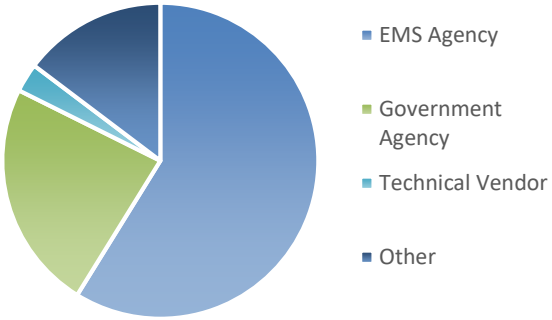
NEMSQA EMS Compass 2.0 Public Comment Period and Response to Public Comments

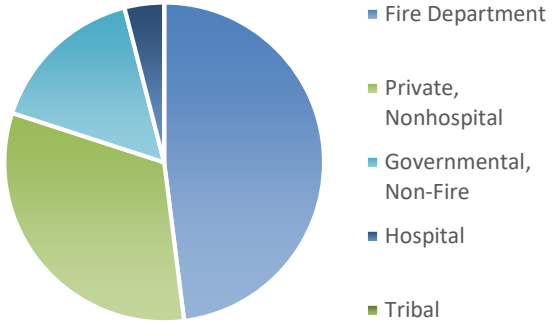
As part of the EMS Compass 2.0 Measure Re-Specification Project, the National EMS Quality Alliance (NEMSQA) hosted an online public comment period June 2019 to July 2019. Information announcing the public comment period was distributed via multiple email lists and listservs within the EMS Community; and public comment materials, including an online survey link, was posted on the NEMSQA website. At the close of the public comment period, a total of thirty-four EMS professionals, from a variety of entities, provided valuable feedback on the proposed measures. Each respondent was asked to provide information about their organization, and a summary of respondent organizations is provided in Figures 1-3.

Figure 1 - Respondent Organizations



After the close of the public comment period on Wednesday July 17, NEMSQA's Quality Measure Consultant cleaned and synthesized the information collected before sending it to members of the Board of Trustees (BOT) and Measure Development Committee for review. During this phase of review, survey information and comments were used to determine if significant points of discussion needed to be had at the EMS Compass Measure Finalization Meeting scheduled for Monday, August 5, 2019.

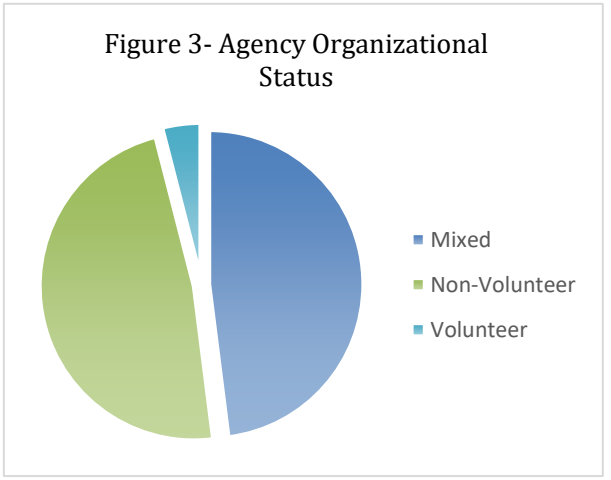
Figure 2 - Agency Organizational Structure



During the August 5 meeting, significant discussion points were brought to the attendees, which included members of the BOT, the Measure Development Committee, and invited guests, and the discussion helped inform decisions to

make changes in measure specifications. In addition to the comments that helped lead the measure re-specification process, all measure-specific public comments were reviewed during the meeting.

While not all comments led a direct change in specifications of the NEMSQA EMS Compass 2.0 Measure Set, all comments are valuable to the mission and objectives of NEMSQA as an organization. Having feedback and insights into the expectations and concerns of the EMS community concerning measurement will help drive future measure development projects that fall under the umbrella of NEMSQA.



The NEMSQA BOT and Measure Development Committee appreciates the feedback provided during the EMS Compass Public Comment Period. Responses to specific comments have been thoughtfully written and can be found in the table below. If you have remaining questions or comments about the EMS Compass Measure Set or the NEMQA Measure Development Process, we encourage you to reach out via the NEMSQA website at http://www.nemsqa.org/contact-us/. The measure development process is ongoing and feedback from the EMS Community will be essential as NEMSQA continues to grow and develop measures.

