

MOTHER'S OWN MILK (MOM) INITIATIVE

HOSPITAL LEVEL IMPLEMENTATION GUIDE

Florida Perinatal Quality Collaborative

AT THE LAWTON AND RHEA CHILES CENTER FOR HEALTHY MOTHERS AND BABIES



Partnering to Improve Health Care Quality
for Mothers and Babies



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INTRODUCTION

Breast milk is the optimal source of nutrition for all babies, especially those born premature and of highest risk under 1,500 grams at birth. Benefits include improved gastrointestinal maturity, better feeding tolerance and reduced risk of life-threatening infections such as sepsis and necrotizing enterocolitis. Infants fed human milk have lower mortality, better visual development, fewer chronic diseases later in life (including obesity, diabetes, asthma and cancer) and higher IQ scores. Breast feeding promotes mother-infant bonding, improves mother's health, and reduces length of stay and health care costs.

However, only 45.7% of infants cared for in Florida NICUs in 2013 received any breast milk through discharge. FPQC proposes an evidence-based statewide NICU quality improvement initiative to determine and remove barriers to human milk use for these at-risk infants.

FPQC has recruited an expert work group that includes neonatologists, neonatal nurses, lactation consultants change facilitators to assist hospitals in a quality improvement collaborative focusing on human milk in the NICU. The Florida Perinatal Quality Collaborative (FPQC) under contract with the Florida Department of Health, is in the process of developing best practice protocols and tools to assist you in implementing change in your service unit.

The goal of the MOM Initiative is to improve newborn outcomes by applying evidence-based interventions to increase the use of mother's own milk for very low birth weight babies at highest risk (<1500 grams at birth).

This implementation guide was developed to support hospital leaders' efforts to successfully implement the best evidence-based practices and tools to create active quality improvement processes to drive successful implementation. The following information outlines the objectives of this quality improvement collaborative, the methods to support it, and the roles and expectations of both FPQC and participants. Use this information to communicate this opportunity throughout your organization and network.

The MOM Initiative provides an opportunity for your facility to implement change and improve the care provided to mothers and infants. We expect you to make a commitment to implementing change and reporting your progress during the Collaborative for the benefit of all neonatal services statewide.

Please retain this Implementation Plan for reference. If you have any questions about the information presented here or during the Collaborative, email FPQC@health.usf.edu.

Thank You!

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TABLE OF CONTENTS

This implementation guide explains the objectives of the MOM Initiative, reviews our model for quality improvement, your role as a participant, the project timeline and activities, and proposed project measures.

MOM INITIATIVE LEADERSHIP.....	4
PROJECT OVERVIEW	5
Initiative Aim.....	5
Hospital Collaborative Initiative.....	5
Collaborative Timeline.....	6
MOM Recommended Key Elements	7
CREATING A CULTURE OF SAFETY.....	8
Model for Improvement.....	8
INITIATIVE CORE MEASURES	10
MOM Initiative Measurement Grid	11
Appendix A: PDSA Worksheet	15

MOM INITIATIVE LEADERSHIP

FPQC engaged an advisory team to develop this initiative and gratefully acknowledges their knowledge, expertise, and time that were generously donated to the project.

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PROJECT OVERVIEW

INITIATIVE AIM

This initiative will focus on increasing the number of very low birth weight infants in Florida's NICUs who receive at least 50% of their feedings as mothers own milk at discharge.

HOSPITAL COLLABORATIVE INITIATIVE

Participating hospitals will start the initiative together in May 2016 and agree to tailor and implement all hospital identified process improvements at their institution during the first year.

FPQC will:

- Build a strong collaborative learning environment to support hospitals with driving change
- Coordinate experts and other resources to support the improvement process
- Provide content oversight and process management for the Collaborative
- Provide participants with information on subject matter and application of that subject matter via medical and quality improvement experts
- Provide tools and resources to support hospitals in implementing process changes and improving documentation
- Develop/adapt/update useful materials and tools as needed by the initiative
- Offer guidance and feedback to participating hospitals on executing improvement strategies
- Provide educational events and conduct in-person technical assistance meetings
- Convene learning session webinars to support hospitals in driving change
- Facilitate an online data submission process and monthly quality improvement data reports for participating hospitals
- Communicate progress and deliverables to the stakeholders of FPQC
- Evaluate and report MOM results in a fashion that does not publicly identify hospitals and providers

Participating facilities will implement strategies until all core components appropriate to a hospital are implemented over the course of one year. It is recommended that facilities then spend at least 6 additional months institutionalizing the strategies.

