

Purpose of the Measurement Grid:

The measurement grid outlines the measures to be collected over the life of the collaborative. The grid includes the specific parameters for each measure.

Measurement for Improvement:

FPQC's goal is not to produce new research but to implement known evidence-based measures to improve the quality of care and/or safety of hospitalized patients. Measurement plays an important role in analyzing interventions. Always remember that measurement should be designed to accelerate improvement, not slow it down.

Timeline for Measurement:

Baseline data will be collected as best as possible for the pre-collaborative dates of 7/1/13 to 8/31/13. Post-implementation data will be collected as best as possible from 10/1/13 to 12/31/14.

Three Types of Measures:

The Measurement Grid is broken down into three categories: Outcome, Process, and Balancing Measures. Teams may also develop additional measures based on the issues that are of most interest and importance to their hospital. Only the measures in the grid below will be submitted to FPQC for analysis. The metrics highlighted in green are considered required for the purposes of the collaborative. Other metrics listed are optional measures which can be submitted to and analyzed by FPQC.

- **Outcome Measures (voice of the customer or patient):** These measures tell you whether changes are actually leading to improvement - that is, helping to achieve the overall aim of improving Delivery Room Management. Outcome measures answer questions like, "How is the system performing?" and "What is the result?".
- **Process Measures (voice of the workings of the system):** To affect the outcome measures related to Delivery Room Management, changes will be made to improve many core processes in the care system, as well as changes to improve the culture as it relates to quality and safety. We will want to know if the parts/steps in the system are performing as planned. Measuring the results of these process changes will tell you if the changes are leading to an improved system.
- **Balancing/"Constraining" Measures (looking at a system from different directions/dimensions):** We will use these measures to make sure that changes to improve one part of the system aren't causing new problems in other parts of the system. Balancing (or "Constraining" measures help us to draw reasonable conclusions about the sustainability of the changes. Balancing measures represent constraints that might limit the effectiveness or negatively impact implementation of a plan (financial measures are sometimes balancing measures).

Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals	
OUTCOME MEASURES					
1° measure (Required)	<p>Temperature on admission to the NICU (VON & FPQC NICU metric)</p> <p>use axillary or rectal temperature on NICU admission</p>	<p>Numerator: # of infants with anticipated anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* with admission temperature between 36.5°-37.5°C</p> <p>Denominator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	<p>Total population of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*</p>	<p>Chart review</p>	<p>≥75% of infants</p>
1° measure (Required)	<p>Oxygen saturation at 10 minutes of life meeting NRP target of 85-95% (FPQC metric)</p>	<p>Numerator: # of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* with pulse oximeter monitoring during resuscitation, having oxygen saturation between 85-95% at 10 minutes of life</p> <p>Denominator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* with pulse oximeter monitoring during resuscitation (this excludes infants having oxygen saturation <85% despite 100% FiO2).</p>	<p>Total population of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU</p>	<p>Chart review</p>	<p>≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)</p>

*Infants are eligible if they were admitted to your NICU directly(i.e. no stops) from the Delivery Room and assumes all newborns with an anticipated BW ≤1500 g OR gestational age ≤30 6/7 wks had a resuscitation team present at delivery.

