Identifying Changes and the Key Driver Diagram

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Objectives: You will be able to answer the following

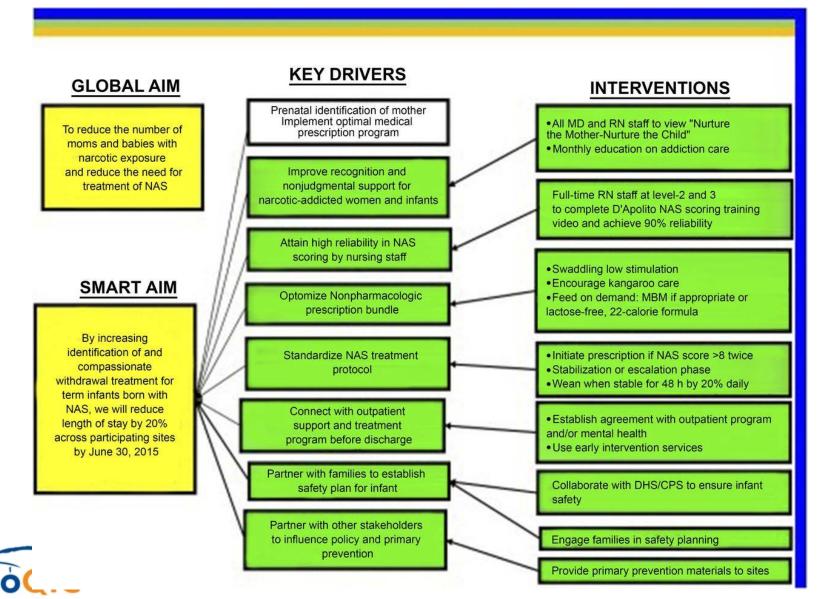
- What is a key driver diagram, anyway?
- Making a key driver diagram seems like a waste of time when I already know the problems. Why is this important?
- Change concepts and key drivers seem like the same thing... what is the difference?
- "Process mapping?" That is quite a fancy term and we are just starting out. Why should we even do that?

