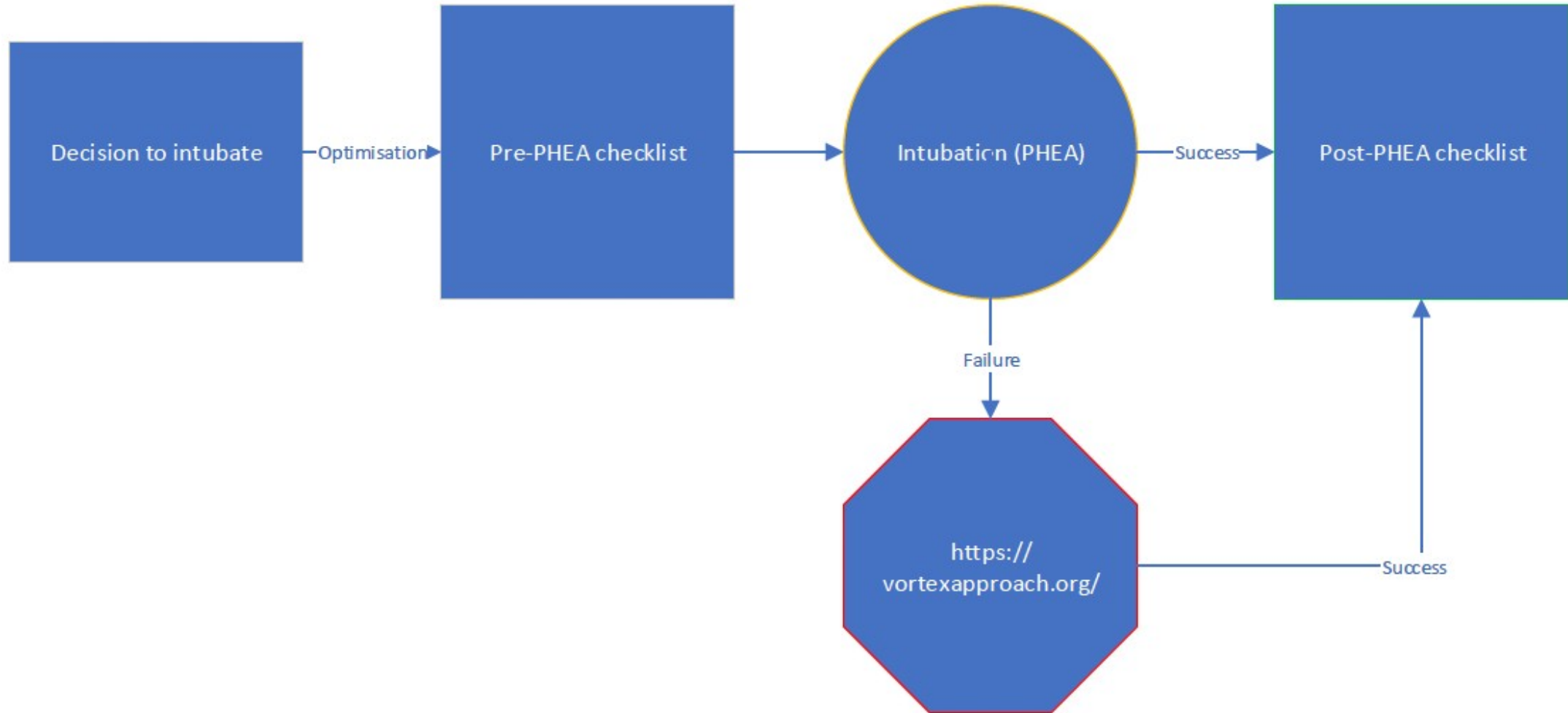
**BY 1 SEPTEMBER 2024**

# DASH-1A:

A New Metric for

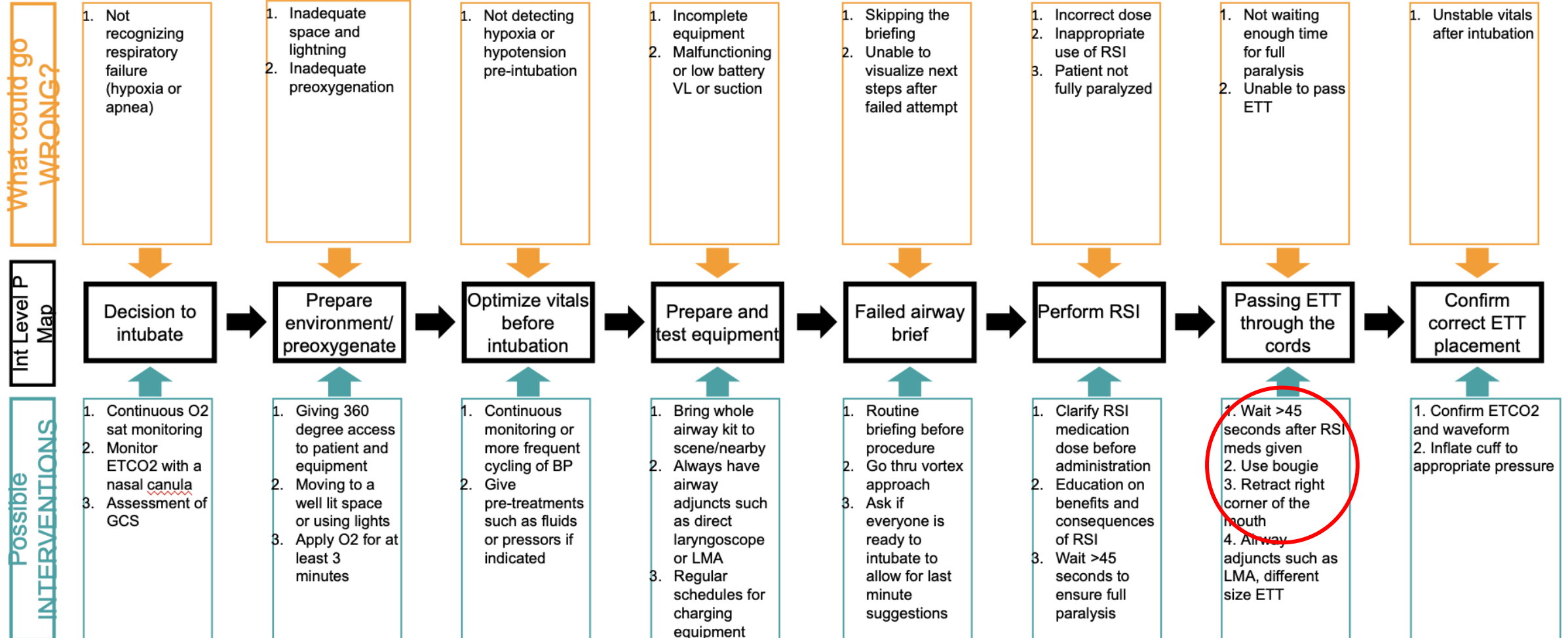
Emergency Airway Management Success

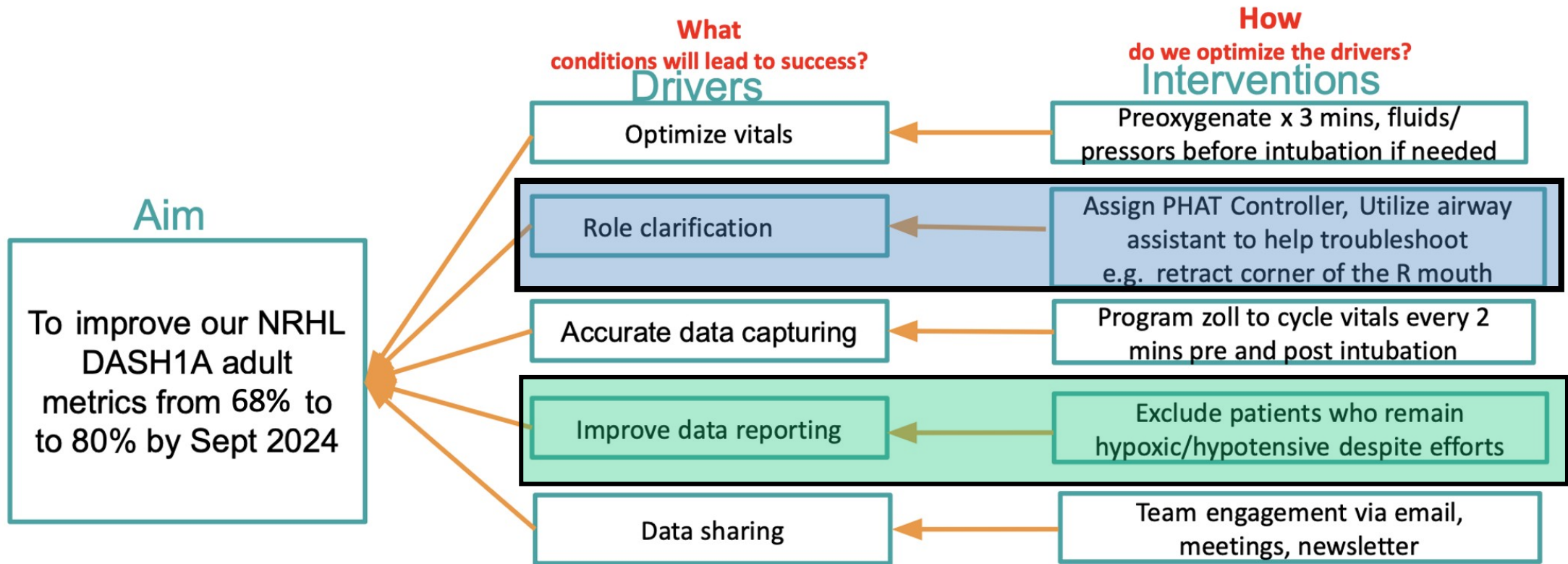
1. Confirm cardiopulmonary monitoring **and** optimize hemodynamics *before intubation*
2. Pre-oxygenation for 3 minutes *before intubation*
3. Confirm working suction and calibrated waveform capnography *before intubation*
4. **Verbally** confirm, “Everyone ready to begin intubation?”
5. RSI medications, when used, are pushed rapidly: sedative→flush→paralytic→flush, followed by a 45-second by timer pause *before intubation*
6. Intubation attempts are strictly limited to 45 seconds by timer, starting from the insertion of the laryngoscope blade
7. Retraction of the right corner of the mouth for tube placement
