NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

NQF #: 0335 NQF Project: Pulmonary Project
(for Endorsement Maintenance Review) Original Endorsement Date: May 15, 2008 Most Recent Endorsement Date: May 15, 2008
BRIEF MEASURE INFORMATION
De.1 Measure Title: PICU Unplanned Readmission Rate
Co.1.1 Measure Steward: Virtual PICU Systems, LLC
De.2 Brief Description of Measure: The total number of patients requiring unscheduled readmission to the ICU within 24 hours of discharge or transfer.
2a1.1 Numerator Statement: Total number of unplanned readmissions within 24 hours after discharge/transfer from the PICU
2a1.4 Denominator Statement: 100 PICU Discharges, <18 yrs of age
2a1.8 Denominator Exclusions: Patients =>18 years of age,
1.1 Measure Type: Outcome 2a1. 25-26 Data Source: Electronic Clinical Data : Electronic Health Record, Paper Records 2a1.33 Level of Analysis: Facility 1.2-1.4 Is this measure paired with another measure? No De.3 If included in a composite, please identify the composite measure (*title and NQF number if endorsed*): Yes: Measures 0334 and 0336

STAFF NOTES (*issues or questions regarding any criteria*)
Comments on Conditions for Consideration:
Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:
1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (*check De.5*): 5. Similar/related endorsed or submitted measures (*check 5.1*): Other Criteria:
Staff Reviewer Name(s):

1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT
Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria)
1a. High Impact: H☐ M☐ L☐ I☐ (*The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact*

aspect of healthcare.)

De.4 Subject/Topic Areas *(Check all the areas that apply)*: Pulmonary/Critical Care, Pulmonary/Critical Care : Critical Care
De.5 Cross Cutting Areas (*Check all the areas that apply)*:

1a.1 Demonstrated High Impact Aspect of Healthcare: High resource use, Patient/societal consequences of poor quality

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact *(Provide epidemiologic or resource use data)*:
"The average ICU readmission rate of 7% (range, 4 to 14%) has remained relatively
unchanged in both North America and Europe. Respiratory and cardiac conditions were the most common (30 to 70%) precipitating cause of ICU readmission. Patients readmitted to ICUs had average hospital stays at least twice as long as nonreadmitted patients. Hospital death rates were 2- to 10-times higher for readmitted patients than for those who survived an ICU admission and were never
readmitted. Predictors of ICU readmission have been neither well studied nor reproducible.(1)
Patient in intensive care units (ICUs) account for nearly 30% of acute care hospital costs, yet these patients occupy only 10% of inpatient beds. Care provided in intensive care units accounts for a large percentage of acute care hospital costs.(2)

1a.4 Citations for Evidence of High Impact cited in 1a.3: 1. Rosenberg AL, Watts C. Patients Readmitted to ICUs-A Systematic Review of Risk Factors and Outcomes. Chest: 2000; 118:492-502.
2. Brilli RJ, Spvetz A, Branson, RD, et al. Critical care delivery in the intensive care unit: Defining clinical roles and the best practice model. Critical Care Medicine; 2001: 29 (10), 2007-2019.

1b. Opportunity for Improvement: H☐ M☐ L☐ I ☐
(*There is a demonstrated performance gap - variability or overall less than optimal performance*)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:
This measure is a critical balancing measure for use with measure 0334 (severity adjusted LOS). Theoretically, units who have lower severity adjusted LOS due to premature discharge of patients would not be identified without pairing the LOS measure with a measure of unplanned readmissions.

1b.2 Summary of Data Demonstrating Performance Gap *(Variation or overall less than optimal performance across providers)*:
[*For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.*]
Following the introduction of an outreach service the emergency admission rate to intensive care fell from 58% to 43% (p = 0.05). These emergency patients had shorter lengths of stay (4.8 days vs. 7.4 days) and had a lower mortality (28.6% vs. 23.5%, p = 0.05).The re-admission rate also fell from 5.1% to 3.3% (p = 0.05). The outreach service had a significant impact on critical care utilization.