Participating Collaborative Hospitals are Required to:

- Assemble a strong QI team including physician, nurse and administrative champions and conduct regular team meetings during implementation.
- Notify FPQC of changes to the QI team
- Complete FPQC pre and post implementation surveys
- At least two team members attend initiative kick-off training
- Commit at least one team member to attend every learning series webinar
- Schedule an on-site educational and technical assistance visit from FPQC advisors and staff
- Implement adapted recommended quality processes and procedure changes within the hospital
- Develop, add or amend hospital or department policy to reflect recommended quality processes and procedure changes related to increasing feeding of MOM at discharge.
- Sign the project Data Use Agreement and document, submit, track, and report all required FPQC measures on a monthly basis throughout the initiative

Hospital Administrator in Participating Hospitals:

- Promote the goals of the collaborative and develop links to hospital strategic initiatives
- Provide the resources to support their team, including time to devote to this effort (team meetings, learning sessions, Collaborative’s in-person meetings and monthly webinars) and facilitate active senior leadership involvement as appropriate

Hospital MD and Nurse Leaders in Participating Hospitals:

- Lead the hospital’s quality improvement efforts, including convening regular team meetings
- Develop a strategy for accountability among partners to help assure progress toward local goals
- Attend the Collaborative’s in-person meetings and monthly phone calls
- Share information and experiences from the Collaborative with fellow participants on conference calls/webinars and at in-person meetings
- Perform tests of change that lead to process improvements in the organization
- Spread successes across the entire hospital system where applicable

Strategies will be adaptable to all hospital settings. There will be core elements that are recommended in a priority order to be included in all locations, including participation in data collection for core metrics. Each facility can either adopt an existing set of protocols or guidelines and tools or develop/adapt protocols or guidelines and tools using the evidence-based elements. An electronic toolbox of materials to assist with implementation will be provided.

Collaborative hospitals will learn improvement strategies that include establishing goals and methods to develop, and test and implement changes to their systems. Quantitative and qualitative data will be collected by sites, submitted to FPQC monthly via a HIPAA-compliant, secure online interface, and shared regularly with hospital teams in a de-identified fashion.

COLLABORATIVE TIMELINE

Timeline is subject to change.

Tasks	Target Completion Date
Hospital Participation Agreements Submitted	April 2016
Recruit Leadership Team, Prepare for and Attend Initiative Kick Off	May 2016
Collect and Submit Baseline Data, Establish Local Team Meeting Schedule	May-June 2016
Kick Off initiative in individual hospital units	June 2016
Attend Learning Session Webinars for training and collaboration, Hold regular Local Team meetings	June 2016-May 2017
Ongoing Data Collection and Technical Assistance upon request	June 2016-May 2017
MOM Initiative Completion	May 2017

Pre-Work

Pre-work is the period between commitment to participate and the kick-off of the initiative in your hospital. During this pre-work time, we request you complete baseline data collection via an online data system, assemble your team (including your nurse and physician champion), meet with your hospital's leadership, and plan your hospital's kick-off. It is important to draft a work plan with responsible parties listed and projected dates for actions to be completed including planning for regular team meetings during the implementation phase. Planning for ways to report back to hospital QI/administration on success helps to build in accountability partnerships.

Action Period

During the Action Period hospitals work toward major, breakthrough improvement. Hospitals in the collaborative will receive ongoing technical assistance, including expert consultation, site visits, training, and data review as needed. To achieve planned results, it is expected that a work plan will be developed specific to the hospital/facility to address all core measures of the MOM Initiative.

During action periods hospitals will be expected to attend learning session webinars, submit monthly data, meet regularly to review quality improvement data reports and progress with their team, and work on improvement strategies. Ongoing communication will occur during monthly webinars in addition to regular e-mails and phone consultation as needed.

Sustainability

After the one year collaborative initiative is complete, hospitals will focus on sustainability of changes made. We recommend that facilities continue to track data and complete PDSA cycles to focus on institutionalizing practices for at least six months.

MOM RECOMMENDED KEY ELEMENTS

Each hospital must review the resources available within its own institution and community to design or modify a written protocol that will assist in the goal of the MOM Initiative.

The MOM Advisory Group has decided that the most important recommended key practice changes and elements of a Mother's Own Milk protocol are these listed below. Hospitals are not expected to begin implementing all of the key elements at once. Each team must prioritize the elements and implement in the order that works best for their facility and resources. The goal of this initiative is to have all of the key elements in place by the end of the initiative in May 2017.

