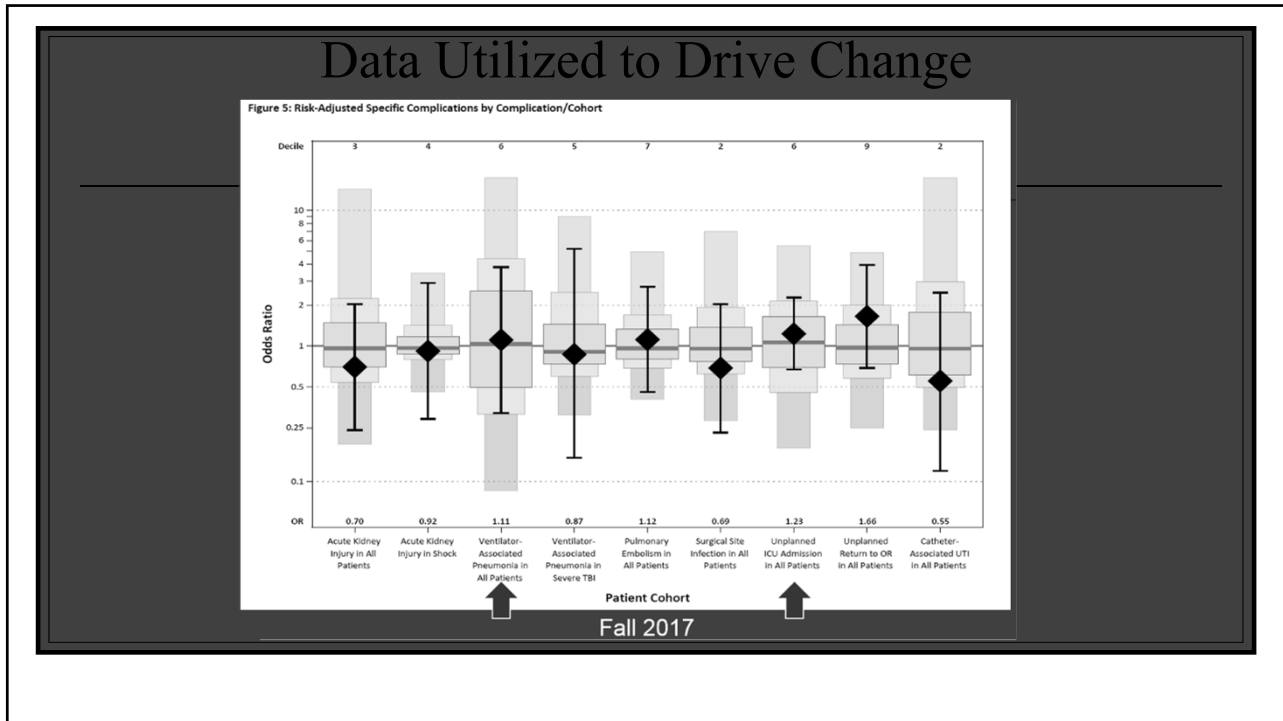


**Utilization of a Novel Screening Tool to Assess Risk
of Respiratory Failure After Blunt Thoracic Trauma:
Ensuring Proper Admission Disposition to Decrease
Unplanned ICU Admissions**

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Project Purpose

- Level II trauma center, 286 bed hospital
- 25 bed mixed ICU and 25 bed mixed PCU
- Top occurrences unplanned ICU admissions, unplanned intubations and respiratory failure.
- To identify trends which had led to this occurrence.
- Development of a screening tool for respiratory failure and the need for a higher-level of initial admission disposition.



Screening Tool

RESPIRATORY RISK ASSESSMENT (RRA)

	NO	YES
=/>3 Rib fxs?	0	1
>65 yrs. old?	0	1
+Smoker?	0	1
B/L rib fxs?	0	1
*Pulmonary complication?	0	1
**Immobilizing factor	0	1

+ Current smoker or past smoker with >= 20 pack years
 * (pulmonary contusion, pneumothorax, etc...)
 ** (Pelvic fx, spinal fx/spinal cord injury, b/l lower extremity fx, moderate/severe TBI GCS < 13)

NOTE: Using the developed scale as above, 100% of reviewed unplanned transfers to ICU secondary to respiratory distress and acute respiratory failure had a score of 3 or greater. If a patient scores >= 3, the patient is considered at **High Risk** for impending respiratory failure and need for elevated level of care/NIPPV or PPV.

Process

- Retrospective review of patients with ICU upgrades 2015-2016
- Commonalities identified amongst cohort
- Development of Respiratory Risk Assessment screening
- Prospective analysis 2017- current for patients with Rib Score of 3 or more
- Cohort tracked to identify ICU upgrades from respiratory failure
- 221 patients identified with respiratory risk assessment > or = 3
- 3 unplanned upgrades to ICU level of care

Data Post Process Change

Total patients	Unplanned upgrades	% Resp Upgrades	Failure of RRA	% RRA Failure			
221	3	1.40%	1	0.40%			
ID	AGE	Original Admit Location	Upgrade Location	RibScore	Unplanned Intubation	Complication	Failure of RRA to Capture
20171551	58	PCU	ICU	3	Y	ETOH withdrawal, resp failure	Yes
20180466	75	ICU->pcu	ICU	3	N	PTX from bleb rupture	No
20180768	51	ICU->pcu	ICU	5	Y	empyema, afib with rvr	No