NEMSQA Response to Public Comments

Survey Question	Reponses Statistics	Comments	NEMSQA Response
This measure set is important for improving the	94.12%: Yes 5.88%: No	To some degree. 1. New Jersey is measuring the following Bundles of Care: Advanced Care: STEMI, Stroke, Sepsis, Pain, and Trauma Basic	1. In the future, NEMSQA may explore developing measures around care bundles. However, the NEMSQA EMS Compass 2.0

quality of care for patients receiving EMS Care.		Care: Asthma (2019 extensions to include STEMI, Stroke, Sepsis, Pain, and Trauma). 2. We need to be measuring OUTCOMES in order to determine the impact of care (ED DX, ED Discharge Status, Discharge DX, Discharge Status, ALOS). 3. These need to be mapped to the NEMSIS standards so that these reports can be consistently and automatically generated. 4. In the denominator, it is not always clear if it should be mapped to MPDS Call Type (eDispatch.01), Patient's Chief Complaint (eSituation.04), or Clinician Diagnosis (eSituation.11). It should be consistent throughout. 5. For hypoglycemia, for example, the diagnosis presupposes that you have already measured the blood glucose and administering glucose in the context of known hypoglycemia is not a very useful benchmark because you don't capture the false negatives where the blood glucose was never measured. 6. The trauma 01 pain assessment should have a mirrored medical version. I'd be much more interested in determining if sickle cell patients received adequate pain relief.	measure re-specification project had very specific goals, not related to bundles of care. 2. NEMSQA agrees that outcomes measures are very important. As NEMSQA begins to develop additional measures, concepts for outcomes measures will be explored. 3. NEMSQA does its best to ensure all elements in its measures map to data fields in NEMSIS. While this information was not included in the materials released for public comment, NEMSIS pseudocode has been released with final measure packages. 4. For clarification on this, please refer to the NEMSIS pseudocode that has been released with the measure materials. If still not clear, please feel free to contact NEMSQA with additional questions. 5. There are other measures that could be developed for the diagnosis and treatment of hypoglycemia. However, the intent of Hypoglycemia-01 is to determine if treatment is being administered for patients with identified hypoglycemia. 6. NEMSQA is also interested in such stratifications of Trauma-01 and Trauma-03. In future measure development projects, the Measure Development Committee will explore creating condition-specific pain management measures.
Survey Question	**Response Statistics**	**Comments**	**NEMSQA Response**

The wording of each measure is clear.	83.33%: Yes 16.67%: No	The wording of **Hypoglycemia-01** could be improved. For measure description, I would suggest: "Percentage of EMS patients who received treatment to correct their hypoglycemia..."	Because EMS provides encounter-based services, the language in the NEMSQA EMS Compass 2.0 measures are also encounter-based. Making this change to the measure language would effectively change the measure to a patient-based measure, which would change the way data is queried for the measure elements.
		For **Pediatrics-01** measure description, would suggest: "Percentage of patients less than 18 years old who had a respiratory assessment completed by EMS for symptoms of respiratory distress" (Essentially stating the numerator first)	Because EMS provides encounter-based services, the language in the NEMSQA EMS Compass 2.0 measures are also encounter-based. Making this change to the measure language would effectively change the measure to a patient-based measure, which would change the way data is queried for the measure elements.
		For **Seizure-02** measure description, would suggest: patients with "active seizures upon EMS arrival" instead of status epilepticus.	The NEMSQA Measure Development Committee who led the re-specification of the NEMSQA EMS Compass 2.0 measure set found it appropriate to include status epilepticus in the inclusion criteria.
		Trauma-04: Numerator Statement states: "Patients transported to a trauma center." However, "trauma center" is not clearly defined, in regard to level of trauma center. The CDC guidelines for Field Triage of Injured patients states: " Trauma centers are designated Level I-IV, with Level I representing the highest level of trauma care available." and further outlines: "Ideally, all persons with severe, life-threatening injuries would be transported to a Level I or Level II trauma center, and all persons with less serious injuries would be transported to lower-level trauma centers or community EDs."	This was discussed in great detail during the discussions for re-specification. While members of the NEMSQA Measure Development Committee agree it would be valuable to measure if patients are transported to trauma centers of the appropriate level, at this time, this type of measure is not feasible. However, as Trauma-04 is used and data capture and feasibility mature over time, NEMSQA will keep this recommendation in mind during annual maintenance cycles; and if this measurement

