

Top 5 Most Difficult Complications

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11:00



Uncomplicating Complications

**It's
complicated**

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To be honest....

We are not experts, we just play them on TV



Please always refer to the dictionaries for the definitions and inclusion criteria.

Hospital Events

- Where do I start?
- How do I know?
- Where do I look?
- Tips and Tricks
- Just because someone says it is, it doesn't mean it is



Hospital Events

Revision 2/12/19

HOSPITAL EVENTS

GENERAL

Any medical complication that occurred during the patient's stay at your hospital.

- The patient's stay begins on arrival to the emergency department.
- Do not include reported complications that are present prior to arrival. For example, a patient arrives with a urinary tract infection as indicated by symptoms present in documentation obtained on arrival and a culture obtained on arrival.
- Do not report contaminants that did not require treatment for infectious events. For example, a patient has a BAL or blood culture that demonstrates contaminant and therapy is not provided. If a provider documents a contaminant, but treatment is provided the event is reported.
- The null value "Not Applicable" should be used for patients with no complications.
- Check all that apply.

COMPLICATION CODE

Enter all corresponding codes provided below for complications. Retired NTDS variable codes are indicated below the variable for variables that the collaborative continues to report.

Def. Source: MTQIP

Hospital Events

Revision 2/12/19

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COMPLICATION CODE

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Def. Source: MTQIP

Top Five Errors in Validation Visits

M·TQIP

- Pneumonia 6.1%
- Unplanned Intubation 4.9%
- Pressure Ulcer 3.3%
- Unplanned admit to the ICU 1.9%
- Catheter-associated Urinary Tract Infection (CAUTI) 1.6%
 - CAUTI is overcaptured significantly more than undercaptured

Pneumonia

PNEUMONIA

Patients with evidence of pneumonia that develops during hospitalization. Patients with pneumonia must meet at least one of the following three criteria:

Criterion 1:

Rales or dullness to percussion on physical examination of chest **AND** any of the following:

- a. New onset of purulent sputum or change in character of sputum
- b. Organism isolated from blood culture
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy

OR

Criterion 2:

Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion **AND** any of the following:

- a. New onset of purulent sputum or change in character of sputum
- b. Organism isolated from blood culture
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy
- d. Isolation of virus or detection of viral antigen in respiratory secretions
- e. Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen
- f. Histopathologic evidence of pneumonia

Criterion 3:

Patient meets criteria for Ventilator-Associated Pneumonia (**report** under both VAP and Pneumonia).

Def. Source: NSQIP, NTDS

Pneumonia (NTDS 20)

Pneumonia

- Is there a positive culture?
 - Blood or sputum (transtracheal aspirate)

The screenshot displays a laboratory information system interface. On the left, a 'Microbiology Viewer (NEW)' window shows a list of test results under 'Lab View'. The 'Sputum Culture' test is highlighted, with a red box around the text 'P Sputum Cu'. On the right, a 'Microbiology Result Details' window is open, showing the following information:

Sputum Culture - Accession:
Result Status - Auth (Verified)

Micro Reports | Susceptibilities | Specimen | Action List

Final Report -

PSEUDOMONAS AERUGINOSA
Quantity of Organism: NUMEROUS

Pneumonia

- But wait.....

• Do not report contaminants that did not require treatment for infectious events. For example, a patient has a BAL or blood culture that demonstrates contaminant and therapy is not provided. If a provider documents a contaminant, but treatment is provided the event is reported.

- You must look deeper to investigate if it is a contaminant
 - Ask those questions
 - Look at the MAR to see if therapy is provided (Abx days)



**DON'T LOOK AT THE
HOLE IN THE
DOUGHNUT. LOOK AT
THE WHOLE DOUGHNUT.**

BRANCH RICKEY

PICTUREQUOTES.COM

Pneumonia

- Are there changes in sputum?
 - New onset purulent sputum
 - Change in character
 - Infectious Disease Consult/Progress Notes



