NeoQIC Respiratory Care Collaborative

Kick-Off

December 3, 2019

neoQIC

Agenda

10:30 – 11:00	Check In & Registration
11:00 – 11:30	Welcome and Introductions
11:30 – 11:40	Why a Respiratory Care Collaborative
11:40 – 12:15	Presentation of Vermont Oxford Network Data & Practice Survey Results
12:15 - 1:00	Lunch
1:00 – 1:10	QI for BPD: Does it Work? A Brief Review of the Literature
1:10 – 1:20	Approaches to Collaborative QI: What Approach Do We Take?
1:20 – 2:00	Team Time! Identifying a Specific Aim for Local QI Efforts and Report Out
2:00 – 2:30	Next Steps

New Collaborative Website: https://www.neoqicma.org/rcc

Password: neoqic2020

You may visit now or after the meeting to download meeting materials.

Welcome and Introductions

Please introduce your group and tell us ONE area of respiratory care your NICU would like to improve

Why Form a Respiratory Care Collaborative

Lawrence Rhein

Practice Survey and VON Results

Helen Healy

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Delivery Room and Transport

Delivery Room Management of Very Preterm Infants

	Default preset FiO2 for initial resuscitation	Routinely use of a T-piece resuscitator
A	30%	Yes
B	30%	Yes
C	30%	Yes
D	30%	Yes
E	30%	Yes
F	30%	No
G	30%	Yes
H	21%	No
I	21%	No

Nasal CPAP in the Delivery Room

Hospital Code	Response
A, B, C, E, G	RAM cannula and a T-piece resuscitator
B	Nasal prongs or nasal mask and a T-piece resuscitator
F, H	Nasal prongs or nasal mask and a bubble CPAP system
I	Nasal prongs or nasal mask and a ventilator
D, G*	CPAP is only provided with bag and face mask or T-piece and mask

Nasal CPAP during Transport from delivery room to NICU

Hospital Code	Response
A, B, C, E, G	RAM cannula and a T-piece resuscitator
C	RAM cannula and a ventilator
F, H	Nasal prongs or nasal mask and a bubble CPAP system
I	Nasal prongs or nasal mask and a ventilator
D	CPAP is only provided with bag and face mask or T-piece and mask

Mechanical Ventilation

Hospital Code	Ventilator Brand(s)	First mode	Volume or pressure-based ventilation first
A	Drager & Maquet	SIMV	Pressure
B	Drager & Maquet	SIMV	Volume
C	Puritan Bennett 980	SIMV	Pressure
D	Avea	SIMV with PSV	Pressure
E	Drager	Assist Control	Volume
F	Drager		Volume
G	Drager	SIMV with PSV	Pressure
H	Maquet	SIMV or AC	Volume
I	Drager & Hamilton	SIMV	Pressure
J	Maquet	SIMV with PSV, changing to AC volume	Pressure, changing to volume

Hospital Code	Pressure support ventilation for very preterm infants
A	Used in selected clinical circumstances
B	Routinely used
C	Rarely used/Used in selected clinical circumstances/ Used PSV as tool to assess readiness for extubation
D	Routinely used
E	Used in selected clinical circumstances
F	Routinely used
G	Routinely used
H	Routinely used/Used as tool to assess readiness for extubation
I	Routinely used
J	Routinely used

Hospital Code	Use of high-frequency ventilation	High Frequency Modes
A	Rarely, only as a rescue	HFOV
B	Frequently, only as a rescue	HFOV ,HFJV
C	Rarely, only as a rescue	HFOV
D	Frequently, only as a rescue	HFOV ,HFJV
E	Rarely, only as a rescue	HFOV ,HFJV
F	Frequently, only as a rescue	HFOV ,HFJV
G	Rarely, only as a rescue	HFOV
H	Rarely, NOT only as a rescue mode	HFOV
I	Frequently, only as a rescue mode	HFOV ,HFJV
J	Frequently, only as a rescue mode	HFOV ,HFJV

Non-Invasive Support

Hospital Code	Available CPAP Types	Preferred First Type of CPAP
A	Bubble & Ventilator CPAP	Either (depending on medical team, equipment availability, etc.)
B	Ventilator CPAP	Ventilator CPAP
C	Ventilator CPAP	Ventilator CPAP
D	Bubble & Ventilator CPAP	Bubble CPAP
E	Ventilator CPAP	Ventilator CPAP
F	Bubble & Ventilator CPAP	Bubble CPAP
G	Ventilator CPAP	Ventilator CPAP
H	Bubble & Ventilator CPAP	Bubble CPAP
I	Bubble & Ventilator CPAP	Bubble CPAP
J	Bubble & Ventilator CPAP	Ventilator CPAP

Hospital Code	Facial Interface Types Used for CPAP	Brand Used
A	Nasal prongs & Nasal cannula	Hudson & RAM cannula
B	Nasal prongs, Nasal mask & Nasal cannula	RAM cannula & Fisher & Paykel
C	Nasal cannula	RAM cannula
D	Nasal mask & Nasal cannula	RAM cannula
E	Nasal cannula	RAM cannula
F	Predominantly Nasal mask, also Nasal cannula	RAM cannula (restricted) & Fisher & Paykel
G	Nasal cannula	RAM cannula
H	Nasal prongs & Nasal mask	Hudson, INCA, & Fisher & Paykel
I	Nasal prongs, Nasal mask & Nasal cannula	RAM cannula & Fisher & Paykel
J	Nasal prongs & Nasal cannula	RAM cannula & Fisher & Paykel

How do you use RAM Cannula?