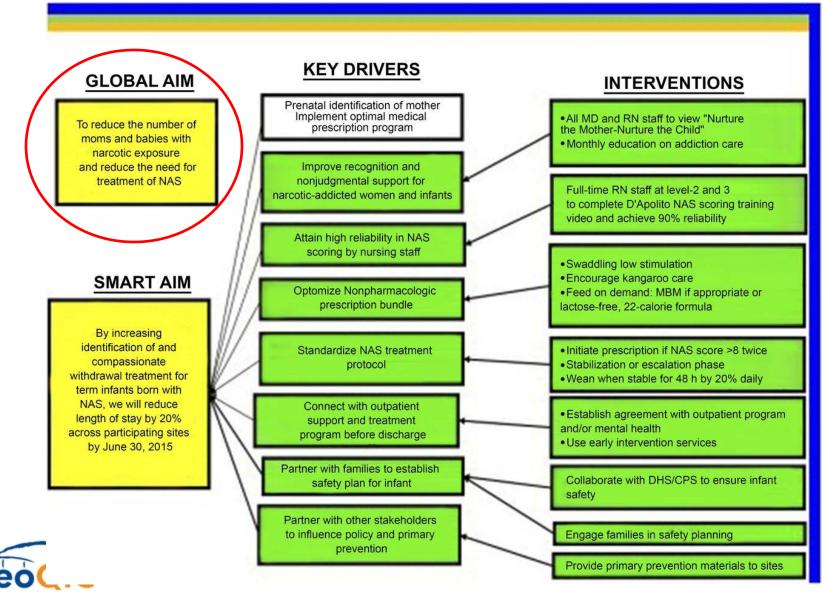


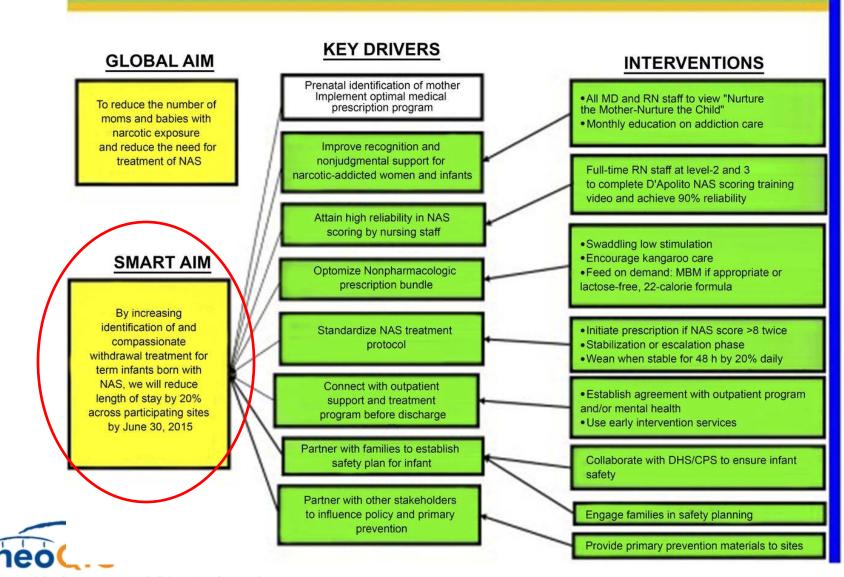


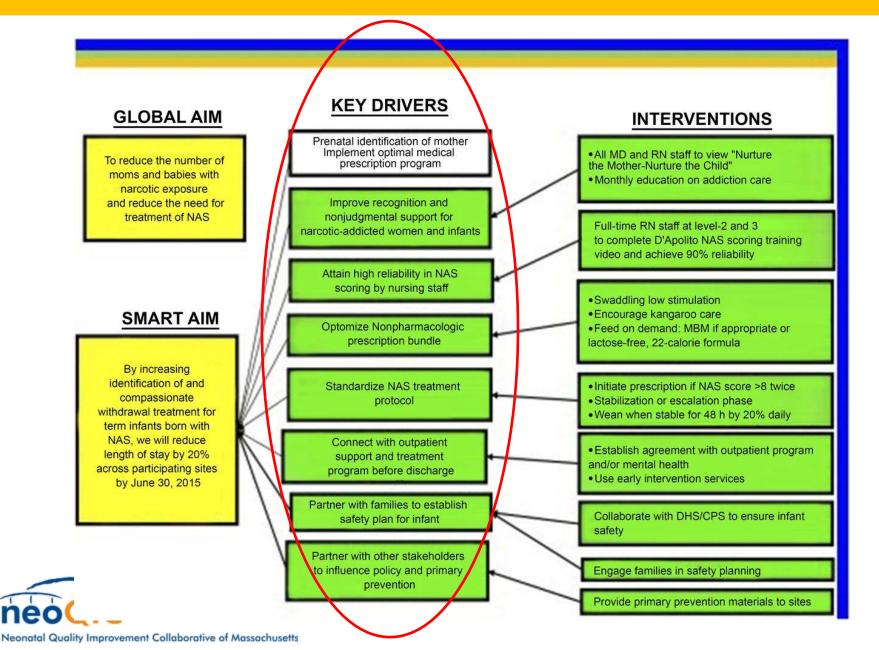
What is a Key Driver Diagram?

- Schematic approach to organizing your QI project
- Clearly delineates main outcome, primary (and secondary drivers), and change concepts
- Helps you to focus your project









GLOBAL AIM

To reduce the number of moms and babies with narcotic exposure and reduce the need for treatment of NAS

SMART AIM

By increasing identification of and compassionate withdrawal treatment for term infants born with NAS, we will reduce length of stay by 20% across participating sites by June 30, 2015

KEY DRIVERS

Prenatal identification of mother Implement optimal medical prescription program

Improve recognition and nonjudgmental support for narcotic-addicted women and infants

Attain high reliability in NAS scoring by nursing staff

Optomize Nonpharmacologic prescription bundle

Standardize NAS treatment protocol

Connect with outpatient support and treatment program before discharge

Partner with families to establish safety plan for infant

Partner with other stakeholders to influence policy and primary prevention

INTERVENTIONS

- All MD and RN staff to view "Nurture the Mother-Nurture the Child"
- · Monthly education on addiction care

Full-time RN staff at level-2 and 3 to complete D'Apolito NAS scoring training video and achieve 90% reliability

- Swaddling low stimulation
- Encourage kangaroo care
- Feed on demand: MBM if appropriate or lactose-free, 22-calorie formula
- Initiate prescription if NAS score >8 twice
- Stabilization or escalation phase
- •Wean when stable for 48 h by 20% daily
- Establish agreement with outpatient program and/or mental health
- Use early intervention services

