

# GAMUT QI Collaborative Consensus Quality Metrics (v. 05/16/2016)

<p>1) Ventilator use in patients<sup>1</sup> with advanced airways</p> <p><b>This metric will be categorized by age into the following 3 categories (neonatal defined as infants &lt;29 days, pediatric defined as patients age 29 days to &lt;18 years, and adults defined as age 18 or older). This metric is reported as “Percent of patient transport contacts with an advanced airway<sup>2</sup> supported by a mechanical ventilator.</b></p>	<p>NUMERATOR: Number of transport patient contacts during the calendar month involving a patient with an advanced airway<sup>2</sup> supported by a mechanical ventilator.</p> <p>DENOMINATOR: Number of transport patient contacts during the calendar month involving a patient with an advanced airway<sup>2</sup>.</p> <p>Metric differentiated amongst neonatal, pediatric, adult patient contacts</p>
<p>2) Scene and bedside times for STEMI activation</p> <p><b>This metric is reported as “Average (mean) bedside time and average scene time (min) for STEMI activation patients.”</b></p>	<p><i>STEMI patients are defined as those patients with ST segment elevation by ECG and those patients with STEMI activations initiated by the referring facilities or the transport team itself.</i></p> <p>AVERAGE TIME: (Arithmetic mean in minutes rounded up) for the following intervals:</p> <p><b>A. From initial bedside patient contact by the transport team to departing bedside with the patient en route to transport vehicle</b></p> <p>NUMERATOR: Sum of bedside times (in minutes) for all transport patient contacts with STEMI activations</p> <p>DENOMINATOR: Number of transport patient contacts with STEMI activations.</p> <p><b>B. From initial scene arrival by the transport team to departing the scene with the patient en route to transport vehicle (i.e., “skids down/skids up” or “ground arrival/departure”).</b></p> <p>NUMERATOR: Sum of scene times (in minutes) for all transport patient contacts with STEMI activations.</p> <p>DENOMINATOR: Number of transport patient contacts with STEMI activations.</p>
<p>3) Unintended neonatal hypothermia</p> <p><b>This metric is reported as “Percent of transported neonates hypothermic upon admission.”</b></p>	<p>NUMERATOR: The number of neonates (infants less than 29 days) with admission temperatures at the destination facility less than 36.5 axillary (excluding those being intentionally cooled, either actively or passively)</p> <p>DENOMINATOR: Number of neonates transported during the calendar month.</p>

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<p>4) Blood glucose check for altered mental status</p> <p><b>This metric is reported as “Percent of patient transport contacts with altered mental status or focal neurologic deficit with a documented blood glucose check.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with GCS &lt; 15 (or focal neurologic deficit with suspicion of stroke) at the time of initial transport evaluation that have a documented blood glucose check. A blood glucose check includes those checks by the transport team or prior to transport team arrival if reviewed and documented by the transport team.</p> <p>DENOMINATOR: Number of patient transport contacts with GCS &lt;15 or neurologic deficit (at the time of initial transport evaluation) during the calendar month.</p>
<p>5) Waveform capnography ventilated patients.</p> <p><b>This metric will be categorized by age into the following 3 categories (neonatal defined as infants &lt;29 days, pediatric defined as patients age 29 days to &lt;18 years, and adults defined as age 18 or older). This metric is reported as “Percent of patient transport contacts with advanced airways<sup>2</sup> in whom continuous waveform capnography was used.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with an advanced airway<sup>2</sup> for whom waveform capnography is initiated and/or maintained throughout transport by the transport team. Waveform capnography is defined as a quantitative, graphical, and real time measurement of the partial pressure of CO<sub>2</sub> in each exhalation.</p> <p>DENOMINATOR: Number of transport patient contacts during the calendar month involving a patient with an advanced airway<sup>2</sup>.</p>
<p>6) First attempt tracheal tube (TT) success</p> <p><b>This metric will be categorized by age into the following 3 categories (neonatal defined as infants &lt;29 days, pediatric defined as patients age 29 days to &lt;18 years, and adults defined as age 18 or older). This metric is reported as “Percent of patient transport contacts successfully intubated on the 1st attempt by the transport team.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with successful TT placement during the 1<sup>st</sup> intubation attempt by the transport team. First-attempt success should not be disqualified by necessary adjustments to the depth of the TT and re-securing it.</p> <p>DENOMINATOR: Number of patient transport contacts undergoing intubation by the transport team during the calendar month.</p> <p><i>An attempt is defined as the insertion of a laryngoscope or the insertion of any bougie or airway device (e.g. TT or LMA) past the lips.</i></p>