Hospital Code	Response
B, C, E, G, J	We use RAM as the preferred/only interface for delivering CPAP
A, F	We use RAM, but restrict its use to certain groups of infants (such as those above a certain gestational age, those weaning on respiratory support, etc.)
D, I	RAM is not our preferred method but we will commonly switch to it if other modes (prongs or mask) are not being tolerated
H	We do not have RAM cannulas in our NICU/never use them

Do you rotate facial interfaces?

Hospital Code	Response
D, I	Yes, rotate on a set schedule
F	Set schedule is a bit loose and sometimes ignored
A, B, H, J	No, one interface is used unless and until needing to be switched for clinical reasons
C, E, G	No, we only have use single interface

How is NIPPV Used?

Hospital Code	NIPPV Is Used
A	Rarely
B	Often
C	Often
D	Often
E	Often
F	Rarely
G	Often
H	Rarely
I	Rarely
J	Often

Surfactant Policies

Hospital Code	Response
A, E, J	Use rescue surfactant - do not have specific criteria for when to use it (i.e., if an infant qualifies is based on medical team assessment)
B, F, G, H, I	Use rescue surfactant - infants are intubated and given surfactant when they meet very specific pre-determined clinical criteria
C	Give prophylactic surfactant for infants under a specific gestational age or birth weight (i.e., automatic intubation and surfactant).
D	No, the decision to use 'prophylactic' vs. 'rescue' surfactant is made for each individual infant

INSURE/LISA

Hospital Code	Response
C, J	Don't have a policy and rarely/never use INSURE or LISA (or similar methods)
A, D, E, F, H, I	Don't have a written policy but do use INSURE or LISA (or similar methods) at times
B	Have a written policy and use INSURE or LISA (or similar methods)
G	Other: LMA/Surfactant method

Caffeine Use

Hospital Code	Response
A, B, C, D, E, F, G, I	Have a protocol directing the routine use of prophylactic caffeine for all infants meeting specific age and/or weight criteria, regardless of whether an infant is intubated or not
J	Does not have a specific practice, the admitting team may decide to use prophylactic caffeine if they feel it is indicated

