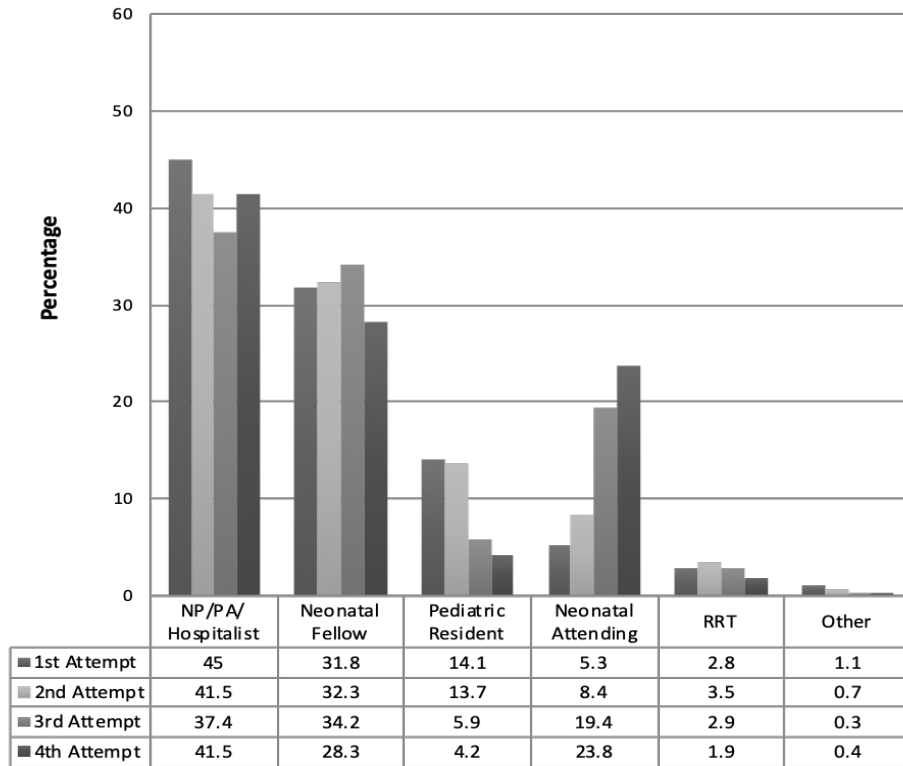
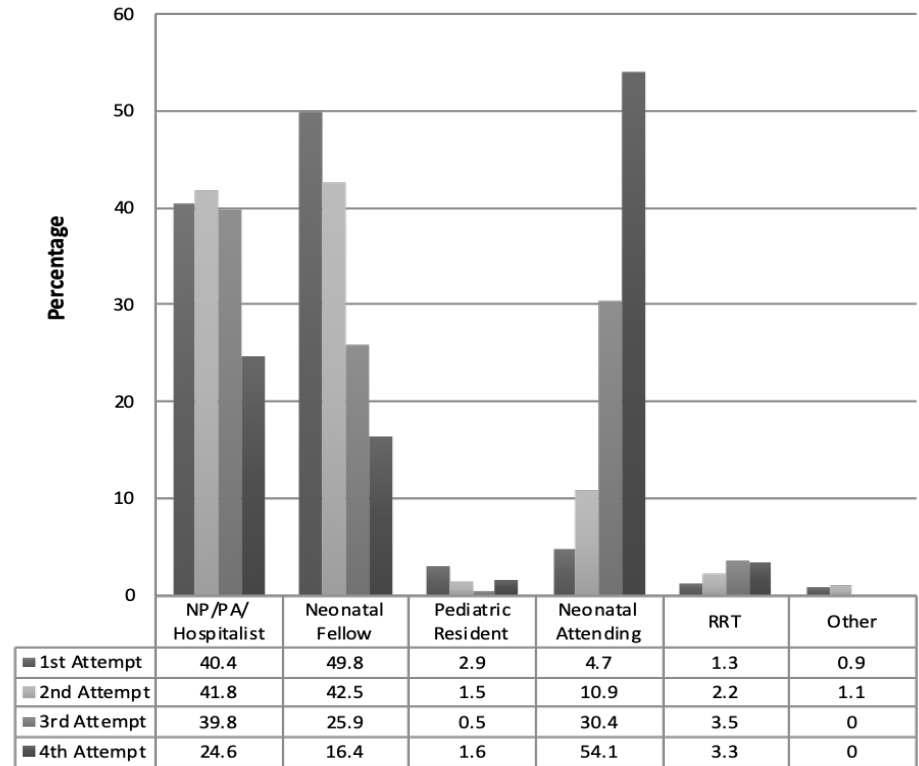