			concept becomes feasible, a new measure will be considered.
		It may be helpful to include specific NEMSIS fields in the numerator/denominator to ensure accuracy of measurement across systems	NEMSQA does its best to ensure all elements in its measures map to data fields in NEMSIS. While this information was not included in the materials released for public comment, NEMSIS pseudocode has been released with final measure packages.
		Hypoglycemia-01: is misleading and may not be the best measure for assessing the recognition and treatment of hypoglycemia. Numerator should be 911 callers with altered mentation, and the denominator should be 911 callers with altered mentation that had blood sugar assessed.	The intent of Hypoglycemia-01 is to determine if treatment is being administered for patients with identified hypoglycemia and the NEMSQA Measure Development Committee discussed the inclusion criteria for this measure in great detail. It is important to NEMSQA that the measures being released are evidence-based, measurable, valid, and reliable.
		Pediatrics-02: Budesonide and ipratropium are not beta agonists. Perhaps you should reword this to bronchodilators and eliminate budesonide, which is a steroid not for acute use.	The two medications have been removed from the medication list. Please note that the medication lists in the measure specifications are not meant to be inclusive but are meant to serve as a guide.
		Pediatrics-01: Under respiratory distress, a description of the cough is probably not that helpful and may distract providers from other more important assessments. Also, under respiratory distress, a blood pressure is not likely to be useful in young children/infants.	This information was taken directly from the referenced clinical guideline, *National Association of State EMS Officials, National Model EMS Clinical Guidelines for Pediatric Respiratory Distress*, which has been quoted verbatim. The clinical guideline was used as a basis to build the measure and should be followed by each clinician as deemed appropriate.

		Seizure-02: the stated definition is incorrect. Status epilepticus is defined as a single seizure lasting longer than 5 minutes or repeated seizures without recovery of consciousness in between.	Upon further discussion, the NEMSQA Measure Development Committee decided to remove the definition of status epilepticus from the measure specification. For the purposes of this measure, determining if a patient is in status epilepticus will be up to the EMS provider.
Survey Question	**Response Statistics**	**Comments**	**NEMQSA Response**
I understand what is required of each measure element (i.e., numerator, denominator, and exclusions).	82.76: Yes 17.24: No	**Pediatrics-02**: Budesonide and ipratropium are not beta-agonists (and should not be included in the measure). I do not think that metaproterenol is not commonly used in many EMS systems. I would keep albuterol and levalbuterol in the numerator.	The medications have been removed from the medication list. Please note that the medication lists in the measure specifications are not meant to be inclusive but are meant to serve as a guide.
		Seizure-02: I would not include clonazepam (po med, used more for managing anxiety vs. acute seizures) or nitrazepam (I do not believe this is commonly used in EMS or emergent treatment of active seizures). I would keep: diazepam, lorazepam, midazolam in the numerator statement.	The medications have been removed from the medication list. Please note that the medication lists in the measure specifications are not meant to be inclusive but are meant to serve as a guide.
		Safety-01 and Safety-02: the goal should be to capture appropriate use of lights and sirens, not a broad percentage of lights and sirens usage that does not take into account the acuity of the patient. I.e. Lights and siren may be appropriately used for time-sensitive conditions (acute STEMI, acute CVA, etc.). What I think may be more valuable to evaluate would be "lights and siren use for non-priority or non-high acuity patients". I realize that different states/regions assign priority differently and this could be more challenging. However, it would yield more actionable data for EMS systems to improve.	The NEMSQA Measure Development agrees measuring lights and sirens based on patient acuity would be valuable. However, at this time, these types of risk-adjusted measures are not feasible as these data are not able to be captured.
		For many of the measures, there is a subset of patients missing from the denominator - those that went unrecognized by the EMS crew but recognized by the receiving facility. For example, in Stroke-01, the denominator is simply those with a primary impression of Stroke. However, if the EMS crew misses the stroke	There are additional populations that could be measured, such as, “EMS encounters for patients diagnosed with stroke where stroke was not suspected during EMS encounter.” However, this is a different measure than Stroke-01. The intent

