Translating Evidence Into Practice: VON NICQ Next2 Quality Improvement Teams Share Data Driven Improvement Multi-Systems Outcomes

Karen Kopischke MS, APRN, NNP-BC
Neonatal Nurse Practitioner
Overland Park Regional Medical Center
Overland Park, KS

Karen Kopischke is a Neonatal Nurse Practitioner at Overland Park Regional Medical Center. She has been an NNP for 25 years and has worked at primarily level 3 facilities throughout that time. Her passion is pulmonary care, especially preventing long term morbidity in the most fragile of infants. She has been the VON data collector for the past 15 years at OPRMC. She is active in multiple unit committees, including the Process Improvement committee. Additionally, she is active in NANN, as a former board member, editor of Scope and Standards of Neonatal Nursing and contributor to several other guidelines and teaching tools. Karen has been the leader of the OPRMC CLD initiative for the past 4 years, a project that they report on now.

Kathleen Weatherstone MD
Neonatal Medicine Doctor
Overland Park Regional Medical Center
Overland Park, KS

Kathleen B. Weatherstone is a board certified pediatrician and neonatologist. She graduated from the University of Kansas School of Medicine and then completed her pediatric internship and residency at the Medical College of Virginia in Richmond, Virginia. Her neonatology fellowship was completed at Case Western Reserve University's Rainbow Babies and Children's Hospital in Cleveland. Dr. Weatherstone joined the faculty of the Department of Pediatrics at the University of Kansas School of Medicine where she became a tenured Associate Professor and was Section Chief of Neonatology for the last 7 years of her service. Dr. Weatherstone formed the Sunflower Neonatology Associates private practice group in 2004. She is the Manager of the private practice and Medical Director of the NICU at the Overland Park Regional Medical Center in Overland Park, Kansas. There are now 9 physicians in the

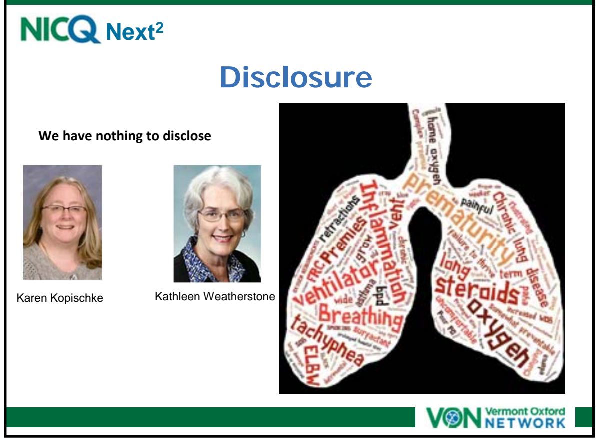
Sunflower Neonatology group and they provide neonatology services to 7 hospitals in the Kansas City area.

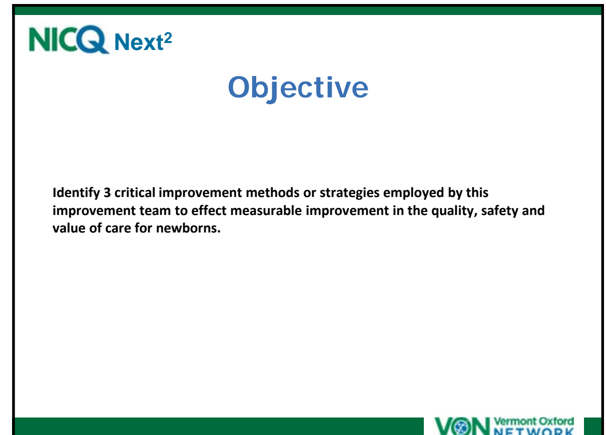
Annual Quality Congress Breakout Session, Saturday, October 28, 2017
Translating Evidence Into Practice: VON NICQ Next2 Quality Improvement Teams Share Data Driven Improvement
Multi-Systems Outcomes