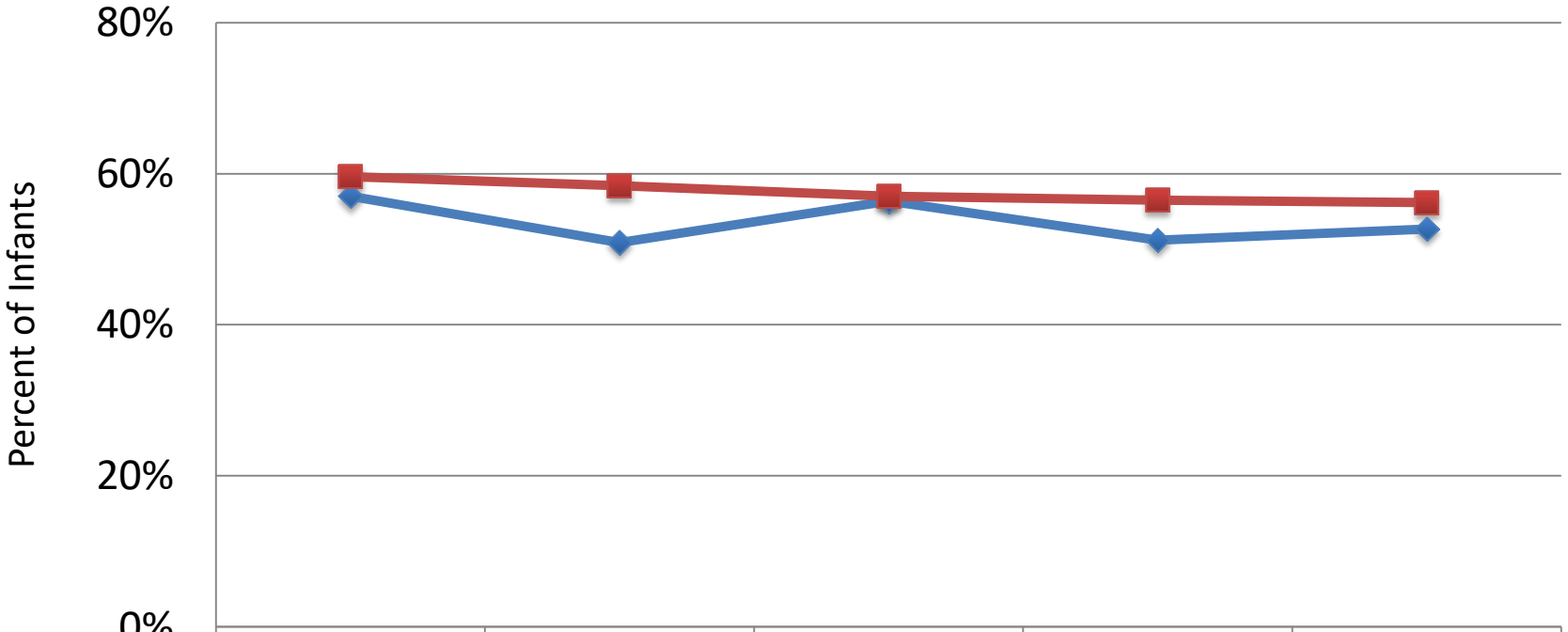
iNO Use

Hospital Code	Response
A, B, E, F, I	iNO is never used for prevention or treatment of BPD but is used in select preterm infants with suspected or diagnosed pulmonary hypertension
C, D, G, J	iNO is used rarely as rescue therapy in preterm infants with extremely severe BPD
H	Never used in preterm infants by policy