		signs/symptoms and the patient is identified as having a stroke on arrival to the ED, these patients should also be included in the denominator.	of Stroke-01 is to determine how many patients with suspected stroke received a stroke assessment, not to determine the efficacy of the stroke assessment. In measurement, it often seems as if segments of the population are being left out; when in fact, they are intentionally being excluded to protect the intent of the measure.
		I personally think this sort of data, when it gets too in depth, is confusing and distracting. Anybody can make something complicated. It takes real genius to make something simple. EMS needs to make things simple. Hands only CPR is a great example how simplicity has saved more lives than complex. We should learn from that.	In this measure re-specification process, NEMSQA has attempted to streamline the NEMSQA EMS Compass 2.0 measures as much as possible by standardizing the measure language, adding more information to the measure specifications, and developing additional measure guidance.
Survey Question	**Response Statistics**	**Comments**	**NEMSQA Response**
The information required for each measure element is currently collected by my organization.	40.74%: Yes 30.04%: No 22.22%: Unsure	Need to map to NEMSIS elements so that pre-scripted analysis can be performed.	NEMSQA does its best to ensure all elements in its measures map to data fields in NEMSIS. While this information was not included in the materials released for public comment, NEMSIS pseudocode has been released with final measure
		The data elements are collected but they are not reported on or calculated as described in the measures.	NEMSQA encourages EMS agencies to calculate the measures as specified, as significant research and careful thought was put into re-specifying the NEMSQA EMS Compass 2.0 measure set so that it is meaningful to the EMS community.
		Not difficult, just need to do it.	NEMSQA hopes that the NEMSQA EMS Compass 2.0 measures and supporting materials will be easy to implement at the agency level. If feasibility concerns arise, please reach out to the Alliance so these concerns may be taken into

			consideration during the 2020 measure maintenance cycle.
		Not all data pertains to air medical transport and while scene information is collected, routine inter-facility transports would skew the data or be N/A.	Interfacility transports are not part of the inclusion criteria for any of the measures in the NEMSQA EMS Compass 2.0 measure set.
		Right now, we have to mine data from within the individual patient run reports to figure out if we're doing the specific care bundles set forth in EMS compass. We're actually in the process now of working with our EMR vendor to try to automatically capture that data and spit it out in graphical form so we can see how often we're performing those activity.	NEMSQA encourages agencies to work with EMR and e-PCR vendors to develop methods for automated data queries. NEMSQA has also released electronic specifications for each measure, which may help with this process.
		The data quality is poor, with a significant amount of incomplete data. The fields are available for all of the measures.	NEMSQA understands this is a concern. However, as the quality measurement process in the EMS community matures, it is expected data quality will also improve.
Survey Question		**Comments**	**NEMSQA Response**
Please provide feedback on the revised measures, indicating if you foresee any feasibility issues with data collection, analysis, or quality improvement surrounding any of the measures.		Given the rationale in Stroke-01, it the stroke assessment used may need to be a little more specific if the goal is to assess for suspected LVO. For instance, Cincinnati stroke scale could be administered but still not screen for LVO well. LAMS or another similar stroke assessment may be what we are seeking here	The intent of Stroke-01 is to determine if stroke assessments are being conducted on all suspected stroke patients. The rationale section in the measure specification has been updated so it is not limited to a specific assessment type.
		Hypogylcemia-01: Treatment of hypoglycemia numerator include "IV/IO".	The measure specifications have been updated to include this information. Please note that the medication lists in the measure specifications are not meant to be inclusive but are meant to serve as a guide.
		Stroke-01: For stroke assessment consider using verbiage stating "validated" or "proven" or even go so far as to recommend top 5 data proven initial and LVO screening assessments.	The intent of Stroke-01 is to determine if strokes assessments are being conducted on all suspected stroke patients. The rationale section in the measure specification has been updated so it is not limited to a specific assessment type.

