

CARE MODEL

Baystate Medical Center’s inpatient quality improvement initiative establishes a number of dedicated rooms on the postpartum floor to provide co-located care to eligible mothers and their infants. This model emphasizes that the mother and infant stay together in the hospital during the observation and treatment phases of an infant’s NAS diagnosis, until the infant is approved to be discharged. Medical staff round on the mother-infant dyad to ensure that withdrawal symptoms are appropriately monitored, scored, and treated, using either pharmacologic or non-pharmacologic treatment. This approach draws strongly from evidence demonstrating that non-pharmacologic strategies incorporating the mother can

reduce the severity of infant withdrawal symptoms – including introduction and continuity of breastfeeding, skin-to-skin contact between infants and their family members early and often, and placement of the infant in a non-stimulating environment for care. If an infant’s symptoms are not mitigated while rooming-in, the infant may be moved into the neonatal intensive care unit for pharmacologic treatment. The Baystate team has also developed a lunch-time conference series for nursing staff to discuss topics including diagnosing NAS, infant and family care, and updates on NAS and opioid use disorder treatment approaches, to support the team providing care to these families.



IMPACT

\$249.8K
HPC AWARD

TARGET POPULATION
All opioid-exposed infants monitored for NAS

TECHNICAL ASSISTANCE PARTNERS
NeoQIC

PRIMARY AND SECONDARY AIMS:

↑ 30%
rooming-in care for eligible maternal-infant dyads



↑ 30%
breastfeeding and skin-to-skin care rates



HCII PATHWAY SUMMARY & HPC BACKGROUND

In 2016, the Massachusetts Health Policy Commission (HPC) launched its \$3 million Mother and Infant-Focused Neonatal Abstinence Syndrome (NAS) Interventions, a pathway of the HPC’s Health Care Innovation Investment (HCII) Program. The NAS Interventions aim to contribute to the Commonwealth’s nation-leading efforts to address the opioid epidemic by supporting enhanced care and treatment for mothers and infants impacted by opioid use. The six NAS initiatives develop or enhance programs for opioid-exposed infants at risk of developing NAS and pregnant and postpartum women with opioid use disorder through a dyadic care model, providing rooming-in care for the mother and infant for the duration of the infant’s inpatient stay. Many initiatives also offer integrated pre- and postnatal supports, including coordinated

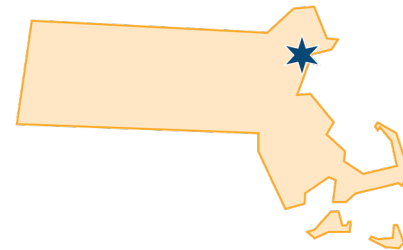
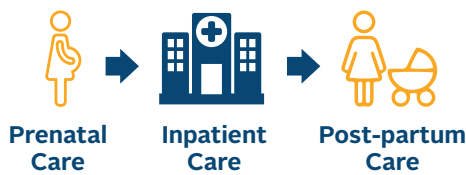
access to behavioral health care, medication assisted treatment, education and support for breastfeeding, and early intervention programming for full family care both in the hospital and in the community after discharge.

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Beverly Hospital's initiative incorporates an inpatient quality improvement program and a multi-pronged outpatient approach. The inpatient program encourages non-pharmacologic care such as breastfeeding and skin-to-skin contact between infants and their families, and decreased environmental stimuli to offer a more soothing setting for care. The team in the Special Care Nursery works closely with physical therapy, occupational therapy, and Early Intervention (EI) providers to offer access to services for at least the first year of life for infants born opioid-exposed. Beverly Hospital has developed a volunteer "cuddler" program to comfort newborns during times when a parent cannot. The outpatient ini-

tiative, "HPC Moms Do Care – Beverly," expands access to prenatal care and medication assisted treatment for pregnant women with opioid use disorder (OUD). Beverly Hospital's model provides behavioral health counseling and peer support for women with OUD for one year post-partum. Inpatient induction of suboxone and methadone is available for pregnant women who present to the emergency department. The initiative also provides education for hospital staff on trauma-informed care, the science of addiction, and self-care strategies for employees who work with patients with a substance use disorder.