Navigator

<input checked="" type="checkbox"/> Specialty Clinical Info	
<input checked="" type="checkbox"/> Advance Directive Infor	
<input checked="" type="checkbox"/> Airway Information	
<input checked="" type="checkbox"/> Airway Care	
<input checked="" type="checkbox"/> Sedation Lightening Ass	
<input checked="" type="checkbox"/> Richmond Scale	
<input checked="" type="checkbox"/> CAM (Confusion Assess	
<input checked="" type="checkbox"/> Braden Assessment	
<input checked="" type="checkbox"/> Breath Sounds Assessme	
<input checked="" type="checkbox"/> Cardiovascular Assessm	
<input checked="" type="checkbox"/> Murmurs Assessment	
<input checked="" type="checkbox"/> Pulses Assessment	

Specialty Clinical In	
Cough, Sputum, and Suction	
Cough and Deep Breathe	Assist airway
Cough	Induced
Suction Device	Inline cathete
Sputum Amount	Scant
Sputum Color	None
Sputum Consistency	
Cough stimulated/assisted by	Suction, Hype
Cough suction comment	
Patient Tolerance Suction	Tolerated We
Suction poor toleration	
Suction Route	Artificial airw
Suction Performed By	Respiratory C
Suction Charge	
Endotracheal Tube Information	

Spontaneous	Assist airway
Induced	
Inline catheter	
Moderate	Copious
Cream, Tan, Yellow	Cream
Mucoid, Tenacious	Tenacious
Suction	
Tolerated Well	
Artificial airway	Endobronchi
	Respiratory C



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OR

Criterion 2:

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Pneumonia (NTDS 20)

Pneumonia

Criterion 1:

Rales or dullness to percussion on physical examination of chest

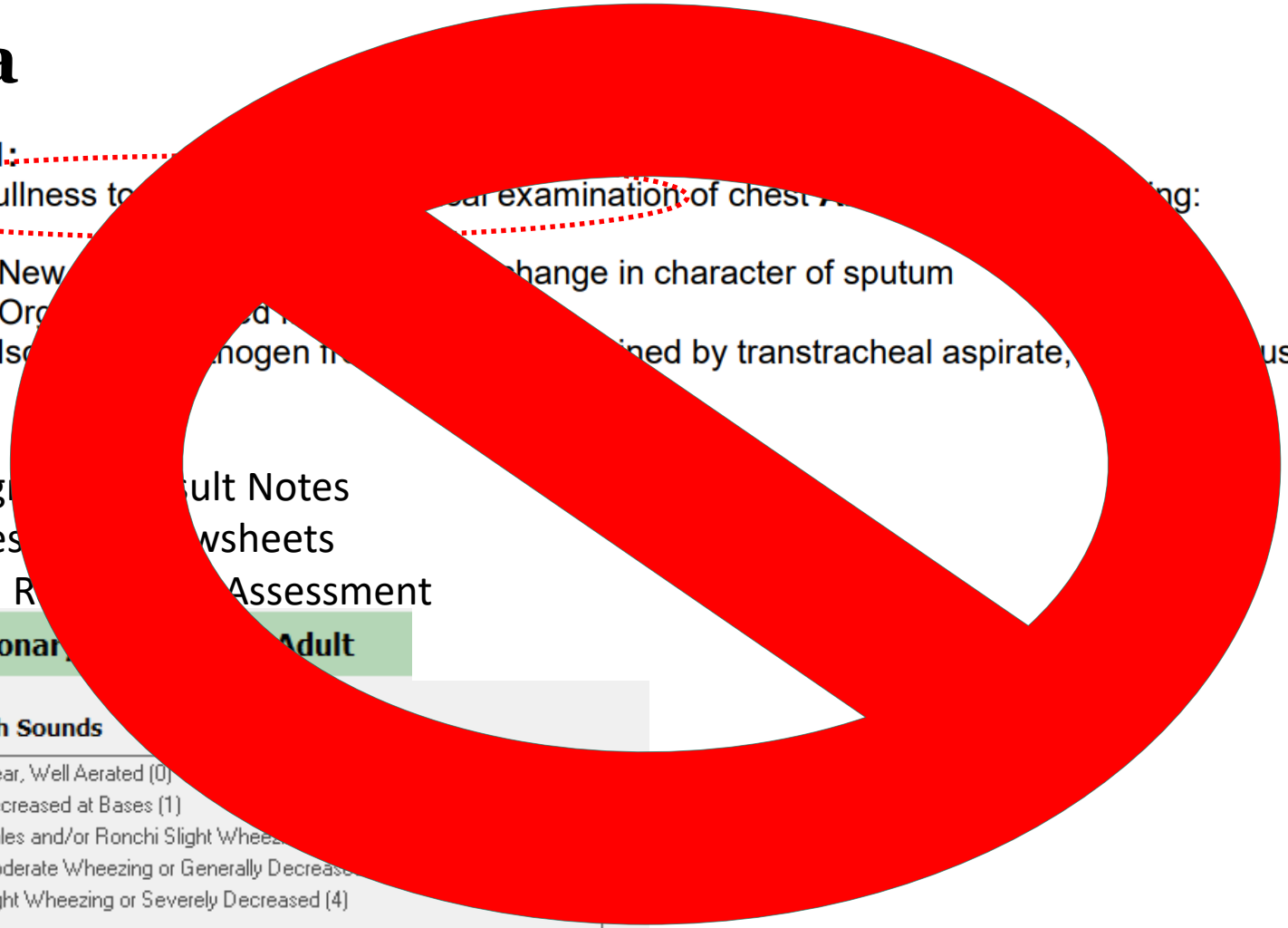
- a. New
 - b. Organized
 - c. Ischaemic
- change in character of sputum
- confirmed by transtracheal aspirate, sputum washing, or biopsy