**Supplemental Figure 1: Airway Provider for each of the First 4 Intubation Attempts A) NICU B) DR**

**A) NICU**



**B) DR**



NP= Nurse Practitioner, PA= Physician's Assistant, RRT= Registered Respiratory Therapist

**Supplemental Table 1: Univariable Analysis of Type of Adverse TIAE,\* by Setting**

Type of Adverse TIAE**	NICU n=2279	Delivery Room n=866	p-value
<b>Severe TIAE; n (%)</b>			
Delayed Recognition of Esophageal Intubation	28 (1.2%)	12 (1.4%)	0.73
Chest Compressions <1 min	19 (0.8%)	12 (1.4%)	0.16
Laryngospasm	11 (0.5%)	1 (0.1%)	0.20
Pneumothorax and/or Pneumomediastinum	10 (0.4%)	2 (0.2%)	0.53
Cardiac Arrest, patient survived	8 (0.4%)	3 (0.3%)	0.99
Direct Airway Injury	7 (0.3%)	2 (0.2%)	0.99
Emesis with Aspiration	8 (0.4%)	0 (0.0%)	0.12
Cardiac Arrest, patient died	3 (0.1%)	3 (0.3%)	0.36
Hypotension Requiring Intervention	3 (0.1%)	1 (0.1%)	0.99
Hypertension Requiring Intervention	1 (<0.1%)	0 (0.0%)	0.99
<b>Non-Severe TIAE; n (%)</b>			
Immediate Recognition of Esophageal Intubation	208 (9.1%)	108 (12.5%)	0.01
Dysrhythmia	132 (5.8%)	36 (4.2%)	0.07
Mainstem Intubation	38 (1.7%)	7 (0.8%)	0.07
Gum or Dental Trauma	33 (1.4%)	7 (0.8%)	0.15
Emesis without Aspiration	25 (1.1%)	0 (0.0%)	<0.001
Pain and/or agitation requiring additional medication causing delay in intubation	11 (0.5%)	1 (0.1%)	0.20
Lip Trauma	7 (0.3%)	3 (0.3%)	0.99
Epistaxis	4 (0.2%)	1 (0.1%)	0.99

\*TIAE= tracheal intubation adverse event

\*\*More than one TIAE can be selected for a given encounter

**Supplemental Table 2:** Sensitivity Analysis of Intubation Outcomes of neonates excluding large quaternary referral center, by Setting\*

	aOR (95% CI)	
	DR, compared to NICU	p-value
First Attempt Success	1.00 (0.78 to 1.28)	0.99
Course Success	0.44 (0.26 to 0.74)	0.002
Success within 4 attempts	1.53 (1.03 to 2.26)	0.03
Any TIAE	0.80 (0.63 to 1.01)	0.06
Severe TIAE	0.70 (0.47 to 1.02)	0.07
Severe desaturation	0.74 (0.49 to 1.11)	0.15
Bradycardia	0.41 (0.23 to 0.71)	0.002

aOR= adjusted odds ratio, CI= confidence interval

\* After adjustment for weight at intubation, approach, pre-medication, indication, provider, and center

**Supplemental Table 3: Sensitivity Analysis of Intubation Outcomes of neonates  $\leq 1$  day old, by Setting\***

Outcome	aOR (95% CI) DR, compared to NICU	p-value
First Attempt Success	0.82 (0.65 to 1.04)	0.10
Course Success	0.70 (0.38 to 1.28)	0.24
Success within 4 attempts	1.60 (1.12 to 2.30)	0.01
Any TIAE	0.81 (0.60 to 1.08)	0.14
Severe TIAE	0.72 (0.46 to 1.11)	0.14
Severe desaturation	0.87 (0.51 to 1.46)	0.59
Bradycardia	0.63 (0.36 to 1.10)	0.11

aOR= adjusted odds ratio, CI= confidence interval

\* After adjustment for weight at intubation, approach, pre-medication, indication, provider, and center