Breast Milk Labeling

Breast Milk Tracking Application

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Through the use of PPID (positive patient identification):

- Decrease the risk of wrong breast milk being fed to a baby in an environment with increasing numbers of babies receiving breast milk
- Decrease manual patient identification and minimize the risk of human error
- Minimize additional steps for clinical staff while increasing safety
Background of the Project

- Promotion of breast milk as important to the clinical outcomes and health of babies is essential
- Launched initiative to increase the use of breast milk at CHP
- Risks with breast milk misappropriation. It should be treated similar to medication administration.
- Manual process to check match of breast milk to baby is at risk of human error.
Initiative to Increase Breast Milk Use

Breastmilk = Medicine

Percent Breastmilk at discharge for babies admitted at <7 DOL

Project Initiation 2013

PPID Initiation

May 2012 thru August 2015

Median

Goal

Children’s Hospital of Pittsburgh of UPMC
Safety Strategies While Increasing Breast Milk Usage

• Education regarding safety and identification related to infection control risks – wanted to tighten the process
• Considered individual refrigeration in patient rooms.
• Bedside milk warmers (currently in place in NICU)
• PPID scanning: treat like a medication
• Explored options for applications: Cerner versus home grown
Application Design and Development

Application designed with internal design team and local software developer

– Capable of implementation within 5 months
– Enabled control of complexity

• Design group included clinical leadership, nurse educators, bedside staff, Clinical Informatics, eRecord Applications, CHP Applications and the software developer
• Application developed to be compatible with CHP PPID device
• Use of barcode and label already in place
• Log onto breast milk app by scan of employee identification badge
• Trigger to communicate the patient’s information to the app is the use of a current order: “Breast Feeding Mom Diet”
  – This order was already being used to provide meal vouchers to breast feeding moms
• Development of reports to track scanning of breast milk
• Nurse did a visual double check of the patient wrist band and breast milk label to verify the correct breast milk for the correct patient:
  – At the bedside
  – With another staff member, to verify the correct patient and breast milk

• Nurse and other staff member signed paper form with the date and time of the check
Process with Breastmilk Scanning

- Staff member verifies name and birthdate on patient ID band against the patient information on the bottle label
  - At the bedside
  - Without another staff member

- When time for feeding, nurse scans patient identification band and the label on the breast milk bottle
  - At the bedside prior to feeding
Breast Milk Scanning – Diet Order

- Breast feeding diet order placed:

![Image of Orders interface with Breast Feeding Mom Diet order]
Breast Milk Verification Prior to Scanning

- Breast Milk is obtained from pantry and double checked against patient ID band at bedside
Breast Milk Scanning – Login

- Tap on icon on ID badge
- Scan ID badge to login to the application
Breast Milk Scanning – Scan the Patient

- Scan the data matrix barcode on the wristband and the patient identification will populate
Breast Milk Scanning – Scan the Bottle

- Scan the data matrix bar code on the bottle
- First bottle field will populate
- Up to 5 bottles can be scanned at a time
Breast Milk Scanning - Completing Verification

- Tap submit when all bottles are scanned
- If they match, the app will go back to scanning screen
- “Patient and Bottle(s) Match” will display in green
Bottles Do Not Match

- Bottles/Fields that do not match will turn red
- Rescan
- Discard if it does not match
Multiples and Donor Breast Milk

• Able to link twins and multiples

• Donor Breast Milk:
  • Donor breast milk is labeled when ready for use and scanned using same process
Breast Milk Scanning Application Demo

Breast Milk Scanning Application Demo
Breast Milk Misappropriations - Inpatient

12 months prior to implementation to present

Breast Milk Scanning/Error Comparison

- Number of Breast Milk Feedings/month
- Number of Errors
- # Breast Milk Bottle Feeds
- # of Milk Events - HARM
- # of Milk Events - NO HARM
- Linear (# Breast Milk Bottle Feeds)
- Linear (# of Milk Events - HARM)
- Linear (# of Milk Events - NO HARM)
1. **Process related**
   - Where scanning was done?
   - How bottles were sent home and labeled?
   - Were we kept labels?
   - Check in and check out milk process

2. No harm

3. Several – near misses

4. **PPID process working fine with solid, uniform process!**
Lessons Learned –
Opportunity for Increased Safety Checks Related to Process

With scanning we have enhanced ability to know that we have a need for an **improved and uniform process**.

1. Eliminate workarounds  
   - Removal of excess labels from the bedside
2. Full decentralization of milk preparation to the bedside  
   - Remove syringes and volufeeds from pantry and perform at bedside
3. When receiving breast milk from mom/dad, scan milk at bedside prior to placing in the pantry and when milk brought from home.
4. Labeling empty bottles and scanning to patient’s ID prior to giving empty bottles to the family when going home.
5. All patient’s milk must be scanned prior to discharge – every bottle.
6. Limiting milk per baby in the unit.
7. Implementing milk techs – in progress
QUESTIONS?
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Children’s Earns Award for E-Record Excellence

Children’s Hospital has been named a 2015 HIMSS Enterprise Davies Award recipient for excellence in Electronic Health Records (EHR). The award promotes EHR-enabled improvement in patient outcomes through sharing implementation strategies, workflow design, best practices, and patient engagement – all focused on improving patient care.

Among its achievements leading to the Davies Award, Children’s has leveraged its state-of-the-art data warehouse to improve care and to significantly reduce hospital-acquired infections. Other accomplishments include deploying a variety of clinical data to populate a dashboard to generate a pediatric Rothman index, a real-time and an easy-to-understand composite score that evaluates the patient’s condition. It enables providers to trigger early preventative measures to significantly reduce ICU admissions associated with pulmonary and cardiac events.

The hospital has also used information technology to improve supply chain management, patient safety and financial outcomes; leveraged RFID technology, bar-coding, patient identification, and system automation to improve on-time delivery of medication rates while lowering medication errors by 60 percent, and launched an improved labeling and delivering system that has virtually eliminated errors in breast milk delivery.