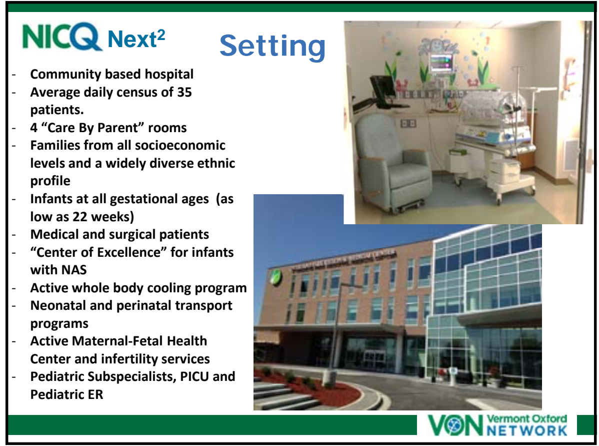
Objective: Identify 3 critical improvement methods or strategies employed by this improvement team to effect measurable improvement in the quality, safety and value of care for newborns.

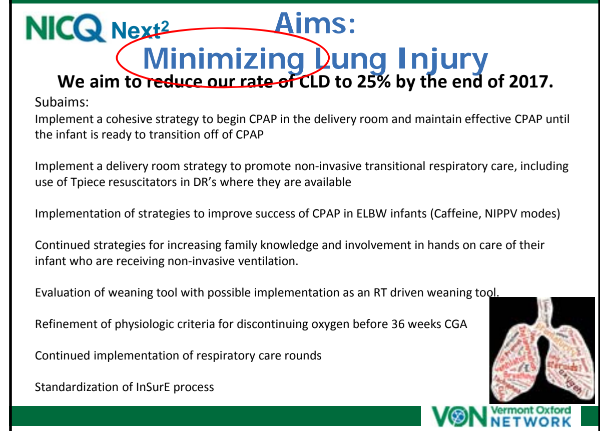
The Most Stubborn of Dots:
A CLD Bundle That Is Only The Beginning

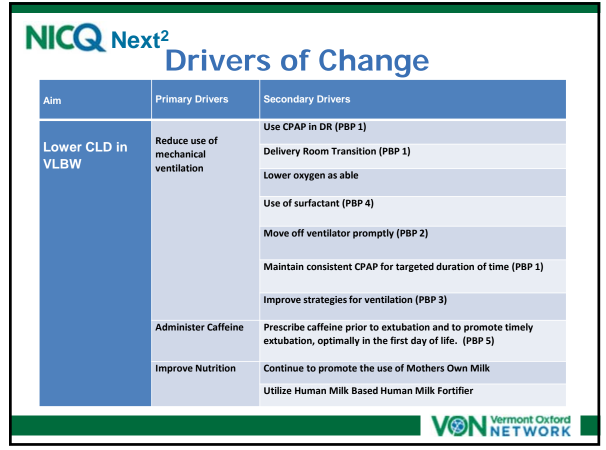
Karen M Kopischke MS, NNP-BC / Kathleen Weatherstone MD