	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
1° measure (Required)	Delayed umbilical cord clamping for 30-60 seconds after delivery (FPQC metric)	<p>Numerator: # of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* where delayed umbilical cord clamping for 30-60 seconds after delivery was achieved</p> <p>Denominator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* (this excludes infants where maternal or fetal contraindication for delayed umbilical cord clamping is present)</p>	Total population of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU	Chart review	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)
PROCESS MEASURES					
1° measure (Required)	Percent compliance to "readiness bundle" (FPQC metric)	<p>Numerator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* where a equipment checklist, team briefing, and team debriefing were used.</p> <p>Denominator: # infants in which your resuscitation team attended delivery at your hospital admitted to your NICU*</p>	Total population of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
2° measure (Required)	% of resuscitated infants with O2 saturation monitoring by 2 minutes of life (FPQC metric)	<p>Numerator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* in which O2 saturation monitoring was established by 2 minutes of life</p> <p>Denominator: # infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	Total population of infants with anticipated BW≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)
2° measure (Required)	% of resuscitations where ≥1 "opportunities for improvement" identified (FPQC metric)	<p>Numerator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* where resuscitation team identified ≥1 "opportunities for improvement"</p> <p>Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	Total population of infants in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
Optional measure (Rec)	% of resuscitated infants receiving surfactant in the Delivery Room (VON & FPQC metric)	Numerator: # infants with anticipated BW ≤1500 g OR GA ≤30 6/7 wks which received surfactant in the Delivery Room Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	0% of infants <i>In 2011, 30% of VON FPQC centers receive surfactant in the DR</i>
Optional measure (Recommended)	% of resuscitated infants with CPAP used in the Delivery Room (FPQC metric)	Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which CPAP was used in the Delivery Room Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	Ratio of "%CPAP to %intubated" increased from baseline. <i>In 2011, 48% of VLBWs at VON FPQC centers were intubated in the DR and 26% of VLBWs received CPAP in the DR.</i>

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
Optional measure (Recommended)	% of resuscitated infants intubated in the Delivery Room (VON & FPQC metric)	Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks which were intubated in the Delivery Room for any reason Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	0% of infants <i>In 2011, 48% of VLBWs at VON FPQC centers were intubated in the DR.</i>
Optional measure (Recommended)	Time to surfactant administration (FPQC metric)	Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* who received surfactant within 2 hours of life Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* who required intubation and mechanical ventilation for respiratory support	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (no baseline data available, reassess goal after 6 months)

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
Optional measure (Recommended)	Time to obtaining IV access (e.g., PIV, UAC, UVC) confirmed with blood return (FPQC metric)	Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* with IV access obtained and confirmed with blood return within 1 hour of life Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)
Optional measure (Recommended)	Time to IV dextrose administration (FPQC metric)	Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* who received IV dextrose fluids within 1 hour of life Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
Optional measure (Recommended)	Time to completion of initial stabilization (FPQC metric)	<p>Numerator: # of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* with IV access obtained, IV dextrose fluids initiated, and radiographic studies obtained within 1 hour of life</p> <p>Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	≥50% of infants (<i>no baseline data available, reassess goal after 6 months</i>)
BALANCING MEASURES					
1° measure (Required)	% of resuscitated infants requiring chest compressions in the Delivery Room (VON & FPQC metric)	<p>Numerator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* that required chest compressions in the Delivery Room</p> <p>Denominator: # infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	Total population of infants with BW ≤1500 g OR GA ≤30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	0% of infants <i>In 2011, 6% of VLBWs in VON FPQC centers needed chest compression in DR</i>

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	Measure	Calculation	Data Collection Plan & Sample Size	Data Collection Method	Tentative Goals
1° measure (Required)	% of resuscitated infants requiring ET or IV epinephrine in the Delivery Room (VON & FPQC metric)	<p>Numerator: # infants with BW \leq1500 g OR GA \leq30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU* that required epinephrine in the Delivery Room</p> <p>Denominator: # infants with BW \leq1500 g OR GA \leq30 6/7 wks in which your resuscitation team attended the delivery at your hospital admitted to your NICU*</p>	Total population of infants with BW \leq 1500 g OR GA \leq 30 6/7 wks in which your resuscitation team attended the delivery at your hospital and were admitted to your NICU*	Chart review (Review of 100% of all resuscitation checklists)	0% of infants <i>In 2011, 6% of VLBWs at VON FPQC centers needed epinephrine in DR</i>

**Infants are eligible if they were admitted to your NICU directly(i.e. no stops) from the Delivery Room and assumes all newborns with an anticipated BW \leq 1500 g OR gestational age \leq 30 6/7 wks had a resuscitation team present at delivery.*