Analysis of data from 80 PICUs submitting data in Q3 2011 to the VPS system revealed unplanned readmission rates ranging from 0% to 3.14% of discharged patients.

1b.3 Citations for Data on Performance Gap: [*For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]
Pittard AJ. Out of our reach? Assessing the impact of introducing a critical care outreach service. Anaesthesia. 2003; 58(9):882-885.

1b.4 Summary of Data on Disparities by Population Group: [*For Maintenance –Descriptive statistics for performance results for this measure by population group*]
Population differences have not been found to be variable in pediatric intensive
care therapies. A study examined whether medical resources and outcomes for children admitted to pediatric intensive care units differed according to race, gender, or insurance status. After adjustment for differences in illness severity, standardized mortality ratios and overall resource use were similar with regard to race, gender, and insurance status, but uninsured children had significantly shorter lengths of stay in the pediatric intensive care unit. Uninsured children also had significantly greater physiologic derangement on admission (mortality probability, 8.1%; 95% confidence interval [CI], 6.2-10.0) than did publicly insured (3.6%; 95%

CI, 3.2-4.0) and commercially insured patients (3.7%; 95% CI, 3.3-4.1). Consistent with greater physiologic derangement, hospital mortality was higher among uninsured children than insured children.

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]
Lopez A, Tilford J, Anand K, et al. Variation in pediatric intensive care therapies and outcomes by race, gender and insurance status. Ped Crit Care Med 2006; 7(1). 2-6.

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
Is the measure focus a health outcome? Yes☐ No☐ If not a health outcome, rate the body of evidence.

Quantity: H☐ M☐ L☐ I ☐ Quality: H☐ M☐ L☐ I ☐ Consistency: H☐ M☐ L☐ I ☐

Quantity	Quality	Consistency	Does the measure pass subcriterion1c?
M-H	M-H	M-H	Yes☐
L	M-H	M	Yes☐ IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No☐
M-H	L	M-H	Yes☐ IF potential benefits to patients clearly outweigh potential harms: otherwise No☐
L-M-H	L-M-H	L	No ☐

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service	Does the measure pass subcriterion1c? Yes☐ IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome)*:
This measure indirectly measures process (decision making related to PICU discharge) while directly measuring PICU resource utilization due to unplanned readmission.

1c.2-3 Type of Evidence *(Check all that apply)*:
Selected individual studies (rather than entire body of evidence)

1c.4 Directness of Evidence to the Specified Measure *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)*:
A number of studies have specifically measured the rate and impact of unplanned ICU admissions.

1c.5 Quantity of Studies in the Body of Evidence *(Total number of studies, not articles)*: Six studies since 2005 have specifically looked at early, unplanned readmission to the ICU setting.

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): The studies look at different populations making pooling of findings problematic. The time frame to be included as a readmission varies in the studies.

1c.7 Consistency of Results across Studies *(Summarize the consistency of the magnitude and direction of the effect):* While the studies varied in the inclusion criteria, the findings all indicated increased risk of morbidity and mortality among this cohort

1c.8 Net Benefit *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)*:

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? No

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.11 System Used for Grading the Body of Evidence: Other

1c.12 If other, identify and describe the grading scale with definitions: per 1c.9 above no grading has been done.