IMPACT

\$1M
HPC AWARD

TARGET POPULATION
Inpatient: All opioid-exposed infants monitored for NAS
Outpatient: Pregnant women with OUD

TECHNICAL ASSISTANCE PARTNERS
NeoQIC
MA Department of Public Health
Institute for Health and Recovery
Advocates for Human Potential

PRIMARY AND SECONDARY AIMS:

Inpatient



↓ 30%

inpatient length of stay

↑ 30%

pediatric follow-up and EI participation after discharge

Outpatient



↑ 20%

retention in treatment

↑ 50%

improvement in patient satisfaction through trauma-informed care

HCII PATHWAY SUMMARY & HPC BACKGROUND

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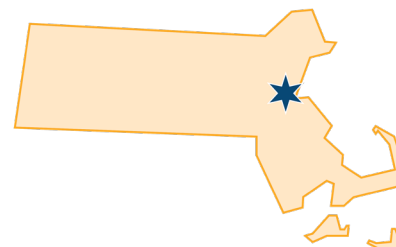
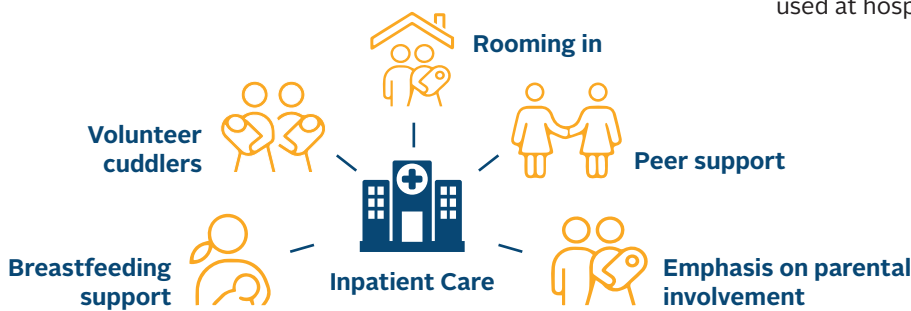
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Boston Medical Center

CARE MODEL

Boston Medical Center's (BMC) inpatient quality improvement initiative utilizes non-pharmacologic care provided by both medical staff and the infant's parents as the first-line treatment for withdrawal symptoms. The initiative emphasizes rooming-in for the maternal-infant dyad, and encourages breastfeeding initiation and continuity, increased skin-to-skin contact between infants and their families, and increased parental presence at the infant's bedside. BMC developed and utilizes a volunteer "cuddler" program to ensure that infants are provided comfort and consolation, even during times when a parent is not able to be present. BMC also employs a peer recovery coach as a lactation counselor to educate new mothers about breastfeeding,

and provide ongoing support – both for breastfeeding, and with other complexities encountered as a parent with opioid use disorder. BMC has adjusted their pharmacologic treatment protocol to use doses of methadone on an as-needed basis to combat withdrawal symptoms, rather than a standard two-week taper of morphine. They have also introduced a new protocol for cardiac monitoring, allowing for infants receiving pharmacologic treatment to room-in with the mother, rather than being held in the neonatal intensive care unit for observation. BMC has collaborated on the development of a strengthened methodology for scoring infants' NAS symptoms, called "Eat, Sleep, Console." The team has created and disseminated training materials for this technique that are used at hospitals across New England.



IMPACT

\$249K
HPC AWARD

TARGET POPULATION
All opioid-exposed infants
monitored for NAS

TECHNICAL ASSISTANCE
PARTNERS
NeoQIC

PRIMARY AND SECONDARY AIMS:



↓ 40%
inpatient length of stay

↓ 30%
use of pharmacologic
treatment



↑ 20%
parental time spent at
the infant's bedside

↑ 15%
breastfeeding
initiation rate

HCII PATHWAY SUMMARY & HPC BACKGROUND

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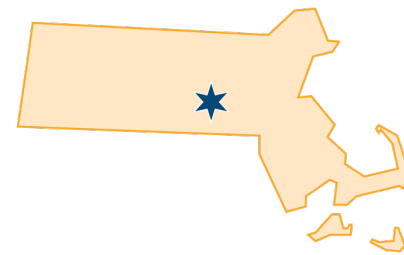
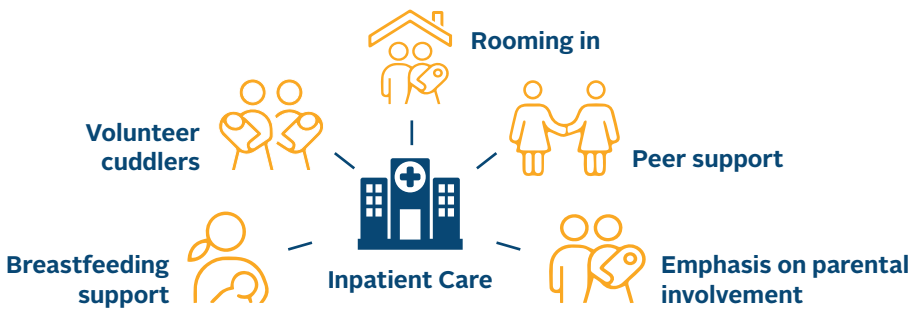
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CARE MODEL