Collaborate with DHS/CPS to ensure infant safety

Engage families in safety planning

Provide primary prevention materials to sites



Basic Elements

- Global aim
- Main outcome (SMART Aim)
- Key drivers
- Change concepts

Key Driver Diagram: NeoQIC Human Milk Quality Improvement Collaborative

Potential Change Concepts Primary Aims Primary Drivers Secondary Drivers Lack of education at prenatal consultation Overall Project Goal Train NICU staff to better educate families in an unbiased way **Process Measure:** Document parent Increase the use of mother's education on human milk benefits at Develop culturally-appropriate education materials for families in own milk (MOM) in very low prenatal consultation. Inadequate parental education multiple languages birth weight infants in Develop prompts in the EMR to Massachusetts and reduce Lack of postnatal education in the NICU document education delivery racial/ethnic disparities Ensure timely use of translators Language barriers prevent timely education Training L&D and postpartum staff Early pumping or hand expression is not to facilitate early pumping and initiated Among VLBW infants in MA, by Dec 31, hand expression 2017: Process Measure: Time (hours) to first Ensure readily available pumps and 1) Increase the use of any MOM 24 pumping or hand expression early expression kits on L&D and Inadequate MOM initiation hours prior to discharge or transfer post-partum areas from a baseline of 63% to $\geq 75\%$ **Process Measure:** Time (hours) to Expand lactation expertise, such as Lack of technical support for mothers administer MOM (oral care or enteral) 2) Increase the use of exclusive MOM IBCLCs, peer-counselors, or nurses 24 hours prior to discharge or Process Measure: Documented contact with with more advanced training in transfer from a baseline of 45% to an IBCLC or equivalent personnel in first 24 lactation ≥ 55% hours of life Reduce racial/ethnic disparities in Improve awareness of STS benefits provision of MOM at Inadequate time performing skin to skin Ensure availability of bedside discharge/transfer by any amount. supplies, such as chairs Process Measure: Any skin to skin Outcome Measures: Percent of VLBW Expand lactation expertise, performed with the mother on DOL 7, 14, 21, infants receiving any or exclusive MOM especially peer-counselors & 28 Inadequate MOM continuation in the 24 hours prior to NICU discharge Development of peer-support or transfer Process Measure: Any/exclusive breastfeeding groups Competing demands prevent mothers from **Encourage family support** MOM used at DOL 7, 14, 21, 28 visiting their infants Free meals for breastfeeding mothers Mothers do not pump regularly Reduce parking costs **Balancing Measures** Minimize restriction of sibling Rate of NEC and any late infection Lack of motivational support for mothers visitation during hospitalization Address lactation issues by phone Growth during hospitalization Lack of training in establishment of direct Inadequate preparation for (weight for gestational age z-score breastfeeding in the home breastfeeding change from birth to discharge or Early non-nutritive sucking environment transfer) **Process Measure:** Any MOM up to 12 Establish home feeding regimen months corrected age post-discharge (to be that maximizes direct

collected by DPH on WIC mothers only)

breastfeeding prior to discharge

Version 7; 07/2017

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Other Possible Elements

- Primary and secondary drivers
- Process measures that map your key drivers
- Balancing measures

Interventions can have impact several drivers

Global Aim

Improve patients' long term developmental outcomes

Smart Aim

For infants with a BW<1500 g and admitted within the first 7 days of life, increase the mean delta z score for weight from -1.8 to -1 within 6 months and sustain for 1 year.

Key Drivers

Standardization of feeding practices

Maximize intended delivery of feeds

Adequate kCal/ Protein Intake

Adequate Micronutrient Status

Shared Mental Model Regarding Growth

Maximize use of Mom's Own Milk

Maximize nutrition delivery capacity

Interventions

Place feeding protocol on unit/reeducate

Fortify feeds early

Provide feeding intolerance decision aid

Supplement feeds with zinc

Update growth chart in Cerner

Use growth-risk tool to streamline growth status information sharing during rounds

Develop infographic for moms to encourage breastmilk over formula

Place breast pumps in every room

Purchase rental breast pumps

Standardize ordering process & documentation for lactation consults

Place central lines early

KEY

Completed intervention: taupe boxes
Ongoing intervention: red boxes



What is the point?

 Making a key driver diagram seems like a waste of time when I already know the problems. Why is this important?





- Real life examples:
 - Skin to skin rate is low and proposed solution is to mandate all nurses to receive a 4-hour education inservice on the importance

- Real life examples:
 - Skin to skin rate is low and proposed solution is to mandate all nurses to receive a 4-hour education inservice on the importance
 - But the problem isn't that nurses don't know it is important, the problem is that they have barriers to their work flow in actually helping mothers

- Real life examples:
 - Families aren't showing up to receive their discharge teaching in a timely manner; this is stressful to nurses and delays discharge
 - Solution is to hold more family support groups

Real life examples:

- Families aren't showing up to receive their discharge teaching in a timely manner; this is stressful to nurses and delays discharge
- Solution is to hold more family support groups
- This doesn't work because the reasons families can't come is because of restricted sibling visitation policies and issues with transportation