8. ETCO<sub>2</sub> waveform detected within 5 breaths *following intubation* **and** inflate ETT cuff unless a non-cuffed was purposely used (e.g., neonates)



# Failure Mode Effects Analysis (FMEA)

Program: NRHL





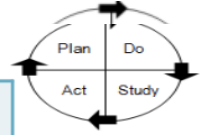


## Model for Improvement

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?



# PDSA Worksheet



<b>Project Title:</b> Improving DASH1A metrics	
<b>Intervention Name:</b>	Retraction of the right corner of the mouth by the PHAT (PreHospital Airway Team) controller/airway assistant
<b>Which key driver(s) does this test impact?</b>	Role clarification
<b>Test Cycle #:</b>	
<b>Test Cycle Start Date:</b>	June 2024
<b>Test Cycle Completion Date:</b>	Ongoing

## PLAN: *(to be completed before the test cycle)*

### Describe the objective of the test cycle:

The airway assistant has a very important role in ensuring a safe and successful intubation. They maintain situational awareness during the procedure by monitoring vitals, administering RSI medications, handing necessary equipment to the intubator and helping troubleshoot if any issues are encountered. The goal is to incorporate another troubleshooting method such as the retraction of the right corner of the mouth in order to make room for the insertion of the endotracheal tube.

List the tasks necessary to complete this test (what)	Person Responsible (Who)	When	Where
Make clinicians aware of new recommendation	Airway QI team	June	Clinical governance mtg/LMS module
Practice airway drills involving this method	All clinicians	June	On shift in training room

DASH1A data will be collected on air maestro then will be reviewed by the business intelligence analyst after information about this intervention is disseminated.