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<p>7) DASH 1A- Definitive airway “sans” hypoxia/hypotension on first attempt</p> <p><b>This metric will be categorized by age into the following 3 categories (neonatal defined as infants &lt;29 days, pediatric defined as patients age 29 days to &lt;18 years, and adults defined as age 18 or older). This metric is reported as “Percent of patients with definitive airway during the 1st attempt by the transport team without suffering hypoxia or hypotension.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with successful advanced airway<sup>2</sup> device placement (TT/cricothyrotomy tube/supraglottic airway) during 1<sup>st</sup> airway attempt by the transport team WITHOUT associated hypoxia or hypotension. An attempt is defined as the insertion of a laryngoscope, the insertion of any bougie or advanced airway device<sup>2</sup> (e.g. TT or LMA) past the lips, or the touching of scalpel or other “cric” instrumentation to the neck. Hypoxia is defined as oxygen saturation newly falling below 90%. Hypotension is defined as systolic blood pressure in adults &lt; 90 mm Hg and SBP &lt;5th percentile in children &lt; 17 years of age.<sup>3</sup></p> <p>DENOMINATOR: Number of patient transport contacts undergoing an airway attempt by the transport team during the calendar month.</p>
<p>8) Verification of TT placement</p> <p><b>This metric is reported as the “Percent of intubated patient transport contacts with documentation of confirmed tracheal tube placement.”</b></p>	<p>NUMERATOR: The number of patient transport contacts of patients with tracheal tubes, regardless of whether or not the transport team placed them themselves, for which there is documentation confirming placement using capnography plus at least 1 of the following methods for TT confirmation: direct visualization, chest radiograph, or symmetric breath sounds.</p> <p>DENOMINATOR: Number of patient transport contacts with tracheal tubes during the calendar month.</p>
<p>9) Over-triage in mode of transportation</p> <p><b>This metric is reported as the “Percent of the HEMS patient transport contacts discharged without hospital admission.”</b></p>	<p>NUMERATOR: The number of HEMS patient transport contacts involving patients discharged directly from the emergency department or not admitted to the hospital. Patients placed in observation (as an outpatient) in the emergency department are included in the numerator. Patient deaths during transport or in the emergency department prior to admission are excluded from the numerator.</p> <p>DENOMINATOR: The number of HEMS patient transport contacts during the calendar month.</p>
<p>10) Medication errors on transport</p> <p><b>This metric will be converted to and reported as a “Rolling 12 month medication error rate per 10,000 patient transport contacts.”</b></p>	<p>NUMERATOR: The number of documented medication administration errors (may be more than 1 per transport) during any transport patient contact. A medication error typically violates one or more of the “7 Rights;” right patient, right drug, right dose, right route, right time, right technique, right documentation. There may be more than one medication error during a single patient transport contact and each of those should be included separately.</p> <p>DENOMINATOR: Number of patient transport contacts during the calendar month.</p>