- Progression of Notes
- Assessment Worksheets
 - Respiratory Assessment

Pulmonary Adult

Breath Sounds

- Clear, Well Aerated (0)
- Decreased at Bases (1)
- Rales and/or Ronchi Slight Wheezing
- Moderate Wheezing or Generally Decreased
- Tight Wheezing or Severely Decreased (4)



Pneumonia

Criterion 2:

Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion **AND** any of the following:

Stable to slightly more pronounced basilar opacities in the medial aspect of the right lower lobe and left retrocardiac region which represent atelectasis and or infiltrates.

IMPRESSION:

1. Increasing left pleural effusion and associated airspace disease at the left lung base.

The right IJ central venous catheter is grossly stable in position. The cardiac silhouette is unchanged in size. There is redemonstration of layering bilateral pleural effusions, right greater than left with associated atelectasis or pneumonia. There is persistent pulmonary vascular congestion with superimposed interstitial edema. There is no pneumothorax.

Hospital Event

Pneumonia

Criterion 3:

Patient meets criteria for Ventilator-Associated Pneumonia (report under both VAP and Pneumonia).

Def. Source: NSQIP, NTDS

Pneumonia (NTDS 20)

- If the patient meets for VAP collect for pneumonia too!!!!
- **Patients may meet for pneumonia but not VAP**
 - Just because they are intubated does not = VAP



If they have a VAP they have pneumonia

POP QUIZ

- A patient with multiple injuries gets intubated in the ICU for increased agitation/impending DTs. The patient goes to the OR the same day for operative repair of a fracture. He requires re-intubation post operatively within 12 hours of the OR for respiratory distress. Would this be collected as an unplanned intubation?

YES!

