Disclosures & Overview

- No affiliations with any persons or entities that could be perceived as having a bearing on this presentation.

- Hand Expression Protocols
- Breastpumps: Pros and cons of various mechanical pumps
- DME providers and Pump Closets
- Billing
Objectives

■ Describe the various types of commercial breast pumps, their indications for use and efficacy of different models.

■ Describe the various methods of hand expression techniques and protocols

■ Identify different strategies for accessing breast pumps for patient care

■ Describe reimbursement policies and billing structures
Terminology

- Multi-User (Hospital Grade) E0604
- Single-User (Personal Use) E0603
- Manual Pump (Hand Pump) E0602
- Pump kits, lactation aids A9999
- Vacuum (suction)
- Cycling
- Warranty
- Costs
- mmGh – millimeter mercury negative pressure

Milk Expression - Evidence

■ Becker, et. al. (2015)
  - Methods of milk expression for lactating women
  - Randomised and quasi-randomised trials comparing methods at any time after birth.
  - LOE = 1

■ 34 studies:
  - pump vs. hand expression comparison
  - pump type vs. other pump type
    - 3 of these studies compare hand expression and multiple pump types
  - specific protocol or adjunct therapy
Milk Expression - Evidence

Outcomes

- “The most suitable method for milk expression may depend on the time since birth, purpose of expression and the individual mother and infant.”
  - Low cost interventions are important
  - More milk with:
    - Music listening
    - Relaxation protocols
    - Warm breasts
    - Breast massage
    - Hand expression
    - Frequent pumping with right sized flange
    - Early initiation (ASAP after birth)
    - Lower cost pumps

“Independently funded research is needed for more trials on hand expression, relaxation and other techniques that do not have a commercial potential.”
Hand Expression Protocols

**Manual Expression of Breastmilk: Marmet Technique**

**Technique is Important**

When starting manual expression, the correct milking motion is difficult to use. In this case, the hand is the same as the eye. Consequently, many women have found manual expression difficult—e.g., after a cesarean delivery or surgical breast reconstruction. These findings are based on an experimental basis and have been confirmed by different techniques which can easily lead to damaged breast tissue, breastfed, and even skin burns. The Marmet technique of manual expression was developed by a woman who needed to express her milk over an extended period of time for medical reasons. She found that the Marmet expression method did not work as well as when her baby breastfed, so she also developed a method of massage and stimulation to assist the breastfeeding. The key to the success of the technique is the combination of the technique of expression and this massage.

**Technique is Effective and Does Not Cause Problems**

It can be easily learned by following this step-by-step guide. Use any manual milk. In practice, it is most effective.

**ADVANTAGES**

- More women are more comfortable with manual expression because it is more natural.
- Milk is when it is most stimulating than the use of a feed.
- Manual expression can be used in any breast that has been treated with a more effective MMR.

**How the Breast MAMES MILK**

The milk is produced in milk-secreting cells (alveoli). When these milk-secreting cells are stimulated, they secrete milk into the duct system (MRR). A small portion of the milk may flow down the duct and collect in the ducts under the areola beneath terminal milk ducts (canal portion of the lactiferous ducts).

**Expressing the Milk**

1. Position the thumb and first two fingers on the breast about 1 cm from the 2nd to 3rd finger behind the base of the nipple.

   - The middle finger is the 2nd finger from the 3rd finger behind the base of the nipple.

   - Place the palm and fingers above the nipple at the 2nd finger behind the 3rd finger behind the base of the nipple.

   - Use this measurement, which is not necessarily the same size of the areola, as a guide. The areola varies in size from one woman to another.

   - Bollman, TLBM

**EXPRESSION OF BREAST DRAINING THE TERMINAL MILK DUCTS**

**First:** Start by expressing the milk from the breast by hand. The milk is expressed from the breast by hand, and the milk is then expressed from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.

**Second:** Continue to express the milk from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.

**Third:** Express the milk from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.

**Fourth:** Collect your milk into a spoon, or as the volume increases, into a small medicine cup or into the breast shield of your pump.

**Fifth:** Compress your breast with the right hand and then express the milk from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.

**Press:** Press back towards your chest.

**Compress:** Compress your breast with the left hand and then express the milk from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.

**Relax:** Relax the pressure and start over again.

**Express Yourself:**

- **Press:** Press back towards your chest.
- **Compress:** Compress your breast with the left hand and then express the milk from the breast by hand. The milk is then expressed from the breast by hand, and the milk is then expressed from the breast by hand.
- **Relax:** Relax the pressure and start over again.

**Hand Express Your Breastmilk**

**How to Hand Express**

**FIRST:** Wash Dr. Jane Morton’s video at the Stanford University website (see below) or purchase the complete video, Making Enough Milk, from the Key to Successful Breastfeeding—Planning for Day One at www.breastmilkboosters.com.

**SECOND:** Gently massage the breast.

**THIRD:** Turn on a C” with your thumb on the edge of the areola until your nipple is engaged and index finger (“pressing”) fingers. As you learn to express your milk, you will discover your “sweet spot,” where the milk comes out the easiest.

**FOURTH:** Go back and forth from one breast to the other (right, left, right, etc.).

**FIFTH:** Collect your milk into a spoon, or as the volume increases, into a small medicine cup or into the breast shield of your pump.

**Press:** Press back towards your chest.

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**PRESS...COMPRESSION...RELAX...”

