GAMUT Database Quality Metrics

2014 Year-to-date Report

This demonstration report is based on incomplete data for the year. In each of the graphs that follow, the vertical line shows the overall combined rate for all progams. The dots reflect the rate for each program and the horizontal bars indicate the 95% confidence interval. When the horizontal bar does not cross the vertical line, this indicates that program's rate is significantly higher or lower than the overall rate.

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Contents

1   Introduction

This report is designed to give representation of a high-level cumulative overview of the individual institutional performance related to the included quality metrics. As we've discussed, quality improvement run charts will be included in a separate report and are designed to present performance over time which is the optimal way to monitor these quality data on a continual basis.

Included in this report are the 12 national consensus metrics. Reports for the remaining Ohio Collaborative metrics will be generated separately. You'll notice that there are some areas where we suspect that the detection of events is not sensitive (ex. medication administration errors) which is likely to afford us the opportunity as a collaborative to build the right detection/reporting mechanism.

Lastly, please remember that these data are de-identified, though there may be examples where you'll be able to infer which program identifier is associated with which program. There are no formal data-sharing agreements in place, though it is the expectation that these data should be solely used for quality improvement of critical care transport both locally and nationally. Performance data should not be used for marketing one program versus another.

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Program Name - ID crosswalk

2   Clinical metrics

2.1   Unintended neonatal hypothermia upon arrival to destination

The number of neonates (infants less than 28 days) with admission temperatures at the destination facility less than 36.5 C axillary (excluding those being actively cooled) DIVIDED by the number of neonates transported during the calendar month.

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## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

2.2 Verification of tracheal tube placement

The number of tracheal tubes (TT) on transport (regardless of whether or not the transport team placed them themselves) for which there is documentation confirming placement using a minimum of 2 of the following confirmatory techniques: x-ray, direct visualization through the cords, continuous capnometry, or use of a colorimetric capnometer, and assessment for symetric breath sounds DIVIDED by the number of intubated patients transported during the calendar month.

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

2.3   Unplanned dislodgement of therapeutic devices

The number of documented dislodgements (may be more than 1 per tansport) while under the care of the transport team of the following devices (IOs, IVs, UACs/UVCs, central venous lines, arterial lines, tracheal tubes, chest tubes, and tracheostomy tubes) DIVIDED by the number of transports during the calendar month. This does not include IVs that infiltrate without obvious dislodgement.

```
## Error:  elements of 'n' must be positive
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

2.4   Neonatal: First attempt tracheal tube placement success

The total number of intubations successful on the first attempt DIVIDED by the number of patients on whom intubation was attempted by the transport team during the calendar month. "Intubation attempt" is further defined as laryngoscopy by any member of the transport team regardless of whether there is an attempt to pass a tracheal tube. A successful intubation is further defined as that which has been confirmed as described in "Verification of TT tube placement." First-attempt success should not be disqualified by necessary adjustments to the depth of the TT and re-securing it. Includes patients less than 28 days (neonates).

```
## Error:  only defined on a data frame with all numeric variables
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

2.5   Pediatric: First attempt tracheal tube placement success

The total number of intubations successful on the first attempt DIVIDED by the number of patients on whom intubation was attempted by the transport team during the calendar month. "Intubation attempt" is further defined as laryngoscopy by any member of the transport team regardless of whether there is an attempt to pass a tracheal tube. A successful intubation is further defined as that which has ben confmrimed as described in "Verification of TT tube placement." First-attempt success should not be disqualified by necessary adjustments to the depth of the TT and re-securing it. Includes patients older than than 28 days (non-neonates).

```
## Error:  only defined on a data frame with all numeric variables
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

3 Operational metrics

3.1 Use of a standardized patient-care handoff

The number of transports for which there is documented use of a standardized hand-off procedure for turning over patient care at the destination hospital DIVIDED by the number of transports during the calendar month.

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## Error:  elements of 'x' must not be greater than those of 'n'
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

3.2   Average mobilization time of the transport team

The average time (includes all transports in the calendar month, excluding transports scheduled in advance and patient transports out of the originating facility) in minutes (rounded up to nearest minute) from the start of the referral phone call to the transport team to the time the transport team is en route to the referral facility. "Stacked" trips or transports right after the last during which the team never returns to base should still be included in this count.