Key Practice Changes include:

1. Process to provide maternal education and advocate for mothers own milk
2. Documentation of informed decision to provide mothers own milk
3. Standardized process for lactation consultations and a lactation consultation by 24 hours of NICU admission
4. Determination of who is responsible and continuously available to initiate and assist with ongoing pumping, including first pumping by infant's 6th hour of life
5. Secure sufficient number of pumps and ensure access (in-house and at maternal discharge)
6. Provide breastfeeding education and measure competencies for all staff
7. Maternal education on hand expression, hands-on pumping, colostrum collection and have MOM available by infant's 3rd day of life
8. Ensure appropriate supplies are available to support facilitate breastfeeding and provision of breast milk
9. Process to monitor milk supply
10. Standardized guidelines for skin-to-skin, test weights, non-nutritive breastfeeding, transition to nutritive breastfeeding, use of nipple shields, support for discharge feeding plan with appropriate follow up.

CREATING A CULTURE OF SAFETY

Culture change is a process. There is no change without an organizational culture change. Culture change requires the support of administration, clinicians, and staff. A big barrier to transforming culture is not recognizing or understanding the need for change. It often takes education, discipline, repetition, and time to substitute old behaviors with new ones.

Suggestions for creating a culture of safety:

- Obtain physician support; senior leadership makes safety rounds
- Participate in continuous quality improvement meetings
- Celebrate successes and recognize staff that perform well
- Use and review data regularly; share data with entire team
- Train physicians and nurses on written policies and procedures
- Build your EMR to incorporate needed key elements
- Standardize the process, individualize to your hospital setting, encourage training in teamwork and communication (e.g. TeamSTEPPS)
- Encourage use of quality management tools such as root cause analysis
- Make patient safety the first agenda topic on team and staff meetings
- Involve patients in the design and review of education materials

Some hospitals have established their QI initiatives under their patient safety umbrella and have developed a practice of having patient safety be the first agenda item on their team meetings. During this agenda item time the initiative progress is reviewed whether it be a unit level staff meeting or other appropriate level meetings (hospital QI, medical staff, periodic reports to administration, etc.).

Suggestions for making change easier:

- Provide evidence to support a change's proposed improvement in quality and help people understand the rationale for change.
- Understand how difficult change can be and sell benefits of the proposed change. Know a middle ground can be found in most circumstances. Encourage collaboration by searching for agreement among involved individuals regarding the proposed change.
- Seek acceptance by particularly engaging those individuals who are very opinionated regarding the change and win them over. Once others see these people accepting change you will often see more acceptance of the idea.
- Provide evidence for the utility of the changes by sharing data regularly related to improvements. Use creative approaches, symbolic awards, rack cards, certificates, buttons, etc. Celebrate/recognize small successes.

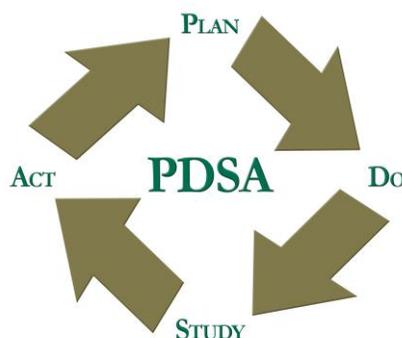
MODEL FOR IMPROVEMENT

The goal of this implementation guide is to provide a simple step-by-step guide for creating quality improvement (QI) changes in your facility to improve care processes associated with increasing feeding of MOM at discharge. We will be using information and tools for quality improvement from the Institute for Health Care Improvement (IHI) available at: <http://www.ihc.org/knowledge/Pages/HowtoImprove/default.aspx>

The Model for Improvement as developed by Associates in Process Improvement, is a simple yet powerful tool for accelerating improvement that has been used very successfully by hundreds of health care organizations across the world to improve many different health care processes and outcomes.

The model has two basic parts:

1. Three fundamental questions, which can be addressed in any order are: 1.) What are we trying to accomplish? 2.) How will we know a change is an improvement? and 3.) What changes can we make that will result in improvement?
2. The Plan-Do-Study-Act (PDSA) cycle tests changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement (see Appendix A PDSA worksheet).



There are several steps involved in the improvement process. The following is a summary of those components as explained on the IHI site.