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**PRESS...COMPRESSION...RELAX...”

**Abstract**

**Background:** Breast engorgement is a major cause of pain and swelling in the early postpartum period. While protocols exist for the management of engorgement, evidence for other methods is lacking. This prospective descriptive cohort study evaluated the experiences of women who used a combination of breastfeeding, hand expression, and massage as an alternative to medication for pain and swelling. Materials and Methods: This was a prospective descriptive cohort study involving 100 women who were enrolled in a breastfeeding support group. The study was conducted at a local hospital in a breastfeeding support group. The data were collected using a structured interview. Results: Of the 100 women enrolled, 95% reported significant improvement in pain and swelling after using the combination of breastfeeding, hand expression, and massage. Conclusion: The results of this study suggest that the combination of breastfeeding, hand expression, and massage may be effective in the management of engorgement. Mothers who choose to use these methods should be encouraged to seek breastfeeding support and assistance. Copyright © 2019 Academic Medicine. All rights reserved.
Hand Expression Protocols

- Ohyama, et.al. (2010)
- “Manual expression and electric breast pumping in the first 48h after delivery”
  - Hand expression collects more colostrum in first 48 hours
  - N=11. Babies in NICU
  - Pumps were “Medela Symphony”
  - Hand expression protocol was variation of “Marmet Technique” (no massage)
  - Performed by trained Midwives
Hand Expression Protocols

Morton
- Massage
- C Hold – away from Areola
- Press, Compress, Release (Relax)
- Repeat
- Colostrum focused
- Recommend 5x/day
- No timed protocol – unclear for how long

Marmet
- Position (C Hold – away from Areola
- Push
- Roll
- Repeat
- Rhythmic
- Established Milk Supply Focused
- Offers timed protocol
- Massage for MER
  - Shake, Stroke, Massage
Hand Expression Protocols

Bollman – Therapeutic Lymphatic Breast Massage & Hand Expression

- 4 R’s” – with Warm Hands
- Round- (circles with fingertips)
- Rake- (efflurage)
- Rain- (tapping with fingertips)
- Roll- (Palms sandwich breast and pull away from chest wall, roll breast between palms)

- Mature Milk focused
- No timed protocol – unclear for how long
Hand Expression Protocols

**Pros**
- More Milk Later
- More Colostrum Collected
- More confidence
- Better compliance

**Cons**
- Stable moms still can’t perform
- Non-compliance
- Staff time / Compliance
- Poor technique
- Unclear timing and frequency
FDA - Definitions

- Durable Medical Equipment
- “Please note that the term “hospital-grade pump” is not recognized by the FDA and there is no consistent definition for this term, so individual companies could mean different things when they label their breast pumps as hospital-grade.”
- If renting – “Multi-User”
- Purchasing – “Single-User”
- Manual, Battery, Electric
- No longer providing definitions for “Closed” vs. “Open” systems
- Rely on Manufacturer’s reporting

-FDA.gov (2019)
Healthcare Common Procedure Coding System (HCPCS)

- Multi-User (Hospital Grade Electric Breast Pump) E0604
- Single-User (Personal Use Electric Breast Pump) E0603
- Single-User (Personal Use Manual Breast Pump) E0602
- Pump Kits E0602
- Lactation aids (nipple shields, flanges, shells) A9999
  - “Misc. DME Supply or Accessory, Not Otherwise Specified”
  - Include Manufacturer’s Sheet with Price
Pump Vacuum

- Zhang, et al. (2017)
- Effect of pumping pressure on onset of lactation after caesarean section: a randomized controlled study
- Treatment was randomized, 2 hours after surgery
  - 6x per day for 30 min. (longer sleep at night)
  - Randomized to higher suction (-150mmHg) or lower suction (-100mmHg)
  - Chinese pump
  - Target pressure was gradually increased over 3-5 minutes
  - Pressure downregulated or terminated with pain
  - In addition to breastfeeding with breastfeeding being a priority
Pumping Vacuum

- **Outcomes**
  - *Pumping at -150mmHg suction/vacuum*
    - increased milk supply and OL II
  - *Boosted maternal confidence in breastfeeding*
  - *Increased nipple discomfort (similar to NSVD mothers)*
  - *Too high pressure is not optimal*

  “Extremely high sucking strength (−237.7 ± 59.6 mmHg) leads to a lowered flow rate of milk transfer.”

Zhang, et.al. (2017)
High vacuum and nipple pain

Infants in Pain Group exhibit Stronger Vacuum and took less milk:

Baseline = -90mmGh
Peak = -214mmGh
Pause = -104mmGh

McClellan, et. al. (2008)
Which Pump for which mother? (Meier, 2016)

- Hand expression (compression) vs. pumping (vacuum)
  - *Infant uses vacuum*
  - *Hand expression alone will not initiate, bring to volume or maintain supply*

- PAMR: Percent of Available Milk Removal
  - *Volume of human milk (HM) removed by pump to baseline of milk in breast*

- HM removal measured in mL per unit of time spent pumping
  - *Healthy infant removes about 80% of HM in 5 min*
  - *Efficient breast pump remove HM in 15 min*

- Comfort and Convenience
  - *Cycle, suction, portability, quietness, discreet*
Which Pump for which mother? (Meier, 2016)