Vermont Oxford Network Data

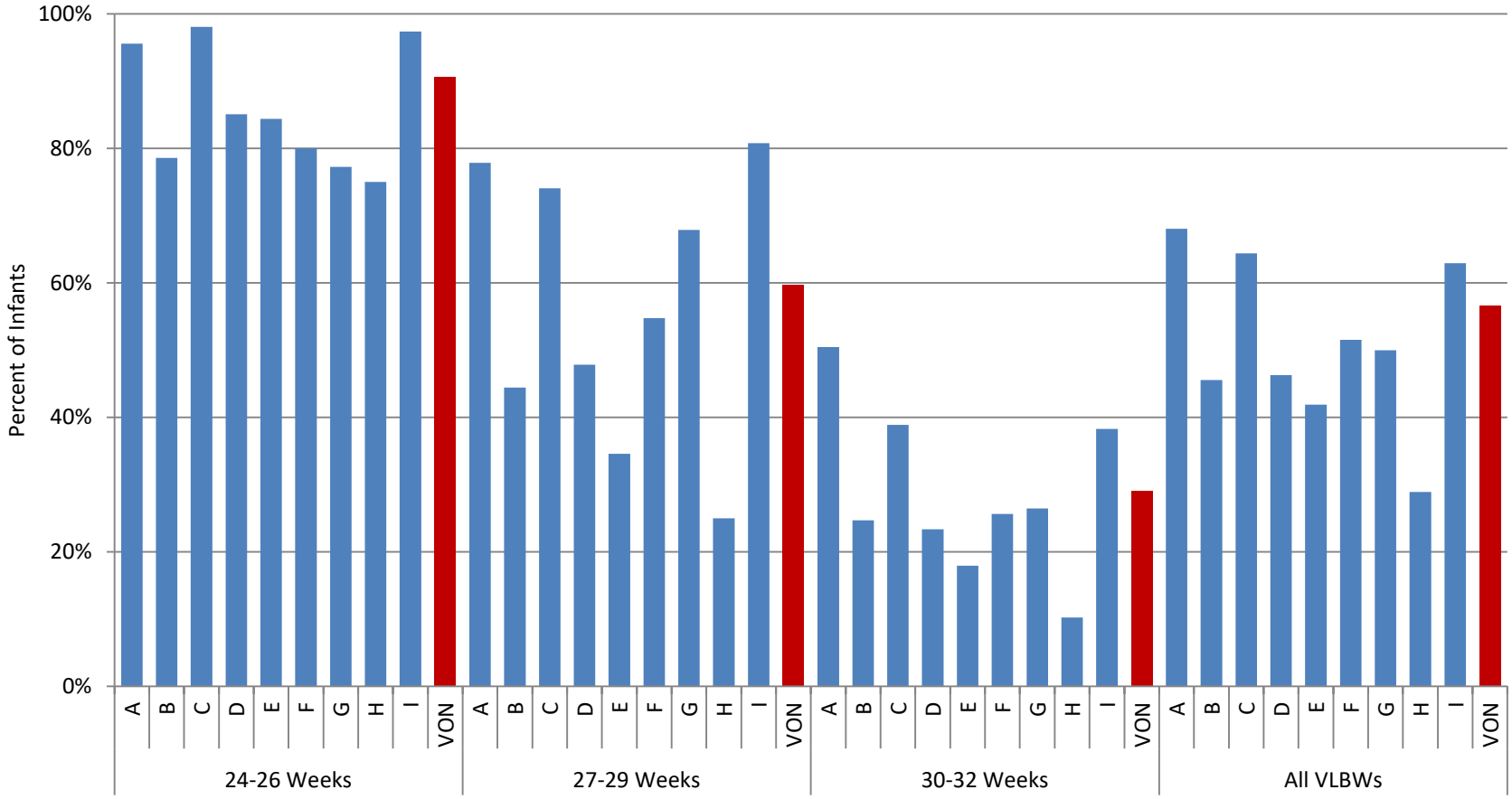
Ventilation Use

Any Mechanical Ventilation, VLBW Infants 2014-2018