Unplanned intubation

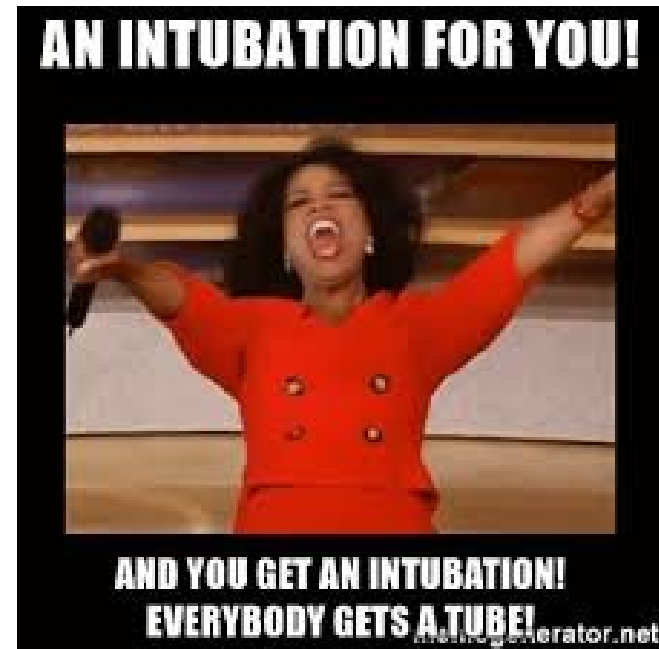
UNPLANNED INTUBATION

Patient requires placement of an endotracheal tube and mechanical or assisted ventilation manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field, emergency department, or those intubated for surgery, unplanned intubation occurs if they require reintubation >24 hours after extubation.

Def. Source: CDC, NTDS

Unplanned Intubation (NTDS 25)

- Are they intubated?
- Why?
- Where?
- When?
 - Progress Notes
 - Respiratory Notes
 - Vital Signs
 - CXRs
- CPR



Pop Quiz

- A patient is intubated by EMS and is extubated in the SICU approximately 6 hours later. She quickly becomes hypoxic and is in respiratory distress. She is re-intubated after failing a bi-pap trial approximately 12 hours after arrival. Would this be collected as unplanned intubation?

NO

Pop Quiz

- A trauma patient is intubated in the ED. He is taken to the SICU with multisystem traumatic injuries. He is extubated the next day. 3 days after arrival, his pulmonary contusions blossom and he is intubated for respiratory distress. Would this be collected as unplanned intubation?

YES!

Pressure Ulcer

PRESSURE ULCER

A localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated. Equivalent to NPUAP Stages II-IV, Unstageable/Unclassified, and Suspected Deep Tissue Injury. **Excludes intact skin with non-blanching redness (NPUAP Stage I), which is considered reversible tissue injury.**

Def. Source: NTDS, NPUAP

- High risk?
 - Immobile
 - Altered
 - Pre-existing conditions
 - Braden Scale
- Use your resources!



Pressure Ulcers



- Wound Care RN
- Skin assessments
- Consult notes
- Progress Notes
- Quality Department
- Pressure Ulcer Champion/Workgroup
- Unit leadership

Coccyx intact, purplish blistered area measures 1x1cm. Per patient, "It hurts right there."

A- Coccyx Deep Tissue Injury

P- Suggest local care with Allevyn foam to protect.

Right ischium with a stage 2 pressure injury that measures 1cmx0.5cm, wound base is shallow and pink with a scant amount of serosang drainage. Periwound skin with a pink blanchable coloration, no drainage noted from wound base during assessment.

Recommend to cover with an allevyn bordered foam dressing to protect and promote healing.

Unplanned Admission to ICU

UNPLANNED ADMISSION TO ICU

INCLUDE:

- Patients admitted to the ICU after initial transfer to the floor.
- Patients with an unplanned return to the ICU after initial ICU discharge.

EXCLUDE:

- Patients in which ICU care was required for postoperative care of a planned surgical procedure.

Def. Source: NTDS

Unplanned Admission to ICU (NTDS 31)

- Registration software
 - Program that tracks patient location
- Consult notes
- Progress notes
- Surgical Report



Unplanned admission to the ICU???

Eff Dte/Tm	Loc	Room-Bd	Ac	Pt	Srv
		N730-01	Z	IA	MED
		N730-01	Z	IA	MED
		SIC6-01	C	IA	MED
		SIC6-01	C	IA	MED
		N718-01	Z	IA	MED
		N718-01	OC	E	EMR
			9	E	EMR
			9	E	EMR
			9	E	EMR
			9	E	ERQ



Unplanned Admission to the ICU ?

Eff	Dte/Tm	Loc	Room-Bd	Ac	Pt	Srv
			SIC8-01	C	IA	MED
			SIC8-01	C	IA	MED
			235 -01	S	IA	MED
			SI13-01	C	IA	MED
			ECRM-03	W	IA	MED
				9	E	EMR
				9	E	ERQ
				9	E	ERQ



Catheter-associated urinary tract infection

CAUTI Criterion SUTI 1a:

Patient must meet 1, 2, and 3 below:



1. Patient has an indwelling urinary catheter in place for the entire day on the date of event and such catheter had been in place for >2 calendar days, on that date (day of device placement = Day 1) AND was either:
 - Present for any portion of the calendar day on the date of event, OR
 - Removed the day before the date of event
2. Patient has at least one of the following signs or symptoms:
 - Fever (>38C)
 - Suprapubic tenderness with no other recognized cause
 - Costovertebral angle pain or tenderness with no other recognized cause
3. Patient has a urine culture with no more than two species of organisms, at least one of which is bacteria >10⁵ CFU/ml.