		The Measure Development Committee discussed limiting the numerator for Stroke-01 to specific assessments. However, the final decision was made by the Measure Development Committee to not put limitations on the type of stroke assessment conducted. Additional evidence-based studies are needed before recommendations can be made on assessment types.
	As with all quality measures that are measured solely on subjective documentation fields, the results can swing wildly based on documenter compliance, education, and clinical ability.	NEMSQA understands this concern. As the EMS Compass measure set is used at local agencies, NEMSQA hopes the measure scores will help inform gaps in compliance, documentation, and education.
	Trauma 03 - Effectiveness of pain management for injured patients. First, I think this is a step in making EMS complicit in the opioid problems in this country by going down the same path as JCAHO. Second, this protocol promotes only narcotic use for pain management for any patient with a pain score > 0. Many patients with mild pain refuse pain medications, yet there is no exception for that. In addition, there are other pain management strategies: splinting, ibuprofen, Toradol, ice, etc. None of those appear to be included in the proposed protocol. Either change the name of the protocol to "Effectiveness of narcotic pain management in injured patients" and make numerator/denominator "all injured patients with pain score > 0 who RECEIVE narcotic analgesia" or rethink the protocol and allow other pain management strategies to be employed. In the latter case, you would still need to change the	The NEMSQA Board of Trustees, Measure Development Committee, and Stakeholders echo these concerns about the opioid epidemic. The intent of Trauma-03 is not to simply administer pain medications but is to relieve the pain of injured patients. There are many comfort measures that can be provided to an injured patient that do not involve medications (e.g., splinting, cold compress, warm blanket). NEMSQA is not suggesting providers directly default to medication to reduce pain. The dosing information in the measure specification was taken directly from the referenced clinical guideline, *Evidence-Based Guideline for Prehospital Analgesia in Trauma*, which has been quoted verbatim. The clinical guideline was used as a basis to build the

	numerator and denominator to include only those patients who had an intervention initiated.	measure and should be followed by each clinician as deemed appropriate.
	Would truly have to be only for scene calls and not inter-facility transports	Interfacility transports are not part of the inclusion criteria for any of the measures in the EMS Compass measure set.
	I do not see any concerns on my agencies part for data collection.	NEMSQA hopes agencies who are able to easily collect data required to calculate the EMS Compass measures can implement them for efforts to improve quality of patient care.
	It would be great if we could see an NNT number for Bronchospasm (asthma/COPD) as in the last version of this document, that was missing. Insufficient evidence at the time	The NNT was not included in the final release of the NEMSQA EMS Compass 2.0 measure set. However, this potential element will be kept in mind as an inclusion during future measure maintenance cycles.
	Where's the manpower?	NEMSQA understands quality measurement is a significant undertaking. Many resources have been released with the re-specified measures, including measure guidance, NEMSIS pseudocode, electronic specifications, and frequently asked questions, in hopes to ease the process.
	The regional EMS collective would have previously been the primary contact on this however that is no longer the case. The feasibility of collecting the data will be much improved when we implement new ePCR software later this summer.	NEMSQA is happy to hear that feasibility will be improved with upgraded eCPR software.
	There might be some data collection issues with the lights and sirens to and from the scene. It is fixable by the agency but could be an issue.	During the re-specification process, the NEMSQA Measure Development Committee engaged multiple stakeholders in an attempt to circumvent data collection and feasibility issues. However, not all data feasibility issues can be foreseen. If and when issues arise in data collection, please provide detailed information

		about the issues with the Alliance, as this information can be used to make improvements to measures during future maintenance cycles.
	None of us are trained statisticians and QA/QI is often just one component of our jobs (supervisor, for me), so any extra workload might be difficult.	NEMSQA understands quality measurement is a significant undertaking. Many resources have been released with the re-specified measures, including measure guidance, NEMSIS pseudocode, electronic specifications, and frequently asked question, in hopes to ease the process.
	Safety-01 and Safety-02: The only measure the IAFF foresees a problem with is the use of Red Lights and Siren. We agree with the safety concept behind it, but we think there will be a wide array of variance and/or compliance with this measure.	NEMSQA understands the variance in policies and guidelines related to use of lights and sirens. However, as quality measures are often used to drive change, NEMSQA hopes data collected from Safety-01 and Safety-02 can help standardize procedures for the use of lights and sirens.
	Safety-01 and Safety-02: Lights and Sirens are often dictated by State Code. An effective policy should govern this with procedure and training based on the policy.	NEMSQA understands the variance in policies and guidelines related to use of lights and sirens. However, as quality measures are often used to drive change, NEMSQA hopes data collected from Safety-01 and Safety-02 can help standardize procedures for the use of lights and sirens.
	Seizure-01: clonazepam and nitrazepam are not used in the United States for status epilepticus. These should probably be removed.	The two medications have been removed from the medication list. Please note that the medication lists in the measure specifications are not meant to be inclusive but are meant to serve as a guide.
	For **Seizure-01** under status epilepticus, the algorithm should include the maximum dose of midazolam, which is generally considered 10 mg. Weight-based dosing without a maximum dose	The dosing information in the measure specification was taken directly from the referenced clinical guidelines, *An Evidence-*