- To determine the appropriate milk expression method:
  - Is infant or pump responsible for HM removal/stimulation – lactation regulation – over the course of 24 hours?
  - Pump dependency
    - Minimal, partial, complete
  - Timing: Stages of Lactation
    - Initiation
    - Coming to Volume
    - Maintenance
### Table 2. Examples of mother-infant dyads with differing degrees of breast pump dependency during the three stages of lactation

<table>
<thead>
<tr>
<th>Phase of lactation</th>
<th>Minimal Description</th>
<th>Degree of breast pump dependency</th>
<th>Complete Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiation</strong></td>
<td>Healthy infant who feeds at breast effectively and efficiently at least 8–12 times daily</td>
<td>Late preterm/early term birth Otherwise healthy term infant who does not feed consistently and effectively at breast (for example, sleepy baby; unsustainable latch)</td>
<td>Premature and/or sick infant admitted to the NICU and unable to feed at breast</td>
</tr>
<tr>
<td></td>
<td>Pacifiers and bottle feeds do not substitute or replace breastfeeding</td>
<td>Mother of multiples with ≥1 infant who feeds effectively and efficiently and ≥1 who does not Pump type: None</td>
<td>Maternal illness requiring separation from infant</td>
</tr>
<tr>
<td></td>
<td>Pump type: None</td>
<td></td>
<td>Maternal HM feeding goal to provide pumped HM exclusively by bottle</td>
</tr>
<tr>
<td><strong>Coming to volume</strong></td>
<td>Healthy infant who feeds at breast effectively and efficiently at least 8–12 times daily</td>
<td>Late preterm, early term or term infant who does not feed consistently and effectively at breast at least 8–12 times daily (including ≥1 of multiples)</td>
<td>Premature and/or sick NICU infant who is unable to feed at breast</td>
</tr>
<tr>
<td></td>
<td>Mother may express HM for engorgement or comfort</td>
<td>Term NICU infant who feeds at breast effectively and efficiently part of the day</td>
<td>Maternal illness requiring separation from infant</td>
</tr>
<tr>
<td></td>
<td>Pump type: Manual or mini-electric (or personal use electric pump if mother already has one)</td>
<td>Pump type: Hospital-grade electric</td>
<td>Maternal HM feeding goal to provide pumped HM exclusively by bottle</td>
</tr>
<tr>
<td><strong>Maintenance of established lactation</strong></td>
<td>Mother of healthy infant who feeds effectively and efficiently at breast but is separated from infant for up to half of all daily feedings</td>
<td>Late preterm, early term or term infant who does not feed consistently and effectively at breast, as evidenced by inadequate HM transfer (for example, test-weights) or weight gain and/or ineffective feeding behaviors (slipping off the nipple, falling asleep early in the feeding, not waking to feed)</td>
<td>Mothers of infants unable to feed at breast owing to prematurity and/or illness who are hospitalized or cared for in the home (for example, premature infants in the NICU, chronically ill infants in pediatric ICU, discharged infants with gastrostomy tube or craniofacial anomalies)</td>
</tr>
<tr>
<td></td>
<td>Pump type: May range from manual or mini-electric for brief separations to personal electric breast pump for longer separations</td>
<td>Mothers of NICU infants who consume some but not enough HM during breastfeeding during the late NICU hospitalization or early postdischarge period</td>
<td>Mothers or their healthy term infants who are separated for more than half of all daily feedings (for example, maternal prolonged shift work or infant or maternal re-hospitalization)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pump type: Hospital-grade electric until infant consumes ≥ 80% of daily feedings at breast, then personal use pump may be adequate</td>
<td>Maternal HM feeding goal to provide pumped HM exclusively by bottle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pump type: Hospital-grade electric may be able to substitute personal use pump for ≤ 50% of daily pumpings for convenience, if returning to employment</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: HM, human milk; NICU, neonatal intensive care unit. Note: The information in this table is an integration of cited evidence and marketing guidelines for product use.
COMMERCIAL PUMPS

Roundtable discussion
Handouts

Breast Pump Comparison Chart

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>ML10302377</td>
<td>JHP03L1</td>
<td>JHP03L1</td>
<td>WH10A181</td>
<td>D0010112</td>
<td>D0010112</td>
</tr>
<tr>
<td>Package</td>
<td>24mm, 30mm</td>
<td>24mm</td>
<td>24mm, 30mm</td>
<td>25mm</td>
<td>24mm, 30mm</td>
<td>30mm</td>
</tr>
<tr>
<td>Tube Length</td>
<td>41.7&quot;</td>
<td>35&quot;</td>
<td>35&quot;</td>
<td>35&quot;</td>
<td>35&quot;</td>
<td>35&quot;</td>
</tr>
<tr>
<td>Diameter</td>
<td>250mm (max)</td>
<td>270mm (max)</td>
<td>280mm (max)</td>
<td>214.5mm (max)</td>
<td>230mm (max)</td>
<td>230mm (max)</td>
</tr>
<tr>
<td>System</td>
<td>Open</td>
<td>Closed</td>
<td>Closed</td>
<td>Closed</td>
<td>Closed</td>
<td>Closed</td>
</tr>
<tr>
<td>Weight</td>
<td>4.4lbs</td>
<td>3.5 lbs</td>
<td>4.3 lbs</td>
<td>6 lbs</td>
<td>5.8 lbs</td>
<td>5.8 lbs</td>
</tr>
<tr>
<td>Adapter / BatteryPack</td>
<td>AC power adapter/Cord</td>
<td>AC power adapter/Cord</td>
<td>AC power adapter/Cord</td>
<td>AC power adapter/Cord</td>
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<td>AC power adapter/Cord</td>
</tr>
<tr>
<td>Motor Warranty</td>
<td>1-year warranty on pump motor, 60-day warranty on parts</td>
<td>1-year warranty on pump motor, 60-day warranty on parts</td>
<td>1-year warranty on pump motor, 60-day warranty on parts</td>
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</tr>
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</table>