1. Improvement requires setting aims. The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected.
2. Measures are core to the process. Teams use quantitative measures to determine if a specific change actually leads to an improvement.
3. Ideas for change may come from the insights of those who work in the system, from change concepts or other creative thinking techniques, or by borrowing from the experience of others who have successfully improved.
4. The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method adapted for action-oriented learning.
5. After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team may implement the change on a broader scale.
6. After successful implementation of a change or package of changes for a pilot population or an entire unit, the team can spread the changes to other parts of the organization or in other organizations

INITIATIVE CORE MEASURES

Participating hospitals will be asked to collect and submit data on the following measures. These measures will focus on very low birth weight infants in the NICU eligible to receive mothers own milk (MOM).

Data collection will be due monthly. A data collection form will be provided to facilitate data submission on each VLBW infant that is 1) eligible to receive mothers own milk AND 2) where mother intends to provide mothers own milk. Hospitals will also be asked quarterly to submit the total number of infants in the NICU who were VLBW and eligible to receive breast milk, whether or not the mother intended to provide MOM.

Outcome Measures

- Intent to provide mothers own milk
- MOM volume ≥ 500 ml/day at day of life 14 and 28
- $\geq 50\%$ of feeding volume comprised of MOM at DOL 7, 14, 28, and discharge
- Nutritive breastfeeding within 7 days of discharge

Process Measures

- Documentation of informed decision to provide MOM
- Hospital grade pump available at maternal discharge
- Lactation consult by 24 hours of admission to NICU
- First pumping by \leq hour of life 6
- MOM available by day of life 3
- Non-nutritive breastfeeding documented
- Skin-to-skin by day of life 10
- Infant feeding volume that is MOM on day 7, 14, 28

Balancing Measures

- Growth parameters at birth and first discharge
- Infants with NEC
- Formula feeding volume on day 7, 14, 28
- Donor breast milk feeding volume on day 7, 14, 28

Please see the Measurement Grid below for details. These measures are subject to change based on collaborative input. Facilities may implement process changes in the order of their choosing.

MOM INITIATIVE MEASUREMENT GRID

These measures will be calculated and reported to the hospitals in a quality improvement data report on a monthly basis so that facilities can track their progress.

Note: “Included VLBW infants” means a data collection form was completed because infant meets inclusion criteria. Consider adding these measures to your electronic health records to facilitate tracking.

Inclusions: VLBW infants admitted to the NICU (eligible to receive MOM) where mother intends to provide MOM

Exclusions: Contraindicated (HIV, CMV, certain drugs), mother does not intend to provide MOM

Process Measures	Description	Data Collection
1. Proportion of included VLBW infants where mother’s informed decision to provide MOM is documented	Numerator: Number of VLBW NICU infants where mother’s intent to <u>provide MOM was documented</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
2. Proportion of included VLBW infants where hospital grade pump is available at maternal discharge.	Numerator: Number of infants where <u>hospital grade pump was available at maternal discharge</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
3. Proportion of included VLBW infants where documented lactation consult was conducted by 24 hours of admission to the NICU.	Numerator: Number of infants where <u>lactation consult was conducted by 24 hours of NICU admission</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
4. Proportion of included VLBW infants where mother’s first pumping occurred at ≤ hour of life 6.	Numerator: Number of infants where <u>mother’s first pumping occurred at ≤ hour of life 6</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
5. Proportion of included VLBW infants where MOM available by day of life 3.	Numerator: Number of infants where <u>MOM was available by day of life 3</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
6. Proportion of included VLBW infants where non-nutritive breastfeeding is documented	Numerator: Number of infants where non-nutritive <u>breastfeeding was documented</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
7. Proportion of included VLBW	Numerator: Number of infants where non-nutritive	Complete data collection form for each



infants where skin-to-skin occurred by day of life 10.	<u>skin-to-skin occurred by day of life 10</u> Denominator: Total number of included VLBW infants	included infant. Submit monthly.
8. Proportion of infant feeding volume (ml) that is MOM on day 7, 14, 28 out of total infant feeding volume.	<u>Numerator: Infant feeding volume that is MOM on day 7 / 14 / 28 per infant</u> Denominator: Total feeding volume on day 7 / 14 / 28 per included VLBW infant (Total infant feeding volume (ml) on each day = MOM volume + formula volume + enteral feeding volume + Donor BM volume on each day per infant)	Complete data collection form for each included infant. Submit monthly.