	will result in overdoses for large children. Also, under status epilepticus, the doses of diazepam are incorrect. Diazepam is generally dosed 0.5 mg/kg rectally and 0.2 mg/kg IV. You should also include maximum doses here.	*Based Guideline for Pediatric Pre-Hospital Seizure Management Using Grade Methodology* and *National Association of State EMS Officials, National Model EMS Clinical Guidelines for Seizure,* which have been quoted verbatim. The clinical guidelines were used as a basis to build the measure and should be followed by each clinician as deemed appropriate.
	Trauma 01 - Trauma 03: the dose of intranasal fentanyl should be 2 mcg/kg, not 1. We generally double the dose when we give it intranasally. Also, under the pain management algorithm, you should probably substitute intramuscular morphine for intraosseous. I cannot foresee a situation in which we would drill a needle into someone's bone to provide pain medicine.	The dosing information in the measure specification was taken directly from the referenced clinical guideline, *Evidence-Based Guideline for Prehospital Analgesia in Trauma*, which has been quoted verbatim. The clinical guideline was used as a basis to build the measure and should be followed by each clinician as deemed appropriate.
Survey Question	**Comments**	**NEMSQA Response**
Do you feel that the denominator exclusions associated with the measures are appropriate?	Need to be consistent between MPDS call type, patient's chief complaint, and clinician diagnosis.	The NEMSQA Measure Development Committee put significant work in to ensuring all measures in the NEMSQA EMS Compass 2.0 measure set are consistent and measurable. If there are specific concerns about consistency in the EMS Compass 2.0 measures, please contact the Alliance, so the information may be included in the next measure maintenance cycle.
	The denominator exclusions - What does that even mean?	A denominator exclusion is a subset of the denominator. This subset of encounter/patients are removed from the denominator because they meet criteria that make it unnecessary to receive the clinical action in the numerator. Ultimately, encounters/patients meeting exclusion criteria are not counted in the measure calculation.

Survey Question	Comments	NEMSQA Response
Please provide any additional feedback you may have on this measure set.	None. Thank you for this undertaking.	NEMSQA looks forward to seeing how the re-specified measures can drive positive change in patient care.
	These are basic patient care measures that should be tracked and valid until a change in treatment plans are implemented (i.e.: if we discover a new way to treat diabetics or asthmatics, etc.)	NEMSQA agrees these measures are only valid until new treatment plans are implemented. NEMSQA has adopted a lifecycle approach to measure development, which includes an annual maintenance cycle. This means that all measures stewarded by the Alliance, including the NEMSQA EMS Compass 2.0 measure set, will undergo an annual review, to ensure they are still clinically relevant and meet the scientific rigor to meet the needs of the EMS Community.
	The IAFF appreciates the work that was done by EMS Compass to develop these measures and feel that these may have been some of the low hanging fruit for the EMS industry to achieve. As stated previously, the lights & siren measure will be hard to get a lot of compliance, but we agree with safety concept behind it. We look forward to working with NEMSQA in the future to establish other performance measures. Thank you for the opportunity to provide comment.	NEMSQA appreciates this feedback.
	With ET3 and Community Paramedicine, the volume of 911 callers who are seen by traditional EM is decreasing. I think limiting the measure to 911 callers may need to be revisited within 5 years.	NEMSQA understands that all measures have a lifespan and it cannot be expected to use a measure indefinitely. NEMSQA has adopted a lifecycle approach to measure development, which includes an annual maintenance cycle. This means that all measures stewarded by the Alliance will undergo a thorough review each year, to ensure they are still clinically relevant and meet the scientific rigor to meet the needs of the EMS Community. Once a measure has

		reached the end of its usefulness to the EMS Community, it will be retired by NEMSQA.