### What do you predict will happen? Qualitative and/or quantitative.

It is an easy intervention to add to the intubation process if needed. By performing this maneuver, it creates more room in the oropharynx for the insertion of the endotracheal tube to ensure first pass success. By performing this maneuver, it is predicted that the DASH-1A metrics will continue to improve.

## DO: *(to be completed after the test cycle)*

### Describe your observations and data.

### Was there anything that occurred that was not part of the plan?

## STUDY:

### How did the results compare to your prediction? What did you learn?

## ACT: *(to be completed after the test cycle)*

**Adapt**  What will you change in the next test if "adapt"?  
*(Modify intervention to reflect learning and/or increase scale)*

**Adopt**

**Abandon**

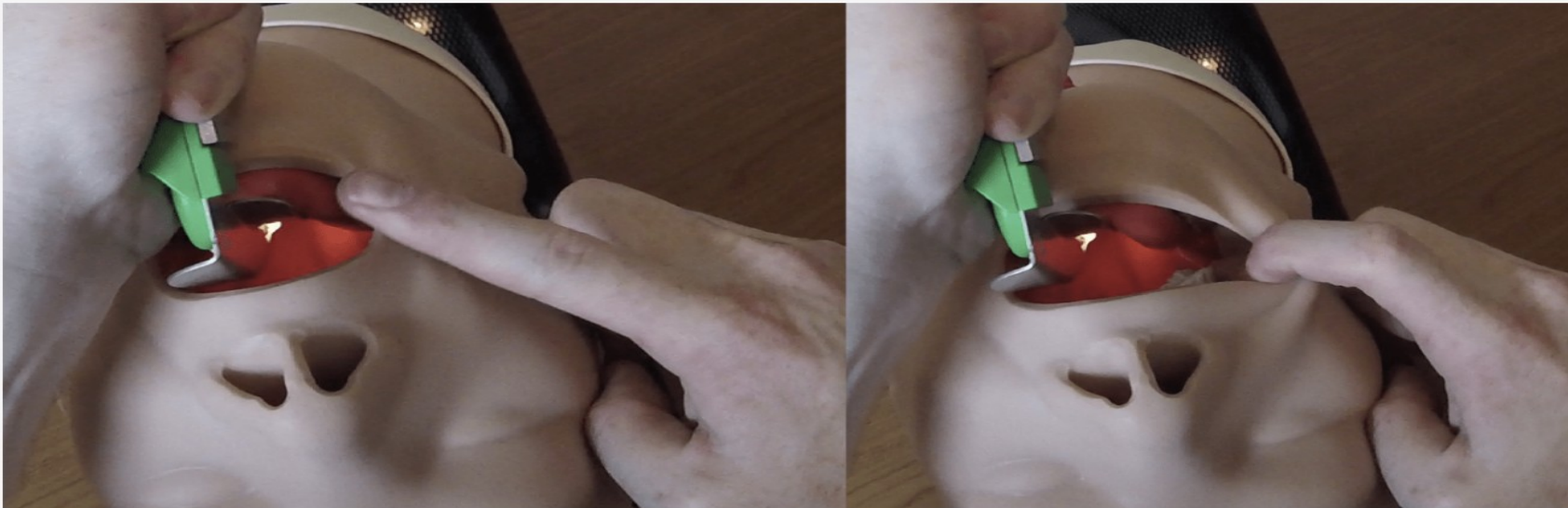
## Mouth retraction - NEW!

We'll call this the "FISH HOOK" for short.

This little manoeuvre can give the intubator WAY more room to widget the bougie into position, and get the tube better angled on the way in. We're hoping this might lead to easier intubations and a higher DASH-1A number. Of note, check out how much more you can move the bougie around when the corner of the mouth isn't holding you up.