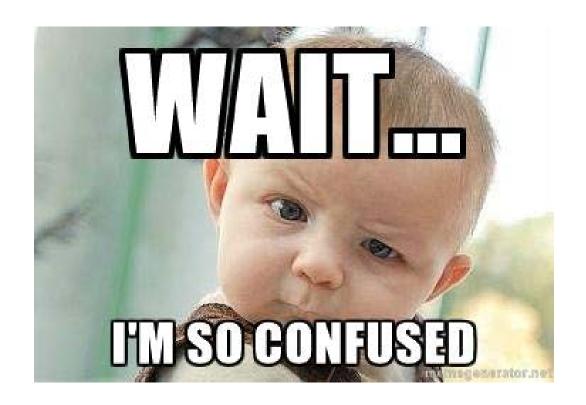
Key Driver Diagrams are Time Savers!

- Thoughtful consideration of the primary and secondary drivers that contribute to the problem
- Organize your approach to interventions that may be the "actual" solution

 Key driver diagrams also ensure a more comprehensive approach to your problem

Change concepts vs. key drivers

 Change concepts and key drivers seem like the same thing... what is the difference?



SMART Aim:

Universal screening for substances at the first prenatal visit by 12/2019 in my clinic

Staff don't think the mothers they serve use opioids so what is the point

Get input from mothers to develop scripts on presenting universal screening at visits

No time to do universal screening

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Mothers would be horrified by this and leave my practice

Share data on frequency of substance use in the population seen in your clinic with staff



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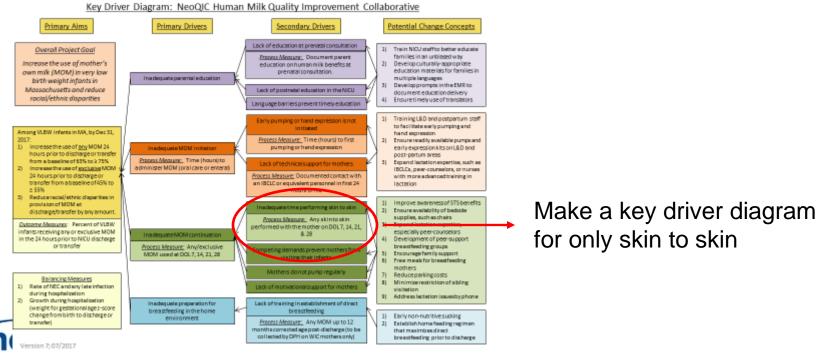
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Last Pearls on Key Driver Diagrams

Key driver diagrams are an iterative process

 You can make entire key driver diagrams from one part of a key driver diagram



Process Mapping

 "Process mapping?" That is quite a fancy term and we are just starting out. Why should we even do that?

Process Mapping

- General term
- Map out processes in a system that are linked
- Draw with boxes and arrows

- Helps you to understand your system
- Helps you to identify specific problems and develop interventions for improvement

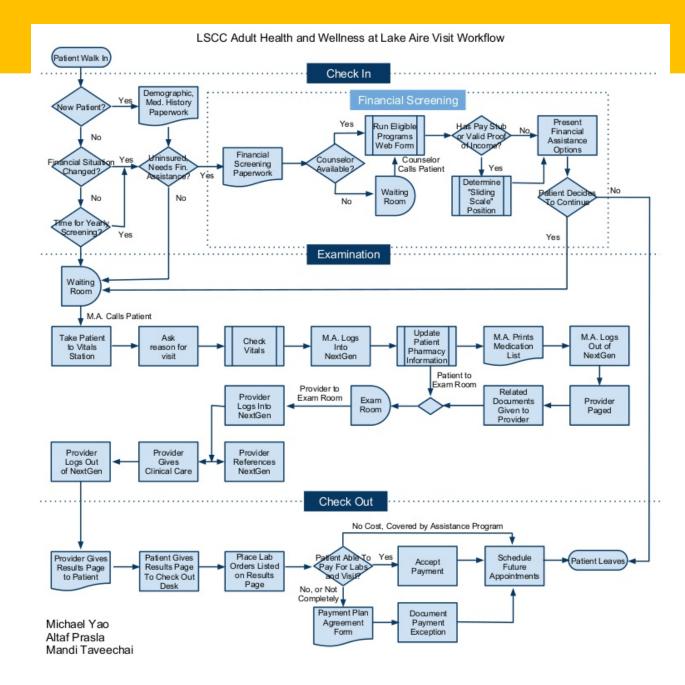


Table Top Breakout Instructions

- Read the prompt with your team
- Create a key diagram that will help you team begin their improvements
- Make sure the following elements are present:
 - Overall goal
 - Specific AIM statement
 - Primary and/or secondary drivers
 - At least 1 change concept for each driver
 - Balancing measures