1c.13 Grade Assigned to the Body of Evidence:

1c.14 Summary of Controversy/Contradictory Evidence: None

1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:

Kramer AA, Higgins TL Zimmerman JE. Intensive care unit readmissions in U.S. hospitals: patient characteristics, risk factors and outcomes. Crit Care Med 2012; 40(1) 3-10

Haller G, Myles PS, Wolfe R, et al. Validity of unplanned readmission to an intensive care unit as a measure of patient safety in surgical patients. Anesthesiology. 2005; 103(6) 1121-9

Makris N, Dulhunty JM Paratz JD et al. Unplanned early readmission to the intensive care unit: a case-control study of patient, intensive care and ward-related factors. Anaest Intensive Care; 2010 38(4): 732-31

1c.16 Quote verbatim, the specific guideline recommendation *(Including guideline # and/or page #)*:

1c.17 Clinical Practice Guideline Citation:

1c.18 National Guideline Clearinghouse or other URL: none

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? No

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.21 System Used for Grading the Strength of Guideline Recommendation: Other

1c.22 If other, identify and describe the grading scale with definitions: per 1c.19 above no grading has been done.

1c.23 Grade Assigned to the Recommendation:

1c.24 Rationale for Using this Guideline Over Others:

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: Low 1c.26 Quality: High1c.27 Consistency: High

Was the threshold criterion, *Importance to Measure and Report*, met?
(*1a & 1b must be rated moderate or high and 1c yes*) Yes☐ No☐
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 Measure Web Page *(In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 If yes, provide web page URL: https://portal.myvps.org/document/NQFMeasures.pdf

2a. RELIABILITY. Precise Specifications and Reliability Testing: H☐ M☐ L☐ I ☐

2a1. Precise Measure Specifications. (*The measure specifications precise and unambiguous.*)

2a1.1 Numerator Statement *(Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome)*:
Total number of unplanned readmissions within 24 hours after discharge/transfer from the PICU

2a1.2 Numerator Time Window *(The time period in which the target process, condition, event, or outcome is eligible for inclusion)*:
Unplanned readmission within 24 hours of discharge/transfer.

Data submission quarterly with reporting on annual basis.

2a1.3 Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses*:
Inclusion: All PICU patients < 18 years of age
Exclusions:
• Patients = 18 years of age
• Readmissions > 24 hours following discharge/transfer from PICU
• All planned readmissions

2a1.4 Denominator Statement *(Brief, narrative description of the target population being measured)*:
100 PICU Discharges, <18 yrs of age

2a1.5 Target Population Category *(Check all the populations for which the measure is specified and tested if any)*: Children's Health

2a1.6 Denominator Time Window *(The time period in which cases are eligible for inclusion)*:
Per 100 PICU discharges

2a1.7 Denominator Details (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
All PICU patients <18 years of age

2a1.8 Denominator Exclusions *(Brief narrative description of exclusions from the target population)*:
Patients =>18 years of age,

2a1.9 Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
Patients not yet discharged from PICU

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses)*:

NONE

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13)*: No risk adjustment or risk stratification 2a1.12 If "Other," please describe:

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.)*:

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)*: Better quality = Lower score

2a1.20 Calculation Algorithm/Measure Logic*(Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)*:
First, identify all discharges/transfers from PICU who are readmitted, limited to children <18 years of age.
Second, exclude all planned readmissions.
Third, use above number as numerator over denominator of PICU discharges/transfers.
Report per 100 PICU discharges

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):
No sampling used. All discharges meeting inclusion criteria as included in measure.

2a1.25 Data Source *(Check all the sources for which the measure is specified and tested*). If other, please describe:
Electronic Clinical Data : Electronic Health Record, Paper Records

2a1.26 Data Source/Data Collection Instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): No mandatory data source or collection instrument for PICU community. Potential resources include PICU-specific databases or the VPS database (myvps.org).

Thus, 2a1.27 and 2a1.30 are not applicable

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:

2a1.33 Level of Analysis (*Check the levels of analysis for which the measure is specified and tested)*: Facility

2a1.34-35 Care Setting *(Check all the settings for which the measure is specified and tested)*: Hospital/Acute Care Facility

2a2. Reliability Testing. (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability*.)

2a2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
As this measure is a simple proportion using previously established methods, there is no further reliability or validity assessment that is indicated.