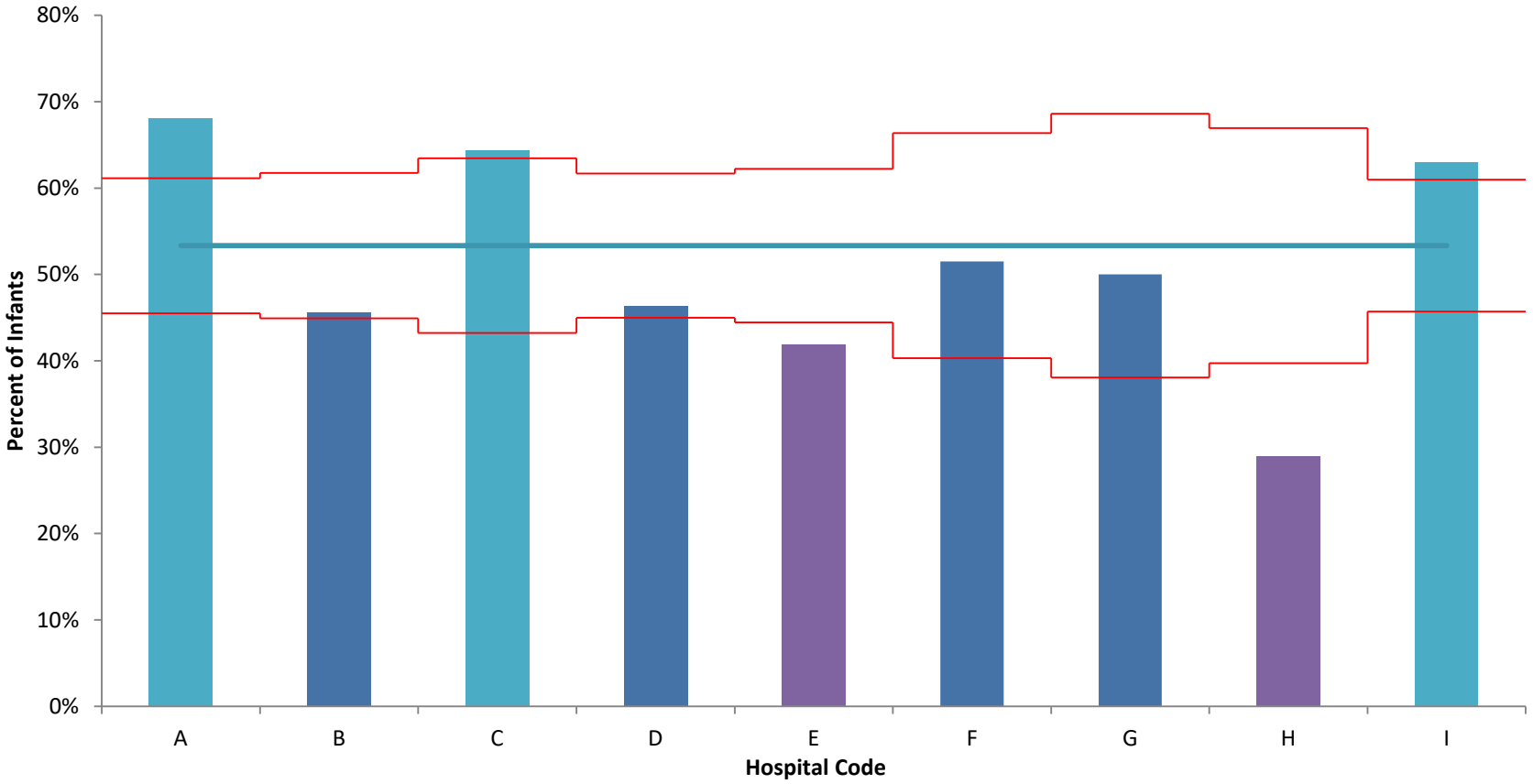
	2014	2015	2016	2017	2018
NeoQIC	57%	51%	56%	51%	53%
VON	60%	58%	57%	57%	56%