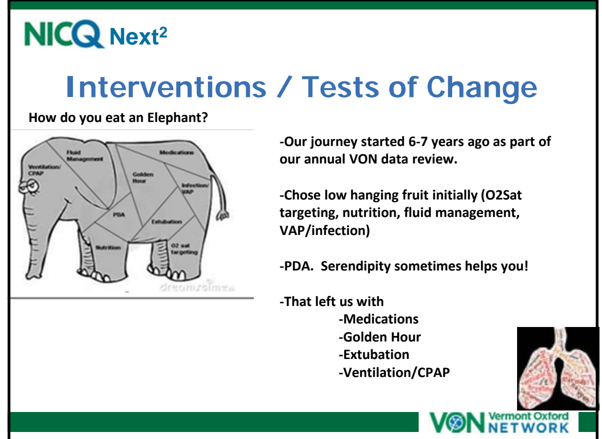


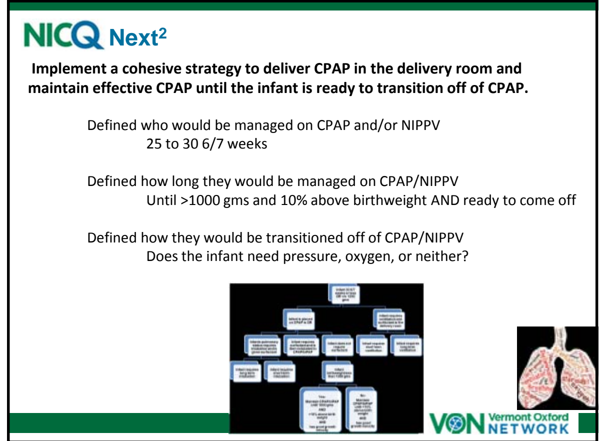




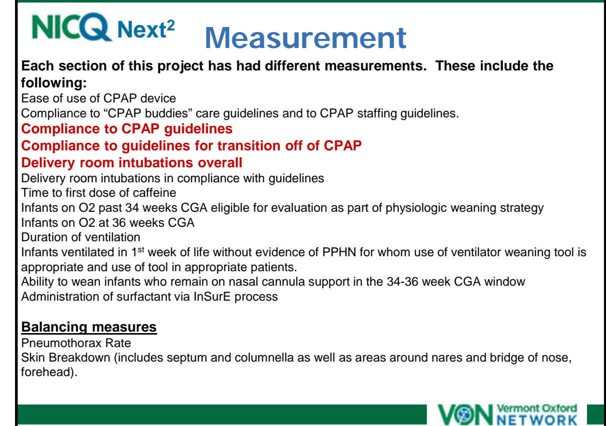


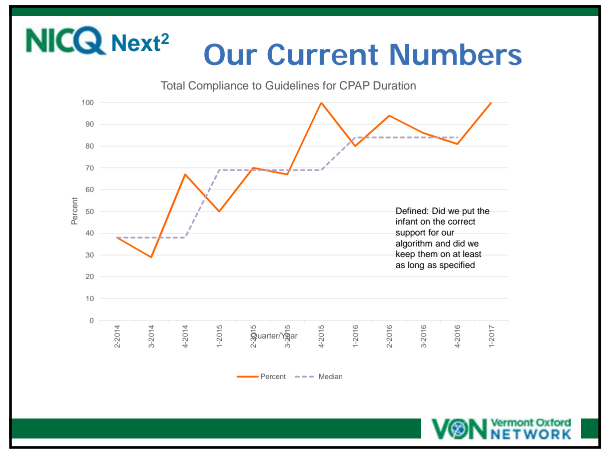
Aim	Primary Drivers	Secondary Drivers
Lower CLD in VLBW	Reduce use of mechanical ventilation	Use CPAP in DR (PBP 1)
		Delivery Room Transition (PBP 1)
		Lower oxygen as able
		Use of surfactant (PBP 4)
		Move off ventilator promptly (PBP 2)
		Maintain consistent CPAP for targeted duration of time (PBP 1)
		Improve strategies for ventilation (PBP 3)
	Administer Caffeine	Prescribe caffeine prior to extubation and to promote timely extubation, optimally in the first day of life. (PBP 5)
	Improve Nutrition	Continue to promote the use of Mothers Own Milk
		Utilize Human Milk Based Human Milk Fortifier