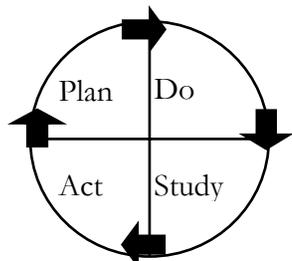


Outcome Measures	Description	Data Collection
1. Proportion of included VLBW infants where MOM volume is \geq 500 ml/day at day 14 and 28.	Numerator: Number of NICU infants where MOM volume is \geq 500 ml/day at day 14 and day 28 <u>Denominator: Total number of included VLBW infants</u>	Complete data collection form for each included infant. Submit monthly.
2. Proportion of included VLBW infants where \geq 50% of feeding volume comprised of MOM at DOL 7, 14, and 28	Numerator: Number of NICU infants with where \geq 50% of feeding volume was comprised of MOM at DOL 7, 14, and 28 <u>Denominator: Total number of included VLBW infants</u>	Complete data collection form for each included infant. Submit monthly.
3. Proportion of included VLBW infants with a nutritive breastfeeding session within 7 days of discharge	Numerator: Number of included VLBW infants with a nutritive <u>breastfeeding session within 7 days of discharge</u> Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
4. Proportion of included VLBW infants receiving \geq 50% MOM at discharge.	Numerator: Number of included VLBW NICU infants receiving \geq 50% at discharge <u>Denominator: Total number of included VLBW infants</u>	Complete data collection form for each included infant. Submit monthly.
5. Intention rate: Proportion of all VLBW NICU infants eligible to receive breast milk where mother intends to provide breast milk.	Numerator: Total number of eligible VLBW NICU infants whose mother <u>intended to provide MOM (data collection forms completed)</u> Denominator: Total number of all VLBW NICU infants	Quarterly: Report total number VLBW infants admitted to NICU eligible to receive MOM for the denominator.
6. Proportion of all VLBW NICU infants eligible to receive breast milk receiving \geq 50% MOM at discharge.	Numerator: Number of all VLBW NICU infants receiving \geq 50% at discharge <u>Denominator: Total number of all VLBW NICU infants</u> Hospitals will report total # VLBW infants admitted to NICU eligible to receive MOM for the denominator on a Quarterly basis	Quarterly: Report total number VLBW infants admitted to NICU eligible to receive MOM for the denominator.



Balancing Measures	Description	Data Collection
1. Growth parameters at birth and at first discharge (weight/length/head circumference)	Numerator: Proportion of included infants <3 rd percentile cutoff (growth restricted) at birth and first discharge Denominator: Total number of included VLBW infants	Complete data collection form for each included infant. Submit monthly.
2. Proportion of infants with NEC (VON definition)	<u>Numerator: Number of NICU infants with NEC inclusions</u> Denominator: Total number of VLBW NICU infants	Complete data collection form for each included infant. Submit monthly.
3. Formula feeding volume day 7, 14, 28	Numerator: Infant feeding volume that is formula on day 7 / 14 / 28 <u>per infant</u> Denominator: Total feeding volume on day 7 / 14 / 28 per infant (Total infant feeding volume (ml) on each day = MOM volume + formula volume + enteral feeding volume + Donor BM volume on each day per infant)	Complete data collection form for each included infant. Submit monthly.
4. Donor breast milk feeding volume, day 7, 14, 28	Numerator: Infant feeding volume that is Donor Milk on day 7 / 14 / 28 <u>per included infant</u> Denominator: Total feeding volume on day 7 / 14 / 28 per infant (Total infant feeding volume (ml) on each day = MOM volume + formula volume + enteral feeding volume + Donor BM volume on each day per infant)	Complete data collection form for each included infant. Submit monthly.

Appendix A: PDSA Worksheet



Team Name:	Date of test:	Test Completion Date:
Overall team/project aim:		
What is the objective of the test?		

Adapted from Ohio Perinatal Quality Collaborative PDSA Tutorial

PLAN: Briefly describe the test:

How will you know that the change is an improvement?

What driver does the change impact?

What do you predict will happen?

PLAN

List the tasks necessary to complete this test (what)	Person responsible (who)	When	Where
1.			
2.			
3.			
4.			
5.			
6.			

Plan for collection of data:

DO: Test the changes.

Was the cycle carried out as planned? † Yes † No

Record data and observations.

What did you observe that was not part of our plan?

STUDY:

Did the results match your predictions? † Yes † No

Compare the result of your test to your previous performance:

What did you learn?

ACT: Decide to Adopt, Adapt, or Abandon.

Adapt: Improve the change and continue testing plan.
Plans/changes for next test:

Adopt: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability

Abandon: Discard this change idea and try a different one