Key considerations when selecting your electric breast pump

- **Comfort**
- **Efficiency**
- **Ease to Clean**
- **Portability**
- **Tastality**
Ameda – FINESSE (Personal Use E0603)

PROS
■ Closed System
■ Vacuum/Suction up to 280 mmHg
■ Independent vacuum and speed
■ Same kit works on all products
■ Internal mechanism
  – upgraded was up/down piston
  – now wave motion
■ Quiet,
■ 2 year warranty
  – begins when received not when manufactured.

CONS
■ Independent control can cause user errors
■ marketing can use improvement
Bellemia – Melon Personal Use E0603

PROS

- Closed System
- Vacuum/Suction up to -250 mmHg
- Button to stimulate Milk Ejection Reflex
- Independent Left / Right Suction Control
- Silicone cushion for comfort,
  - remove silicone cushion accommodates larger nipples - up to size 28mm,
- Medi-Cal Population
  - Packaging in English/Spanish
  - Inexpensive

CONS

- Issues with A/C Adaptor (3rd party company - has since been resolved)
- Unknown as far as name recognition
- Warranty
Freemies - Personal Use E0603

**PROS**

- Closed system, -280 mmhg
- Independent control of vacuum
- Hands free, portable, multi-tasking, comfortable
- Holds 8 oz of breast milk on each breast, Doesn’t require bags
- Plug in to any USB port
- Compatible with different pumps like: Medela PIS, Hygeia Enjoy, Spectra S1, S2, 9+, M1, Ameda Purely Yours, Ardo, and more
- Comparable price $300 for Liberty Breast Pump,
- Either $60 or $80 for a connection kit.

**CONS**

- User Error:
  - Plastic: Temperature sensitive to temperature
  - Can warp which makes it not work.
  - Only boiling is recommended.
  - Not using the independent control on the vacuum/speed correctly:
    - 10 on speed is quick cycles which is stimulation but people assume the higher is better and put the speed on 10 and vacuum on 10.
  - Sometimes the battery pack needs to be replaced. There is a 1 year warranty to do that
- May not work for all sizes of breasts
Freemies - Personal Use E0603

PUMP WHERE YOU WANT WITH FREEMIE

Pump in public wearing any shirt and bra
Hygeia – Endear and Enjoye

**PROS**
- Comparable to Medela PIS
- Compatible with Medela parts
- Endear is “Lactina” (E0604)
- DME – can cover some Medi-Cal

**CONS**
- Name recognition
Limerick Pride Multi-User Breast Pump

**PROS**
- Closed System
- -250 mmHg
- silicone flanges for comfort and mimicking compression of baby
- one-size fits all flange
- minute timer shows how many minutes pumping
- ability to save the settings for next use
- positive messages to mother while she pumps
- COLOSTRUM COLLECTION

**CONS**
- Expensive - Lowest price = $400
- Unknown name recognition,
- Not reimbursable by many insurance providers
- Can’t even buy from Amazon
- Only available on website
- Not rentable
Limerick

- Evaluation of Milk Production with a Multi-User, Electric Double Pump with a Soft Flange in Mothers of Very Low Birth Weight (VLBW) (<1500 GM, ≤31 WK Gest) NICU Infants: a Pilot Study - White, et.al. (2011)

- Research funded by manufacture

- “The PJs comfort® multi-user pump is a viable alternative to larger, more expensive pumps for establishing an adequate milk supply in mothers of VLBW infants in the NICU.”
Medela – Symphony, PIS and Sonata
Medela Research

• FUNDS RESEARCH

• Initiation Mode – Do you see more colostrum?

• Durable Equipment

• Simple to use

• Can’t determine where -150mmGH

• Their research – “highest tolerable suction”

• Symphony comfortable, complaints about PIS

• Mixed reviews on Sonata (quieter, yes)
Use Initiate:
- Baby <5 days; and
- Until milk volumes reach >20ml for 3 sessions

Use Maintain:
- Milk volumes >20ml for 3 sessions
- Watch flow – adjust suction – switch phases with flow

The Maintainer program, with the research-based 2-Phase Expression technology, starts with a high frequency stimulation phase (120 cycles per minute) to elicit milk ejection. After switching to the expression phase, a breast pump suction pattern with low frequency (54-78 cycles per minute) and variable vacuum (-50 to -250 mmHg) is used to comfortably and efficiently remove milk. As mothers may not sense milk ejection, they should watch out for milk flow and actively switch to the expression phase if needed.
Symphony PLUS™ Quick Start Instructions

Step 1: Choose your program

- Use INITIATE immediately after birth:
  - Within the first 5 days, OR;
  - Until you’ve pumped at least 20 mL in each of your last 3 sessions

- Use MAINTAIN after milk comes in:
  - Once you’ve pumped at least 20 mL in each of your last 3 sessions, OR;
  - Beginning day 6, whichever comes first

Step 2: Select program and get started

Press to start the breastpump.