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<p>11) Rapid Sequence Intubation protocol compliance</p> <p><b>This metric is reported as “Percent of patient transport contacts undergoing RSI where all indicated elements of the program’s RSI protocol were completed.”</b></p>	<p>NUMERATOR: Number of patient transport contacts where ALL indicated elements of a program’s Rapid Sequence Intubation/Induction (RSI) protocol were completed.</p> <p>DENOMINATOR: Number of patient transport contacts that received advanced airway<sup>2</sup> management by the transport team and met inclusion criteria for use of the RSI protocol during the calendar month.</p>
<p>12) Appropriate management of blood pressure for aortic emergencies</p> <p><b>This metric is reported as “Percent of patient transport contacts with known or suspected aortic dissection receiving indicated blood pressure and heart rate therapies.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with known or suspected aortic dissection with heart rates less than 60 beats per minute and systolic blood pressures less than 120 mm Hg OR documented interventions during transport aimed at achieving these parameters.</p> <p>DENOMINATOR: Number of patients transported with known or suspected aortic dissection in the calendar month.</p>
<p>13) Unplanned dislodgements of therapeutic devices</p> <p><b>This metric is reported as “Unplanned dislodgements of therapeutic devices per 1000 patient transport contacts.”</b></p>	<p>NUMERATOR: The number of documented unplanned dislodgements (may be more than 1 per transport) while under the care of the transport team of the following devices (IOs, IVs, UACs/UVCs, central venous lines, arterial lines, advanced airway<sup>2</sup>, chest tubes, and tracheostomy tubes). This does not include IVs that infiltrate without obvious dislodgement.</p> <p>DENOMINATOR: Number of transport patient contacts during the calendar month.</p>
<p>14) Rate of Serious Reportable Events (SREs)</p> <p><b>This metric will be converted to and reported as a “Rolling 12 month SRE rate per 10,000 patient transport contacts.”</b></p>	<p>NUMERATOR: The number of SREs 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 <a href="http://www.qualityforum.org/Topics/SREs/List_of_SREs.aspx">http://www.qualityforum.org/Topics/SREs/List_of_SREs.aspx</a>.</p> <p>DENOMINATOR: All patient transport contacts during the calendar month.</p>

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<p>15) Incidence of hypoxia during transport</p> <p><b>This metric is reported as “Percent of patient transport contacts experiencing transport-related hypoxia.”</b></p>	<p>NUMERATOR: Number of patient transport contacts during which the documented pulse oximetry reading drops below 90%. Multiple incidents with one patient are considered as one incident. If the pulse oximetry reading is chronically low or is below 90% when contact is made, the patient is not included except for those patients where the saturation has been corrected to greater than 90% and falls again.</p> <p>DENOMINATOR: Number of patient transport contacts during the calendar month (excluding those with chronic oxygen saturations lower than 90% or oxygen saturations lower than 90% that persist throughout the entire transport).</p>
<p>16) Management of hypertension in hemorrhagic stroke</p> <p><b>This metric is reported as “Percent of transport patient contacts with hemorrhagic stroke and appropriate blood pressure management.”</b></p>	<p>NUMERATOR: Number of known hemorrhagic stroke transport contacts with goal systolic blood pressure (SBP) less than 160 (OR 20% less than initial MAP for initial SBP greater than 200) at transfer of care to the receiving hospital. Hemorrhagic stroke is defined as non-traumatic, intraparenchymal hemorrhagic bleed identified on CT or MRI.</p> <p>DENOMINATOR: Number of known hemorrhagic stroke patient transport contacts during the calendar month.</p>
<p>17) ECG interpretation for STEMI patients</p> <p><b>This metric is reported as “Percent of transport patient contacts with accurately interpreted 12-lead ECG evaluations.”</b></p>	<p>NUMERATOR: Number of 12-lead ECGs in transport patient contacts with possible cardiac ischemia correctly evaluated for STEMI by the transport team as confirmed by the interpreting physician. Administrative/Medical Director review may substitute for receiving physician review in instances where the receiving physician interpretation is not documented.</p> <p>DENOMINATOR: Number of 12-lead ECGs in transport contacts assessed by the transport team for evaluation of possible cardiac ischemia during the calendar month.</p>
<p>18) Appropriate management of hemorrhagic shock</p> <p><b>This metric is reported as the “Percent of patient transport contacts with hemorrhagic shock appropriately managed.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with hemorrhagic shock in which 1) hemorrhage control measures are initiated if applicable, 2) IV administration of blood products if available, and 3) IV fluid resuscitation meeting the following:</p> <ol style="list-style-type: none"> <li>1. Signs of adequate tissue perfusion, or</li> <li>2. SBP <math>\geq</math> 70+ 2 x age (yrs) or <math>\geq</math>90 mmHg or MAP <math>&gt;</math>65</li> <li>3. Maximum of 2 liters in adults or 40 mL/kg in children <math>&lt;</math>16 years of age.</li> </ol> <p>DENOMINATOR: Number of patient contacts with hemorrhagic shock during the calendar month. Hemorrhagic shock is defined as hypovolemic shock resulting from confirmed or suspected hemorrhage with clinical signs of hypoperfusion.</p>