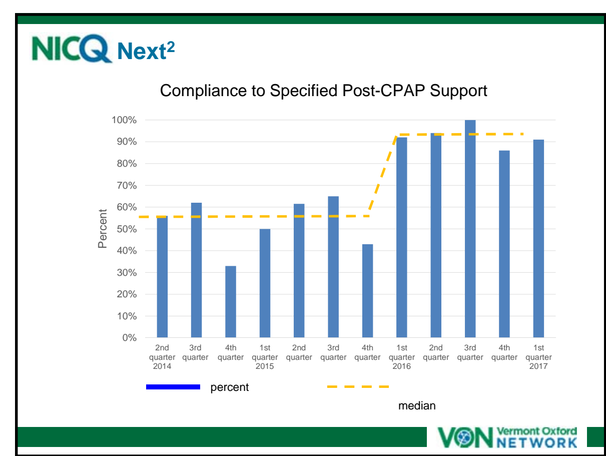

NICQ Next2
Interventions / Tests of Change
How do you eat an Elephant?
Fluid Management
Medications
Ventilation/CPAP
Golden Hour
Infection/VAP
PDA
Extubation
Nutrition
O2 sat targeting
-Our journey started 6-7 years ago as part of our annual VON data review.
-Chose low hanging fruit initially (O2Sat targeting, nutrition, fluid management, VAP/infection)
-PDA. Serendipity sometimes helps you!
-That left us with
-Medications
-Golden Hour
-Extubation
-Ventilation/CPAP
VON Vermont Oxford NETWORK

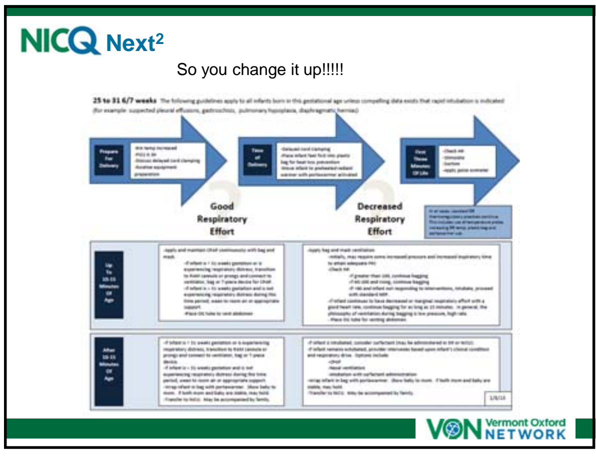

NICQ Next2
Implement a cohesive strategy to deliver CPAP in the delivery room and maintain effective CPAP until the infant is ready to transition off of CPAP.
Defined who would be managed on CPAP and/or NIPPV
25 to 30 6/7 weeks
Defined how long they would be managed on CPAP/NIPPV
Until >1000 gms and 10% above birthweight AND ready to come off
Defined how they would be transitioned off of CPAP/NIPPV
Does the infant need pressure, oxygen, or neither?
VON Vermont Oxford NETWORK

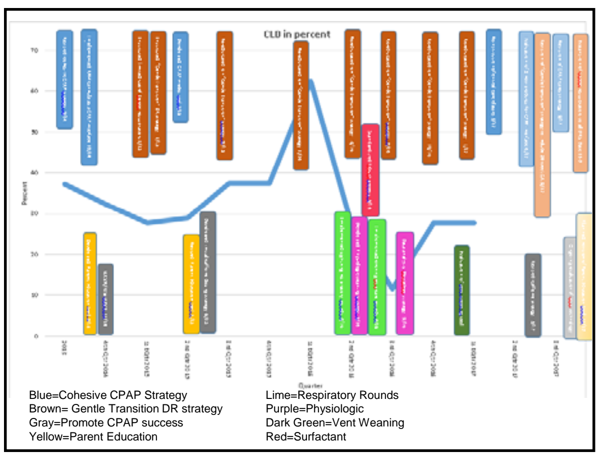
NICQ Next2
CPAP Buddies & CPAP Families
VON Vermont Oxford NETWORK