Def. Source: CDC, NTDS

Catheter-Associated Urinary Tract Infection (NTDS 33)


Catheter-associated urinary tract infection

3. Patient has a urine culture with no more than two species of organisms, at least one of which is bacteria $>10^5$ CFU/ml.

NO CULTURE=NO CAUTI!!!!


Urine Culture - Accession
Result Status - Auth (Verified)

Micro Reports	Susceptibilities	Specimen	Comments	Action
Final Report - CORYNEBACTERIUM AMYCOLATUM Colony Count: >100,000 COLONIES/ML				



Urine Culture - Accessi
Result Status - Auth (Verified)

Micro Reports	Susceptibilities	Specimen	Action List
Final Report - CITROBACTER KOSERI Colony Count: 1000-10,000 COLONIES/ML			



Catheter-associated urinary tract infection

- If they have a positive culture that meets the definition....

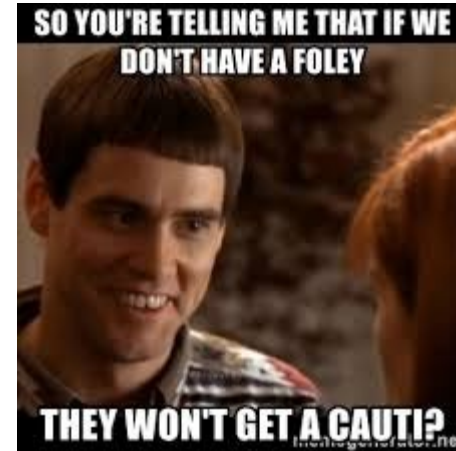


2. Patient has at least one of the following signs or symptoms:

- ★ • Fever ($>38^{\circ}\text{C}$)
- Suprapubic tenderness with no other recognized cause
- Costovertebral angle pain or tenderness with no other recognized cause

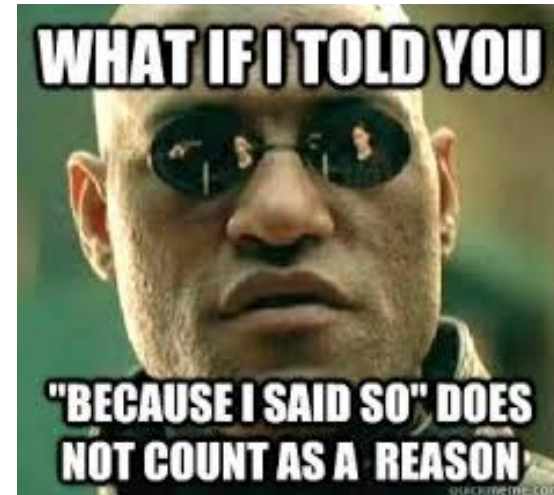
Catheter-associated urinary tract infection

- Do they have an indwelling catheter?
 - When was it put in
 - Nursing assessment
 - I&O
 - Progress notes
- Day of placement = Day 1
 - Has to be in place >2 days
 - Or removed the day before the date of the event (positive culture)



Remember....

- Follow the NTDB and MTQIP data dictionaries
- Ask questions
- Different collection criteria for different organizations
 - Quality, ICU, OR, ID, etc. may have different collection criteria
 - Not always apples to apples (CAUTI, VAP, Pneumonia)
- Look at the whole picture
- Just because someone says it is, doesn't mean it is



References

- <https://www.mtqip.org/>
- <http://www.ntdsdictionary.org/>
- <https://www.npuap.org/>
- <https://www.cdc.gov/hai/vap/vap.html>
- <https://www.cdc.gov/infectioncontrol/guidelines/cauti/>

Questions???

**I'm confused.
No wait...
*Maybe I'm not.***