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<p>19) Medical equipment failure</p> <p><b>The metric is reported as “Medical equipment failures per 1000 patient transport contacts.”</b></p>	<p>NUMERATOR: The number of documented medical equipment failures (may be more than 1 per transport) while under the care of the transport team. Examples include IV pumps and ventilators that malfunction during transport, broken monitor leads, empty medical gas tanks, etc.</p> <p>DENOMINATOR: The number of transports during the calendar month.</p>
<p>20) Adverse drug event during transport</p> <p><b>The metric is reported as “Adverse drug events per 1000 patient transport contacts.”</b></p>	<p>NUMERATOR: Number of patient transport contacts for which there is documentation of an unanticipated drug related event during transport. Adverse drug events (ADEs) are defined as any injuries resulting from medication use, including physical harm, mental harm, or loss of function.</p> <p>DENOMINATOR: Number of patient transport contacts during the calendar month</p>
<p>21) Patient near-miss or precursor adverse events</p> <p><b>This metric is reported as a “Rolling 12 month transport-related patient mishap rate per 10,000 patient transport contacts.”</b></p>	<p>NUMERATOR: The number of documented transport-related patient near-misses or patient precursor adverse events. Near-miss events are defined as deviations from generally accepted performance standards that occurred but did not “reach” the patient, perhaps because the error was caught. Precursor adverse events are deviations from generally accepted performance standards that reach the patient but result in no harm or minimal, temporary patient harm. Excluded are injuries and deaths related to the medical/surgical conditions themselves. Examples include patient falls, loose pieces of transport equipment that fall and strike a patient, injuries suffered in a transport vehicle accident, etc.</p> <p>DENOMINATOR: The number of patient transport contacts during the calendar month</p>
<p>22) Reliable pain assessments</p> <p><b>The metric is reported as “Percent of patient transport contacts with a documented pain assessment.”</b></p>	<p>NUMERATOR: Number of patient transport contacts with documented pain assessments using age-appropriate pain scales</p> <p>DENOMINATOR: Number of patient transport contacts during the calendar month.</p>
<p>23) Average mobilization time of the transport team</p> <p><b>This metric is reported as “Average (mean) mobilization time for all unscheduled transports during the calendar month.”</b></p>	<p>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 be included in this count.</p>

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<p>24) Rate of transport-related patient injuries</p> <p><b>This metric is reported as a “Rolling 12 month transport-related patient injury rate per 10,000 transports.”</b></p>	<p>NUMERATOR: The number of documented transport-related patient injuries or deaths.</p> <p>DENOMINATOR: 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.</p>
<p>25) Rate of CPR performed during transport</p> <p><b>This metric is reported as a “Rolling 12 month CPR rate per 10,000 transports.”</b></p>	<p>NUMERATOR: 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.</p> <p>DENOMINATOR: 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.</p>
<p>26) Rate of transport-related crew injury</p> <p><b>The metric is reported as a “Rolling 12 month transport-related crew injury rate per 10,000 transports.”</b></p>	<p>NUMERATOR: The number of transport-related crew injuries or deaths reported to the institution’s employee health department or equivalent during the calendar month.</p> <p>DENOMINATOR: The number of transports during the calendar month.</p>
<p>27) Use of a standardized patient care hand-off</p> <p><b>This metric is reported as “Percentage of transports involving a standardized patient care hand-off.”</b></p>	<p>NUMERATOR: 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.</p> <p>DENOMINATOR: The number of transports during the calendar month.</p>

1 In instances where a specialty team (i.e. neonatal or pediatric specialty team is being transported by the regional transfer service), it is the responsibility of the team providing patient care to report metrics data. (i.e., neonatal specialty team should report neonatal hypothermia rate for its transport service – not the non-specialty team who is providing transportation and complementing the specialty service)

2 Advanced airway is defined as a tracheal tube, laryngeal mask airway, esophageal-tracheal Combitube, tracheostomy tube, King Airway, cricothyroidotomy tube, or equivalent