INITIATE program

To select the INITIATE program, press the screen displays:

- Press to start
- Press to cancel

The INITIATE program alternates between the stimulation and expression phase, with several pauses and turns off automatically when the session is completed. Complete the entire program.

Maintain program

To select the MAINTAIN program, wait 5-10 seconds, while the screen displays:

- Press to start
- Press to cancel

While pumping in the MAINTAIN program, the stimulation phase will last 2 minutes. If your milk starts flowing before the expression phase begins, press to begin the expression phase.

To achieve Maximum Comfort Vacuum™, adjust knob to optimum suction level.

Symphony PLUS™ Instrucciones de inicio rápido

Paso 1: Seleccione su programa

Use INICAR inmediatamente después del parto:
- Dentro de los 5 primeros días, OR;
- Hasta que haya bombeado al menos 20 mL en cada una de sus 3 últimas sesiones

Use MANTENER después que la leche empieza a fluir:
- Cuando haya bombeado al menos 20 mL en cada una de sus 3 últimas sesiones
- A partir del día 6, lo que sea primero

Paso 2: Seleccione el programa y empiece

Pressione para iniciar la bomba sacaleches.

Programa INICAR

Para seleccionar el programa INICAR, presione la pantalla muestra:

- Press to start
- Press to cancel

El programa INICAR alternar entre las fases de estimulación y extracción con varias pausas y se apaga automáticamente cuando se termina la sesión. Termine el programa completo.

Para lograr el Maximum Comfort Vacuum™, ajuste la perilla al nivel óptimo de succión.

Programa MANTENER

Para seleccionar el programa MANTENER, espere 5 a 10 segundos, mientras la pantalla muestra:

- Press to start
- Press to cancel

El programa MANTENER se iniciará automáticamente. La pantalla mostrará:

- Press to start
- Press to cancel

Mientras bombe en el programa MANTENER, la fase de extracción durará 2 minutos. Si la leche empieza a fluir antes que empiece la fase de extracción, presione para iniciar la fase de extracción.
NOT CORRECT
PUSH IN THE TUBES
CORRECT!
PUSH IN THE TUBES
## Spectra

<table>
<thead>
<tr>
<th></th>
<th>Dew 350</th>
<th>S2</th>
<th>S1</th>
<th>9 Plus</th>
<th>Hand Plus</th>
<th>Hand Adapter (Switch)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WARRANTY</strong></td>
<td>2-year motor 90-day accessories</td>
<td>2-year motor 90-day accessories</td>
<td>2-year motor 90-day accessories</td>
<td>5-year motor 90-day accessories</td>
<td>90-day</td>
<td>90-day</td>
</tr>
<tr>
<td><strong>MINIMUM-MAXIMUM VACUUM STRENGTH</strong></td>
<td>0-275mmHg (+/- 15%)</td>
<td>50-280mmHg (+/- 15%)</td>
<td>50-280mmHg (+/- 15%)</td>
<td>0-260mmHg (+/- 5%)</td>
<td>0-250mmHg (+/- 20%)</td>
<td>0-350mmHg</td>
</tr>
<tr>
<td><strong>2-PHASE MODE MASSAGE EXPRESSION</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>CYCLE LEVEL</strong></td>
<td>One-Dial Button to Adjust suction strength (30, 42, 46, 50, 54)</td>
<td>5-level (30, 42, 46, 50, 54)</td>
<td>5-level (30, 42, 46, 50, 54)</td>
<td>One touch adjusts suction strength and cycle speed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>VACUUM LEVEL</strong></td>
<td>N/A</td>
<td>Massage L1-L5 Expression L1-L12</td>
<td>Massage L1-L5 Expression L1-L12</td>
<td>Massage L1-L5 Expression L1-L10</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>FLANGE SIZE AVAILABLE</strong></td>
<td>20mm, 24mm, 26mm, 32mm</td>
<td>20mm, 24mm, 26mm, 32mm</td>
<td>20mm, 24mm, 26mm, 32mm</td>
<td>20mm, 24mm, 26mm, 32mm</td>
<td>24mm only</td>
<td>Can be used on all Spectra S1, S2, 9 Plus, Dew 350 Breast Shields or Fingers</td>
</tr>
</tbody>
</table>
Spectra S1/S2 – Personal Use E0603

**PROS**
- Closed
- -250mmGH
- Independently cycle/vacuum
- LCD display
- Nighlight
- Pump running time
- Light weight
- Effective
- Cost-effective (especially over Symphony)

**CONS**
- Complaints about customer service
- Flange sizes don’t always work for hands free
- Pump kit not compatible with other brands (see hacks)
- Confusing instructions
- Moms confuse massage/expression phrases
- Battery in S1 doesn’t work always
Spectra S1/S2 - Modes

### Massage
- Pump starts in Expression
- Push the three waves button to get into Massage
- Set at 70 cycles (Not adjustable)
- Facilitate Let down
- Adjust Vacuum (suction L1-L5)

### Expression
- After let down, Press three waves button to get into Expression Mode
- Cycles adjustable (38-54 cycles)
- Adjust Vacuum (suction L1-L12)
- L12 = 250mmHg
- Turns off automatically at 30min
Willow
Willow

**PROS**

- Can adjust Suction (Stim/Expression)
  - Levels 1-7 in Expression
- Single User, 1 year
- Wearable pump
  - Senses let down - automated
- Flange 24 and 27 – offers measuring size 21-30
  - Bra size G-H
- Good for multi-tasking, service
- Willow App
- Customer Services – Excellent
  - “Willow Coaching Program”