UMass Memorial Medical Center’s (UMass) inpatient quality improvement initiative focuses on providing appropriate pharmacologic and non-pharmacologic treatment to infants experiencing withdrawal in the neonatal intensive care unit (NICU). UMass designated a number of rooms in the NICU for maternal-infant rooming-in, so that mothers can provide non-pharmacologic treatment to infants for the duration of the infant’s inpatient stay. UMass promoted breastfeeding for mothers with opioid use disorder, and hired a peer recovery coach to work as a lactation counselor. The lactation counselor supports pregnant women prenatally who receive treatment at the Green Clinic on the UMass campus

to educate them about breastfeeding, and to provide support throughout pregnancy and during the post-partum period. The UMass program encourages skin-to-skin contact between infants and their families, and increased parental presence at the infant’s bedside. UMass has developed a 24/7/365 volunteer “cuddler” program, to ensure that infants are provided non-pharmacologic care, even during times when a parent is not able to be present. UMass has also placed a strong emphasis on monitoring and analyzing provider adherence to protocols, to adapt and amend procedures for NAS treatment, as necessary and appropriate.



IMPACT

\$250K
HPC AWARD

TARGET POPULATION
All opioid-exposed infants monitored for NAS

TECHNICAL ASSISTANCE PARTNERS
NeoQIC

PRIMARY AND SECONDARY AIMS:

↓ 30%
inpatient length of stay



↓ 25%
30-day readmission rates



↑ 30%
breastfeeding rate at discharge



HCII PATHWAY SUMMARY & HPC BACKGROUND

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Lawrence General Hospital's (LGH) inpatient quality improvement initiative deploys a multidisciplinary care coordination team to bridge gaps in treatment for pregnant women with opioid use disorder both within the hospital, and between the hospital and outpatient providers of medication assisted treatment, social services, and prenatal care. A dedicated social worker coordinates outreach efforts in the community to pregnant women planning to deliver their infants at LGH to prepare them for the experience of infant opioid withdrawal. The model emphasizes clinician training, with quarterly education modules on topics such as clinical diagnosis of NAS, guidelines and policies for best treatment practices

for NAS symptoms, stigma around substance use disorders and treatment, and the importance of trauma-informed care. LGH has developed protocols to encourage non-pharmacologic treatment for NAS symptoms, including an emphasis on breastfeeding, skin-to-skin contact between infants and their families, parental contact and time spent at the infant's bedside, and on decreasing environmental stimuli in the infant's room. LGH also has developed a volunteer "cuddler" program to ensure that infants are provided non-pharmacologic care, even during times when a parent is not able to be present.



IMPACT

\$250K
HPC AWARD

TARGET POPULATION
**All opioid-exposed infants
monitored for NAS**

TECHNICAL ASSISTANCE
PARTNERS
NeoQIC

PRIMARY AND SECONDARY AIMS:

↓ 10%
cost of an NAS
episode



↓ 20%
inpatient length of
stay



↑ 20%
breastfeeding rate for eligible
infants going home in the
custody of birth parent



HCII PATHWAY SUMMARY & HPC BACKGROUND

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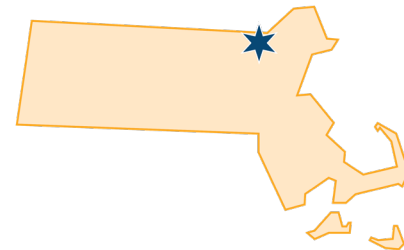
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Lowell General Hospital's (LGH) initiative incorporates an inpatient quality improvement program emphasizing non-pharmacologic treatment for newborns exposed to opioids and a multi-pronged outpatient approach. The inpatient initiative provides care through increased rates of breastfeeding, encouraging skin-to-skin contact between infants and their families, and decreasing environmental stimuli to offer a more soothing setting for newborn care. LGH utilizes the Eat, Sleep, Console model for monitoring and scoring infant withdrawal symptoms. The LGH team works closely with Early Intervention providers, who offer access to developmental services at home for at least the first year of an infant's life. The

outpatient initiative, "HPC Moms Do Care – Lowell," expands access to prenatal care and medication assisted treatment for pregnant women with opioid use disorder (OUD). LGH's model provides behavioral health counseling and peer support for women with OUD for six months post-partum. This initiative integrates care between the emergency department and outpatient providers of pharmacologic treatment and behavioral health services, and provides education on trauma-informed care, the science of addiction, and self-care strategies for staff who work with patients with a substance use disorder.



IMPACT

\$999K
HPC AWARD

TARGET POPULATION
Inpatient: All opioid-exposed infants monitored for NAS
Outpatient: Pregnant women who test positive for OUD

TECHNICAL ASSISTANCE PARTNERS
NeoQIC
MA Department of Public Health
Institute for Health and Recovery
Advocates for Human Potential

PRIMARY AND SECONDARY AIMS:

Inpatient



↓ 15%

inpatient length of stay

Outpatient



↑ 20%

utilization of pharmacologic treatment

HCII PATHWAY SUMMARY & HPC BACKGROUND

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