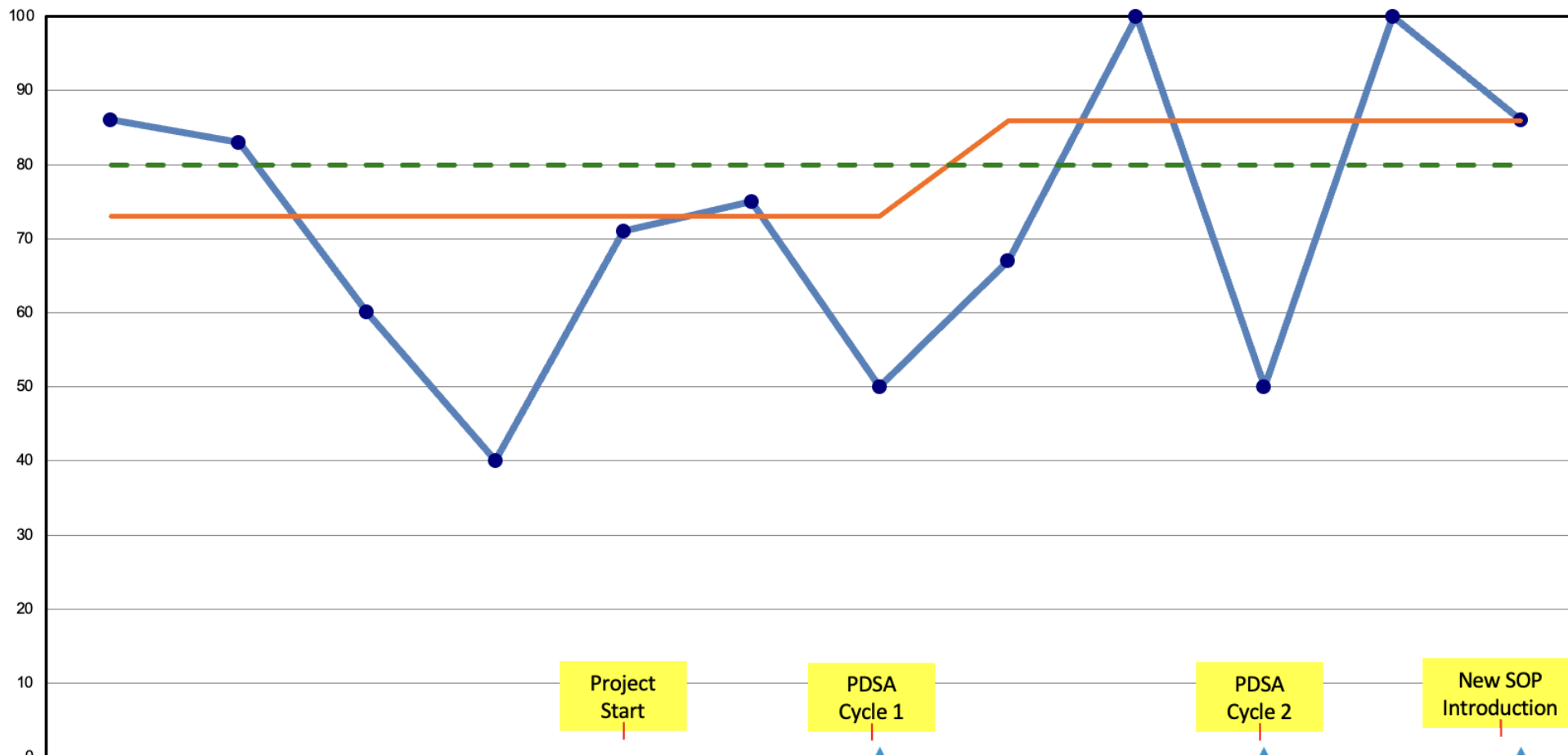
The picture below gives you an idea with two caveats:

1. The PHAT Controller can keep their finger out of the mouth and achieve the same thing.
2. The mannikin will not give you as much space as a real person will.



PERCENT

# % ACHIEVED DASH1A ADULT



	September	October	November	December	January	February	March	April	May	June	July	August
Values	86	83	60	40	71	75	50	67	100	50	100	86
Median	73	73	73	73	73	73	73	86	86	86	86	86
Goal	80	80	80	80	80	80	80	80	80	80	80	80
Extend							0			0		0

—●— Values    — Median    - - - Goal    —●— Extend

MONTH



AUCKLAND RESCUE  
HELICOPTER TRUST  
**5**  
YEARS  
1970 - 2020

**Ford**  
Go Further

douglas

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