**CONS**

- Expensive
- Warranty for 1 year
- Very large/small breasts?
- Milk collection bags $1 each?
  - Only holds 4 oz
Other Pumps

- Ardo “Calypso”
- Avent
- Evenflo
- Lansinoh
- Naya
- Pigeon
- Real Bubee
MANUAL PUMPS & LACTATION AIDS
Primo-Lacto Colostrum Collector

**PROS**
- Closed System for Colostrum Collection
  - No transfer from spoons or medicine cups
  - Dedicated tool for colostrum collection
  - Reduces risk of contamination
    - NICU babies at higher risk for contamination
  - Collection easier, lose less colostrum
  - Promotes appropriate amount expectations
  - Hand expression collection cup

**CONS**
- Cost:
  - $13/kit
  - includes hand expression funnel collector cup,

- if using an enteral slip tip syringe
  - has to be on tight
  - can slip off and lose milk
  - Enfit syringes are secure because they screw on
Primo-Lacto Colostrum Collector

www.maternallife.com
US 8,998,879
US 8,979,819
Hakaa

**PROS**
- Collects milk 1-2oz
- Uses some negative pressure
  - Collects leaking milk
- Moms love “saving” the milk
- Moms who hate pumping - LOVE

**CONS**
- Confusion “Fore/Hind Milk”
- At risk infants
  - may not get enough
- At risk milk supply
  - not enough stimulation
Laktek Flanges and Pump to Bottle

**PROS**
- Soft silicone flange
  - *Supposed to mimic baby suckle*
- Pump / Feed during travel
- Exclusive Pumping Mom
  - *Helps to pump/feed at same time*
  - *Fresh milk to baby*

**CONS**
- No evidence it works
- Promotes pumping
- Still hard to hold baby and manage paced feeding
Laktek – Pump to Bottle
Compression Bras

Uboost: Compression Pump
“Booster”

Lilu Massage Bra
DURABLE MEDICAL EQUIPMENT & BILLING

Helping mothers access Breastfeeding Support, Supplies and Counseling
DME Closets

- Hospital/Clinic location
- Team up with DME
- MOU
- Discharge patient with Pump
- DME Closets are common:
  - Crutches
  - Walkers
  - Wheelchairs
DME Closets Benefits

Mother

• Bedside teaching, easy access, no delay, promotes exclusive breastfeeding

Medial Team

• Increase EBF Rates

DMEs benefit

• Save shipping costs, better customer service, less patient error
Medical Necessity & Charting

- The person who knows the rules of the game – can WIN!
- If you don’t chart appropriate for medical necessity, code appropriately on prescriptions – you may not get paid, or delays
- Hospitals and providers contract with Health Plans
- Health Plan payors
  - will pay based on nationally recognized utilization management guidelines for “medical necessity”
Medical Necessity & Charting

- Utilization Managers rely on standardized guidelines for payment
- There are three nationally recognized third-party groups that develop these guidelines
  - Milliman® (Used by CMS - Medicaid/Medicare, Anthem, Kaiser, California Medi-Cal)
  - InterQual® (used by California Medi-Cal, Anthem, Delegated models in California)
  - Apollo Managed Care® (Puerto Rico, Inland Empire Health Plan)
Apollo Managed Health Care

- From the Chief Medical Officer in response to whether there are Utilization Management guidelines for Breastfeeding Support, Supplies and Counseling:

  “Lactation and breast feeding are not medical conditions (neither covered nor noncovered).

  Therefore, Apollo does not have a clinical guideline.

  Formula to feed an infant is also not covered unless a medical indication requires a special infant formula.

  Breast pumps may be covered by some health plans such as Anthem. The contact may find the Anthem policy for Medi-Cal members of interest and helpful.”
HOW CAN WE WIN WITHOUT RECOGNITION AND GUIDANCE FROM HEALTH PLANS?
Laws & Policies

- **Federal Law:** ACA requires health plans and contracted physicians to provide DME Pumps

- **California policy:** Medi-Cal requires health plans (providers) to provide DME Pumps: [1998 DHCS Policy MMCD 98-10](#)
Laws & Policies

Since 1998, California Medi-Cal policy requires health plans and contracted providers to:

1. Provide breastfeeding promotion, education and counseling services, integrated into perinatal, postpartum and pediatric services.
2. Provide medically necessary interventions, including access to DME.
3. Implement procedures to ensure that postpartum mothers receive necessary breastfeeding counseling and support after delivery.
4. Have appropriate procedures to refer to lactation professionals.
5. Refer to WIC
6. Offer health education (if contracted) in breastfeeding (detailed instructions in policy.)
7. Not market formula.
8. Provide lactation aids (DME.)
9. Cover enteral feeding (i.e. banked human milk, special formulas.)
ARTICLE 4. The Medi-Cal Benefits Program [14131 - 14138]

14134.55. The department shall streamline and simplify existing Medi-Cal program procedures in order to improve access to lactation supports and breast pumps among Medi-Cal recipients.

(Added by Stats. 2007, Ch. 460, Sec. 5. Effective January 1, 2008.)
### Breastfeeding: Lactation Management Aids

Lactation management aids include breast pumps and breast pump kits that may be purchased or rented if medically necessary. Follow these guidelines when billing for breast pumps and breast pump kits.