Any Mechanical Ventilation by GA
VLBW Infants, 2016-2018

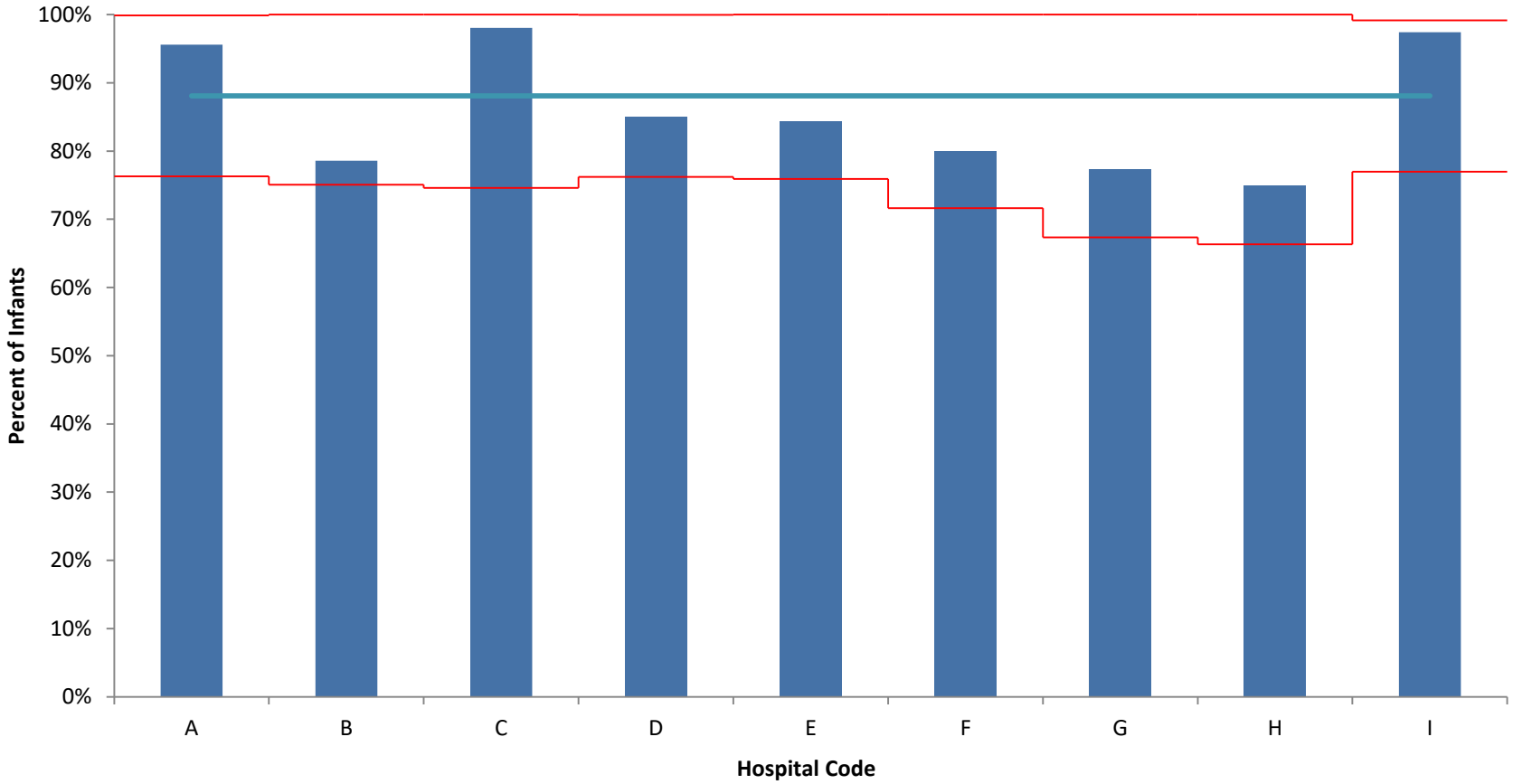


neoQIC

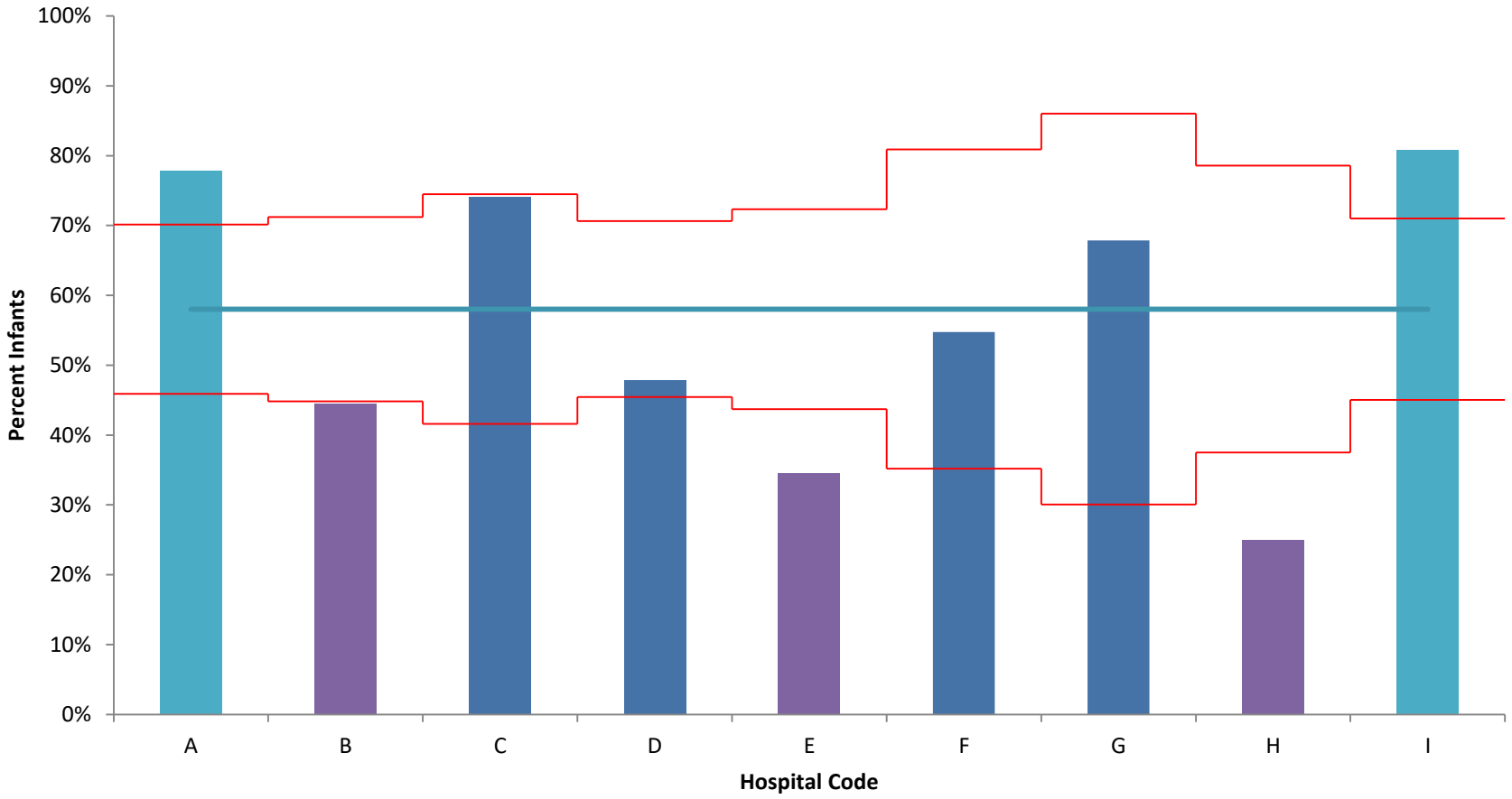
Any Ventilation, all VLBW, 2016 – 2018
p Chart