2a2.2 Analytic Method *(Describe method of reliability testing & rationale)*:

2a2.3 Testing Results *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:

2b. VALIDITY. Validity, Testing, including all Threats to Validity: H☐ M☐ L☐ I ☐

2b1.1 Describe how the measure specifications *(measure focus, target population, and exclusions)* are consistent with the evidence cited in support of the measure focus (*criterion 1c)* and identify any differences from the evidence:
As this measure is a simple proportion using previously established methods, there is no further reliability or validity assessment that is indicated.

This specific measure appropriately targets children in PICU settings who are readmitted in an unplanned manner within 24 hours of discharge/transfer.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)*

2b2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:

2b2.2 Analytic Method *(Describe method of validity testing and rationale; if face validity, describe systematic assessment)*:

2b2.3 Testing Results *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)*:

POTENTIAL THREATS TO VALIDITY. (*All potential threats to validity were appropriately tested with adequate results.*)

2b3. Measure Exclusions. (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

2b3.1 Data/Sample for analysis of exclusions *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Exclusions include:
• Patients = 18 years of age
• Readmissions > 24 hours following discharge/transfer from PICU
• All planned readmissions

This is appropriate as the measure is intended to describe care of children (<18 years of age) in a PICU setting.

Planned readmissions are excluded as they reflect conscious care decisions rather than potential failures of care processes.

2b3.2 Analytic Method (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)*:

2b3.3 Results *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*

2b4. Risk Adjustment Strategy. (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Not applicable (see 2b4.4)

2b4.2 Analytic Method (*Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables)*:

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata)*:

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: This is simply a proportion of readmissions. While secondary analysis to see if these were due to risk factors including severity of illness, by virtue of the perception that they were ready for discharge, severity of illness at time of discharge is not routinely calculated nor would it be a valid process.

2b5. Identification of Meaningful Differences in Performance. (*The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.*)

2b5.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Unscheduled readmission rate within 24 hours for data submitted by 80 PICUs for Q3 2011 are between 0% and 3.14%.

2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance)*:

2b5.3 Results *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:

2b6. Comparability of Multiple Data Sources/Methods. (*If specified for more than one data source, the various approaches result in comparable scores.*)

2b6.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
No sampling was done. However, the data available from the VPS system reveals that the unplanned readmission rates among 80 participating PICUs ranged from 0% to 3.14% in the third quarter of 2011. This indicates that there is unit specific variance. As numerators, denominators and all definitions are standardized with an IRR >96%, this variation reflects differences in care and not the measurement itself.

2b6.2 Analytic Method *(Describe methods and rationale for testing comparability of scores produced by the different data sources*

specified in the measure):

2b6.3 Testing Results *(Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted)*:

2c. Disparities in Care: H☐ M☐ L☐ I ☐ NA☐ (*If applicable, the measure specifications allow identification of disparities.*)

2c.1 If measure is stratified for disparities, provide stratified results *(Scores by stratified categories/cohorts)*: N/A. This is consistent with published literature.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?
(*Reliability and Validity must be rated moderate or high*) Yes☐ No☐
Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

C.1 Intended Purpose/ Use *(Check all the purposes and/or uses for which the measure is intended)*: Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

3.1 Current Use *(Check all that apply; for any that are checked, provide the specific program information in the following questions)*: Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for public reporting.*)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large *(If used in a public reporting program, provide name of program(s), locations, Web page URL(s)).* If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [*For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.*]
We are aware of not national or community programs requiring reporting of this measure. However, multiple PICUs do publically report this data. One illustration can be found on the Children´s Hospital of Wisconsin Critical Care Quality Webpage (http://www.chw.org/display/PPF/DocID/44240/Nav/1/router.asp)

3a.2.Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: As illustrated in the aforementioned webpage, with minor narrative comments, this measure can be made readily understandable and meaningful for public reporting. As to whether any agencies request this measure is beyond the purview of these authors.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): None that we are aware of.