<table>
<thead>
<tr>
<th>HCPCS Code</th>
<th>Item</th>
<th>TAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>E0602</td>
<td>Breast pump, manual, any style</td>
<td>Required if the cumulative cost within the calendar month for the purchase of DME items within a group exceeds $100</td>
</tr>
<tr>
<td>E0603</td>
<td>Breast pump, electric (AC and/or DC), any type. This is also known as a personal grade (single-user) electric breast pump.</td>
<td>Required if the cumulative cost within the calendar month for the purchase of DME items within a group exceeds $100</td>
</tr>
<tr>
<td>E0604</td>
<td>Breast pump, hospital grade, electric (AC and/or DC), any type. This is also known as a hospital grade (multi-user) electric breast pump.</td>
<td>Required if the cumulative cost within a 15-month period for breast pump, DME items within a group exceeds $164</td>
</tr>
</tbody>
</table>

Note: Code E0602 may be used to bill either a manual breast pump or a breast pump kit.

### Hospital Grade (Multi-User) Electric Breast Pumps

Hospital grade (multi-user) electric breast pumps (HCPCS code E0604) are covered for daily rental only. If there are no other relevant rentals, a TAR is not required until the rental amount exceeds $164 in a 15-month period.
TAR Requirements

- Treatment Authorization Requests (TAR)
  - Complete, detailed description of medical necessity
  - Explanation of why the requested pump is necessary over manual pump
  - Prescription, signed by physician
  - Infant’s name, birthdate
  - Submit to TAR processing Center
  - DME coverage is limited to the lowest cost item that meets the patient’s medical needs.
9. Breast Pump TAR Documentation Requirements and Code Description Updates

Code descriptions for HCPCS codes E0603 and E0604 have been updated as follows:

<table>
<thead>
<tr>
<th>HCPCS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E0603</td>
<td>Breast pump, electric (AC and/or DC), any type. This is also known as a personal grade (single-user) electric breast pump.</td>
</tr>
<tr>
<td>E0604</td>
<td>Breast pump, hospital grade, electric (AC and/or DC), any type. This is also known as a hospital grade (multi-user) electric breast pump.</td>
</tr>
</tbody>
</table>

TAR Documentation Requirements Update
The following is clarification regarding the Treatment Authorization Request (TAR) documentation requirements for HCPCS code E0604:

A TAR must be accompanied by documentation establishing that the item is medically necessary in either of the following situations:

1. If direct nursing at the breast is established during the neonatal period (the period immediately following birth and continuing through the first 28 days of life) and nursing interrupted, medical necessity for code E0604 is defined as the existence of any of the following medical conditions:
   - The mother has a medical condition that requires treatment of her breast milk before infant feeding; or
   - The mother is receiving chemotherapy or other therapy with pharmaceutical agents that render her breast milk unsuitable for infant feeding; or
   - The infant developed a medical condition or requires hospitalization that precludes direct nursing at the breast on a regular basis.

2. If direct nursing at the breast is not established during the neonatal period, medical necessity for code E0604 is defined as the existence of any of the following medical conditions:
   - Any maternal medical condition that precludes direct nursing at the breast; or
   - The infant has a congenital or acquired neuromotor or oral dysfunction that precludes effective direct nursing at the breast; or
   - The infant has a congenital or acquired condition that precludes effective direct nursing at the breast; or
   - The infant continues to be hospitalized and the mother is no longer an inpatient.

This information is reflected in the following provider manual(s):

<table>
<thead>
<tr>
<th>Provider Manual(s)</th>
<th>Page(s) Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable Medical Equipment and Medical Supplies Pharmacy</td>
<td>dura_cd (32); dura_bil_dm (19–21)</td>
</tr>
</tbody>
</table>
Correction

To clear up any confusion that resulted from publishing only a portion of our policy on electric breast pumps, we will be publishing a new Medi-Cal Bulletin announcement. This Bulletin announcement will clarify that a TAR is only required when the specified cumulative cost is exceeded ($100 in a calendar month for a personal grade breast pump and $164 in a 15-month period for a hospital grade breast pump). This Bulletin announcement will convey the information that can be found in the Durable Medical Equipment (DME): Bill for DME section of our Provider Manual (attached). Thank you for your bringing this to our attention.
Health Net – Provider Guidance
UNDERSTANDING MEDI-CAL BILLING
In 2011, over 60% of Medi-Cal births were covered through the fee-for-service system. About two in three Latina mothers and four in five foreign-born mothers in Medi-Cal participated in the fee-for-service system. Undocumented mothers are eligible only for restricted-scope benefits and cannot participate in Medi-Cal’s managed care programs. These mothers represented 73,000, or 47%, of Medi-Cal FFS births in 2011 (not shown).
Fee for Service vs. Managed Care
(Delegated Model)

**FFS**
- Restricted, Straight
- Presumptive Eligibility (PE)
- Can choose provider
- Provider bills the STATE directly
- Beneficiary (patient) has to find participating providers
  - Physicians
  - Pharmacies
  - DME providers

**MMC**
- County Plans
  - Two Plan
  - COHP
  - Single Plan
  - Geographic Plan
- Bill MC plan
- Must stay in network
- Must use contracted DME
- Capitated payments
Managed Care & RBO, Capitation

Many Medi-Cal Managed Care Health Plans have set up contracts with “RBOs” with capitated rates:

- **RBO = Risk Bearing Organization**
  - Independent Practice Associations (IPA)
  - Medical Groups
- **Capitation: Monthly fees to the providers**
  - based on “predicted utilization”
  - [LINK](#) comprehensive list of all California RBOs and Capitated Providers

The responsibility of accessing the DME may be assigned to the RBO, not the health plan.
RBO Components

- Physician Services (Medical Group, IPA etc.)
- Management Service Organization (MSO)
- Clinics (Infrastructure, Another MG)
Managed Care: Utilization Management

- These are the “go-betweens”
  - They set up contracts between
    - Health Plan & Physician
    - Health Plan & Physician group
    - Health plan & FQHC
    - Health plan & Independent Practice Association (IPA)
    - They advise physicians on how to access health plan benefits

- See Medpointe Management – an MSO
  - Medpoint has confirmed access to E0604 pumps.
    - Manages “Risk” for 3 of the hospitals that consistently are listed in the state report for the 15 lowest performing hospitals in the State:
      - California
      - St. Francis
      - Valley Presbyterian*** Off the list!
MMC, RBOs, & DME
Codes – See our Cheat Sheet

- Diagnosis code: ICD-10
  What qualifies the patient for further evaluation and management

- HCPCS: Healthcare Common Procedure Coding System (HCPCS) coding system.

- CPT: Common Procedural Terminology
  *What did the clinician do? (Evaluate and manage, Telephone, Counseling)*
ICD-10 CODES Maternal

092.3 Agalactia; Failure of lactation
092.4 Hypogalactia/insufficient milk supply
092.6 Galactorrhea/over-abundant milk supply
092.79 Other disorders of breast and disorders of lactation associated with pregnancy and the puerperium (general difficulty breastfeeding / engorgement)
092.03 Retracted nipple w/lactation
092.13 Cracked nipple w/lactation
092.70 Unspecified disorders of lactation
N64.82 Hypoplasia of breast / Micromastia
N64.89 Other specified disorders of breast
N64.9 Disorder of breast, unspecified
Z39.1 Encounter-exam-care lactation/supervision of lactation
ICD-10 CODES Infant

P07.30 Preterm newborn, unspecified weeks of gestation

P92.2 Slow feeding
P92.3 Underfeeding of Newborn
P92.4 Overfeeding Newborn
P92.5 Neonatal difficulty in feeding at breast
P92.6 Failure to thrive in newborn
P92.8 Other feeding problems of newborn
P92.9 Feeding Problem newborn/unspecific

P59.9 Neonatal Jaundice

http://www.icd10data.com/
HCPCS

- Multi-User (Hospital Grade Electric Breast Pump) E0604
- Single-User (Personal Use Electric Breast Pump) E0603
- Single-User (Personal Use Manual Breast Pump) E0602
- Pump Kits E0602
- Lactation aids (nipple shields, flanges, shells) A9999
  - “Misc. DME Supply or Accessory, Not Otherwise Specified”
  - Include Manufacturer’s Sheet with Price
CPT – In Person Consultation Codes

Evaluation and Management Codes (Clinic, Office)

- **99205**: HMOs prefer this code. HIGH COMPLEX MEDICAL Decision Making
- **99215**: 60 min – Office Visit new or established
- **99245**: 80 min - Office Visit new or established
- **99341**: Home Visit

Classes

- **S9442**: Lactation Classes, Non-Physician Provider, Per Session

CPT – Not in Person Consultation Codes

Not all payers....Telemedicine....

Evaluation and Management Codes (Clinic, Office)
- 99367 Medical Team Conference (30 min)

Telephone
- 98968 Telephone with Physician Extender - 21 to 30 minutes of medical discussion

Emails (In basket messages)
- 98969 Email or some other online service to discuss a medical problem with a physician extender.
Questions

- Genevieve  gthomas@mednet.ucla.edu
- Cristina  Cristina.Morales@DignityHealth.org
Citations

ABM Clinical Protocol #10: Breastfeeding the Late Preterm (34–36 6/7 Weeks of Gestation) and Early Term Infants (37–38 6/7 Weeks of Gestation), Second Revision 2016, retrieved from https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/10-breastfeeding-the-late-pre-term-infant-protocol-english.pdf

Becker, GE. 2015. Methods of milk expression for lactating women (Review). Cochrane Database of Systematic Reviews


Citations


Mohrbacher, Nancy, To Pump More Milk, Use Hands On Pumping, Breastfeeding USA, Retrieved from https://breastfeedingusa.org/content/article/pump-more-milk-use-hands-pumping


Links

Link to Medi-Cal DME Polices
Choose “Durable Medical Equipment (DME): Bill for DME (dura bil dme)” for guidelines on billing codes. (page 21)
Choose “Durable Medical Equipment (DME): Billing Codes and Reimbursement Rates (dura cd)” for billing code and reimbursement rates. (Page 43-44)

CWA “Breastfeeding Support in the Medi-Cal Program:

DHCS – State of California Breastfeeding Promotion Policy for Medi-Cal MMCD -98-10:

State Medi-Cal Law:

New Medi-Cal Provider Bulletin

DME:  http://files.medical.ca.gov/pubsdoco/bulletins/artfull/dme201711.asp
Pharmacy:  http://files.medi-cal.ca.gov/pubsdoco/bulletins/artfull/ph201711.asp