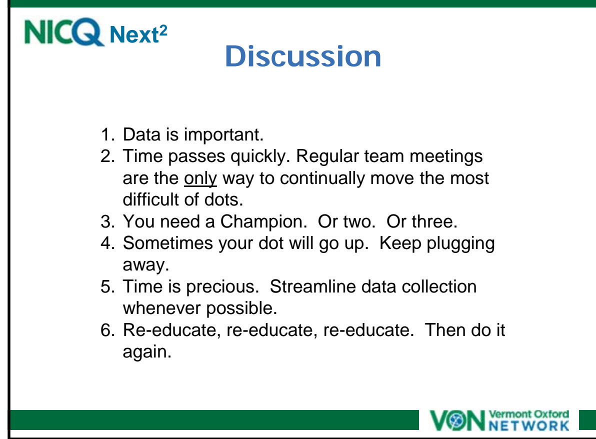

NICQ Next2
Measurement
Each section of this project has had different measurements. These include the following:
Ease of use of CPAP device
Compliance to "CPAP buddies" care guidelines and to CPAP staffing guidelines.
Compliance to CPAP guidelines
Compliance to guidelines for transition off of CPAP
Delivery room intubations overall
Delivery room intubations in compliance with guidelines
Time to first dose of caffeine
Infants on O2 past 34 weeks CGA eligible for evaluation as part of physiologic weaning strategy
Infants on O2 at 36 weeks CGA
Duration of ventilation
Infants ventilated in 1st week of life without evidence of PPHN for whom use of ventilator weaning tool is appropriate and use of tool in appropriate patients.
Ability to wean infants who remain on nasal cannula support in the 34-36 week CGA window
Administration of surfactant via InSurE process
Balancing measures
Pneumothorax Rate
Skin Breakdown (includes septum and columnella as well as areas around nares and bridge of nose, forehead).
VON Vermont Oxford NETWORK


NICQ Next2
Our Current Numbers
Total Compliance to Guidelines for CPAP Duration
Percent
100
90
80
70
60
50
40
30
20
10
0
2-2014
3-2014
4-2014
1-2015
2-2015
3-2015
4-2015
1-2016
2-2016
3-2016
4-2016
1-2017
Quarter/Year
Defined: Did we put the infant on the correct support for our algorithm and did we keep them on at least as long as specified
Percent
Median
VON Vermont Oxford NETWORK


NICQ Next2
Compliance to Specified Post-CPAP Support
Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2nd quarter 2014
3rd quarter
4th quarter
1st quarter 2015
2nd quarter
3rd quarter
4th quarter
1st quarter 2016
2nd quarter
3rd quarter
4th quarter
1st quarter 2017
percent
median
VON Vermont Oxford NETWORK

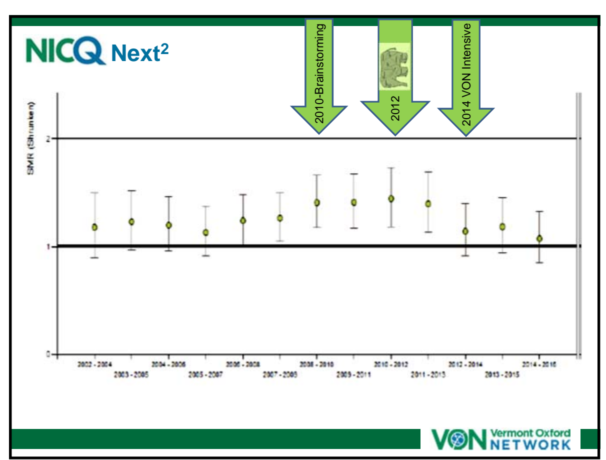






Discussion

1. Data is important.
2. Time passes quickly. Regular team meetings are the only way to continually move the most difficult of dots.
3. You need a Champion. Or two. Or three.
4. Sometimes your dot will go up. Keep plugging away.
5. Time is precious. Streamline data collection whenever possible.
6. Re-educate, re-educate, re-educate. Then do it again.



Thank you to our awesome staff at OPRMC, to Hannah King and Wally Carlo for their invaluable advice, and our parents who advise us and inspire us to move that dot!!!
Overland Park
Regional Medical Center
Believes In
Preemies!
VON Vermont Oxford NETWORK