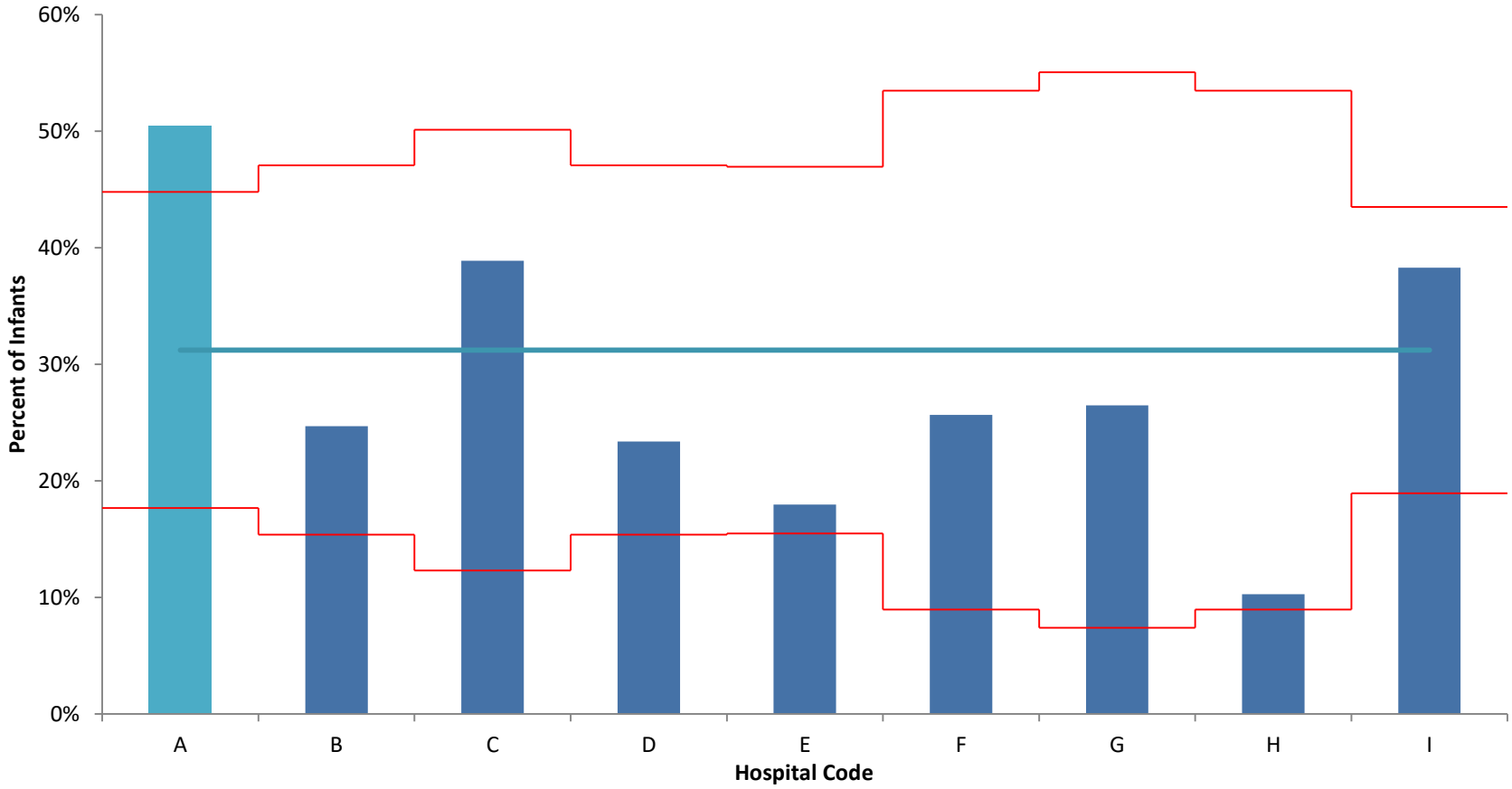
Any Ventilation, 24 - 26 wks GA, 2016 - 2018
p Chart