3b. Usefulness for Quality Improvement: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for quality improvement.*)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
[*For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement*].
Unplanned readmission to the ICU setting have been clearly linked to worsened mortality and increased resource utilization. Only through measurement can one improve on this potential hazard.

Further, unplanned readmission is a critical balancing measure to severity adjusted LOS, as discussed previously.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated *(e.g., QI initiative),* describe the data, method and results:
As seen in this illustration (http://www.chw.org/display/PPF/DocID/44240/Nav/1/router.asp), trending of this data is easy to perform and allows for comparison with peers. Further, within an organization, systematic review of unplanned readmissions (measure 0336) allows for identification of specific areas for improvement.

Overall, to what extent was the criterion, *Usability*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

4a. Data Generated as a Byproduct of Care Processes: H☐ M☐ L☐ I ☐

4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*
Data used in the measure are:
Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry), Other
capture from electronic sources (eg, time of discharge orders)

4b. Electronic Sources: H☐ M☐ L☐ I ☐

4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields)*: Some data elements are in electronic sources

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources: The availability of data in electronic sources depends on each individual organizations resources. There is no reason the data could not be readily available in an implement EHR.

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H☐ M☐ L☐ I ☐

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
Theoretically, there is a risk of miscapturing the time of original discharge and this incorrectly including or excluding a patient. Additionally, there is a risk for potential error related to misidentifying readmissions as either planned or unplanned. However, pairing with measure 0336 allows for validation of whether a readmission is planned or not.

4d. Data Collection Strategy/Implementation: H☐ M☐ L☐ I ☐

A.2 Please check if either of the following apply (*regarding proprietary measures*):
4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time

and cost of data collection, other feasibility/implementation issues *(e.g., fees for use of proprietary measures)*:
The identification of unplanned readmissions within 24 hours is a straightforward process that requires minimal resources. One illustration of this is the cohort of 99 hospitals and 117 PICUs capturing this data in the VPS data system in an ongoing manner with more than 470,000 patient encounters between 2002 and 3rd Quarter of 2011

Overall, to what extent was the criterion, *Feasibility*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes☐ No☐
Rationale:

If the Committee votes No, STOP.
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures *(either same measure focus or target population)* or competing measures *(both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures *(e.g., a more valid or efficient way to measure quality);* OR provide a rationale for the additive value of endorsing an additional measure. *(Provide analyses when possible)*:

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): Virtual PICU Systems, LLC, 4470 W Sunset Blvd, Suite 440, Los Angeles, California, 90027

Co.2 Point of Contact: Christine, Gall, cgall@myvps.org, 262-439-9640-

Co.3 Measure Developer if different from Measure Steward: NACHRI (Pedi-QS), 401 Wythe Street, Alexandria, Virginia, 22314

Co.4 Point of Contact: Ellen, Schwalenstocker, PhD, eschwalenstocker@nachri.org, 703-797-6045-

Co.5 Submitter: Christine, Gall, cgall@myvps.org, 262-439-9640-, Virtual PICU Systems, LLC

Co.6 Additional organizations that sponsored/participated in measure development:
National Association of Children´s Hospitals and Related Institutions, Child Health Corporation of America, Medical Management Planning, VPS

Co.7 Public Contact: Christine, Gall, cgall@myvps.org, 262-439-9640-, Virtual PICU Systems, LLC

ADDITIONAL INFORMATION
Workgroup/Expert Panel involved in measure development Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:
Measure Developer/Steward Updates and Ongoing Maintenance Ad.3 Year the measure was first released: 2008 Ad.4 Month and Year of most recent revision: Ad.5 What is your frequency for review/update of this measure? 3 years Ad.6 When is the next scheduled review/update for this measure? 01, 2012
Ad.7 Copyright statement:
Ad.8 Disclaimers:
Ad.9 Additional Information/Comments:
Date of Submission (*MM/DD/YY*): 10/18/2011