```
## Error:  object 'timeData' not found
```

Average time weighted by monthly run volume.

4 Safety metrics

4.1 Rate of patient medical equipment failure during transport

The number of documented medical equipment failures (may be more than 1 per transport) while under the care of the transport team DIVIDED by the number of transports during the calendar month. Examples include IV pumps and ventilators that malfunction during transport, broken monitor leads, empty medical gas tanks, etc.

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## Error:  zero-length inputs cannot be mixed with those of non-zero length
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

4.2 Rate of transport-related patient injuries

The number of documented transport-related patient injuries or deaths DIVIDED by the number of transports during the calendar month. Excluded are injuries and deaths related to the medical care itself or the omission of medical care. Examples include a patient fall, a loose piece of transport equipment that falls and strikes the patient, injury suffered in a transport vehicle accident, etc.

```
## Error:  zero-length inputs cannot be mixed with those of non-zero length
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

4.3   Rate of transport-related crew injuries

The number of transport-related crew injuries or deaths reported to the institution's employee health department or equivalent during the calendar month DIVIDED by the number of transports during the calendar month.

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## Error:  zero-length inputs cannot be mixed with those of non-zero length
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

5   Rare Events

5.1   Rate of medication administration errors

The number of documented medication administration errors during a calendar month DIVIDED by the number of transports during the calendar month. Medication administration errors are further defined as drug admnistrations violating any of the "five-rights" – right patient, right medication, right dose, right route, and right time.

```
## Error:  zero-length inputs cannot be mixed with those of non-zero length
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```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

5.2 Rate of CPR performed during transport

The number of transports during which chest compressions are performed from the time the transport team assumes care ("hands on") until the patient hand-off is completed at the destination facility DIVIDED by the number of transports during the calendar month. Multiple episodes of chest compressions in a single transport should only be counted as one episode. If CPR is in progress when the team arrives, this should not be included in this count.

```
## Error:  arguments imply differing number of rows:  29, 0
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

5.3   Rate of Serious Reportable Events (SREs)

The number of SREs during the calendar month DIVIDED by the number of transports during the calendar month. An SRE is defined as any unanticipated and largely preventable event involving death, life-threatening consequences, or serious physical or psychological harm. Qualifying events include but are not limited to the National Quality Forum's Serious Reportable Events available at `http://www.qualityforum.org/Topics/SREs/List_of_SREs.aspx`.

```
## Error:  zero-length inputs cannot be mixed with those of non-zero length
```

```
## Error:  no applicable method for 'xtable' applied to an object of class "list"
```

ID	program_name	total_patients
100	Indiana LifeLine Adult	
101	Tampa General Neo	24
102	UC Davis Childrens	335
103	Childrens Hospital Philadelphia	1293
104	Northwest MedStar	2058
105	AirMed International	
106	Yale-New Haven Childrens Peds	100
107	AEL LA	
108	Mattel Childrens	
109	Mayo Clinic	38
110	Nationwide Childrens	850
111	PHI NM Adult/Peds	0
112	AEL TX	
114	Childrens WI	549
115	Cleveland Clinic	
116	St Vincent CCT	182
117	AEL GA	
118	NETS	
119	Childrens Kings Daughters	528
120	Geisinger	
121	Akron Childrens	485
122	AEL WV	
123	Indiana LifeLine Neo	
124	AEL OH	
125	Dell Childrens	47
126	MedFlight Ohio	
127	Nemours Childrens	883
128	Cleveland Clinic Childrens	144
129	PHI Redding Neo	
130	AEL IN	
131	PHI Tucson Neo	
132	Cincinnati Childrens	952
133	Indiana LifeLine Peds	
134	Mercy Life Line	173
135	Memorial Childrens	92
136	AEL MO	
137	AEL IL	
138	AEL MS	
139	Medical City Dallas	
140	Brenner Childrens	251
141	AEL KY	
142	Yale-New Haven Childrens Neo	
143	Dayton Childrens	551
144	Texas Childrens	139
145	Air St Lukes	
146	Boston MedFlight	672
147	AEL TN	
148	Kentucky Childrens	283
149	AEL IA	
150	Airlink	63
151	Cardinal Glennon Childrens	200
152	Barbara Bush Childrens	
153	BC EHS	
154	LifeFlight of Maine	
155	PHI Phoenix Neo	145
156	Kaiser Santa Clara	26
157	AEL AL	