Any Ventilation, 27- 29 wks GA, 2016 - 2018
p Chart

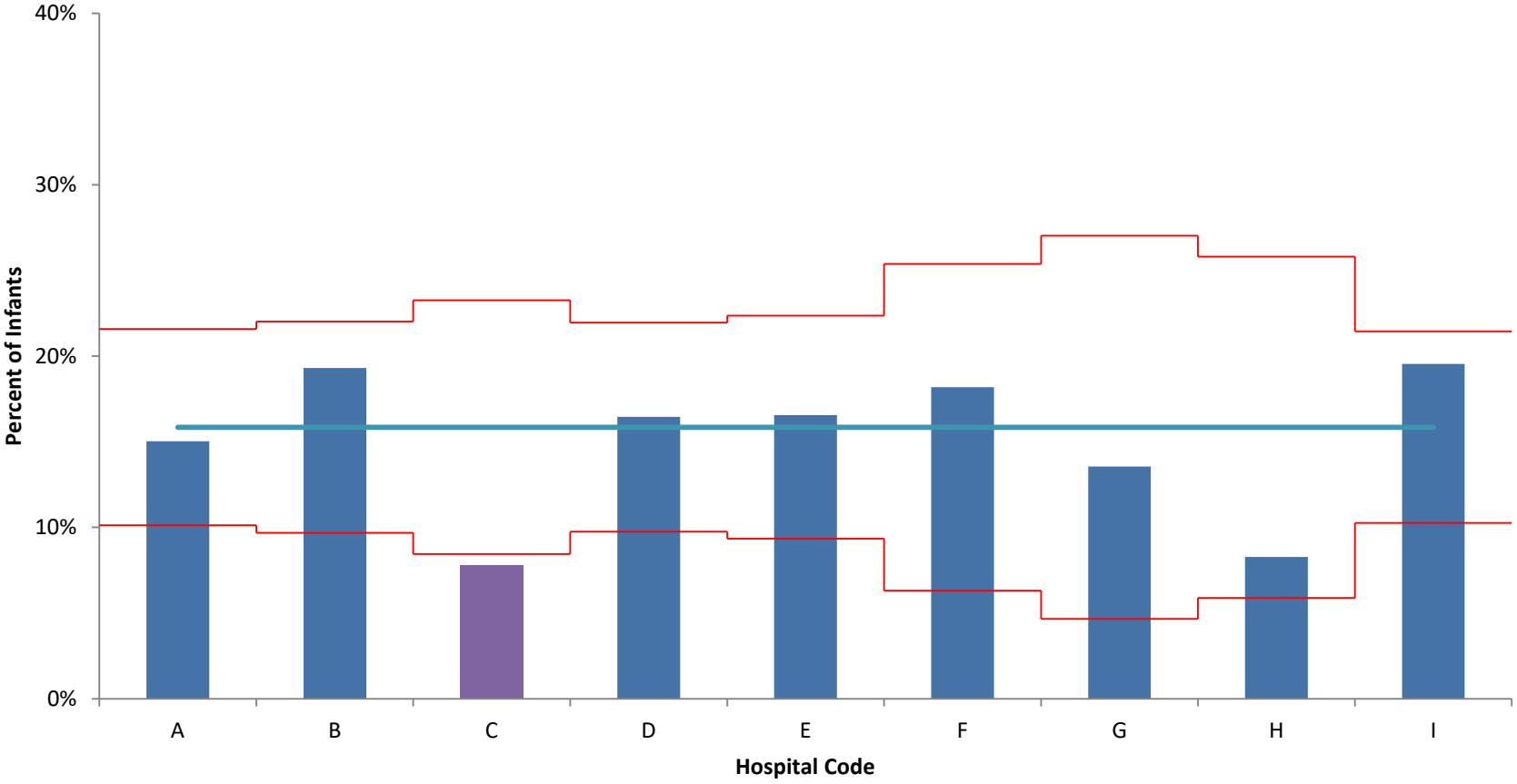


Any Ventilation, 30 - 32 wks GA, 2016 - 2018
p Chart



neoQIC

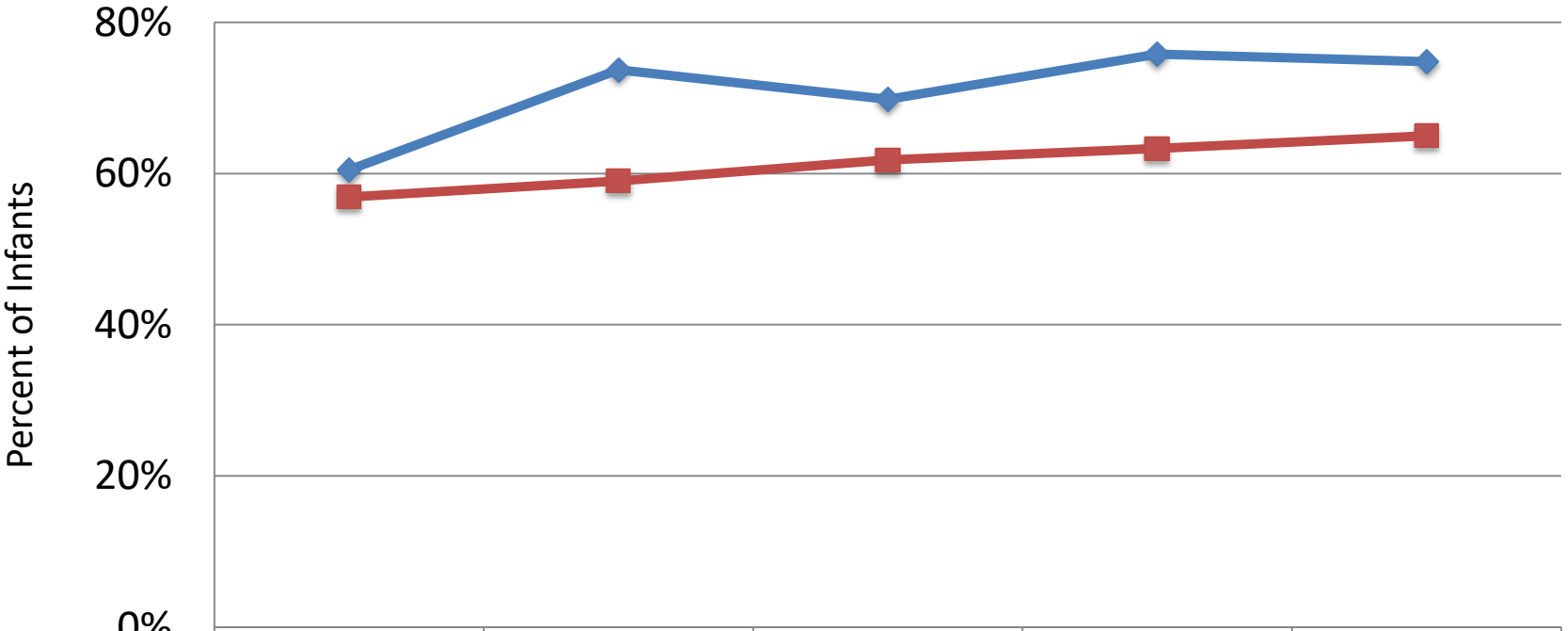
High Frequency Use, All VLBW, 2016 - 2018
p Chart



Non-Invasive Support

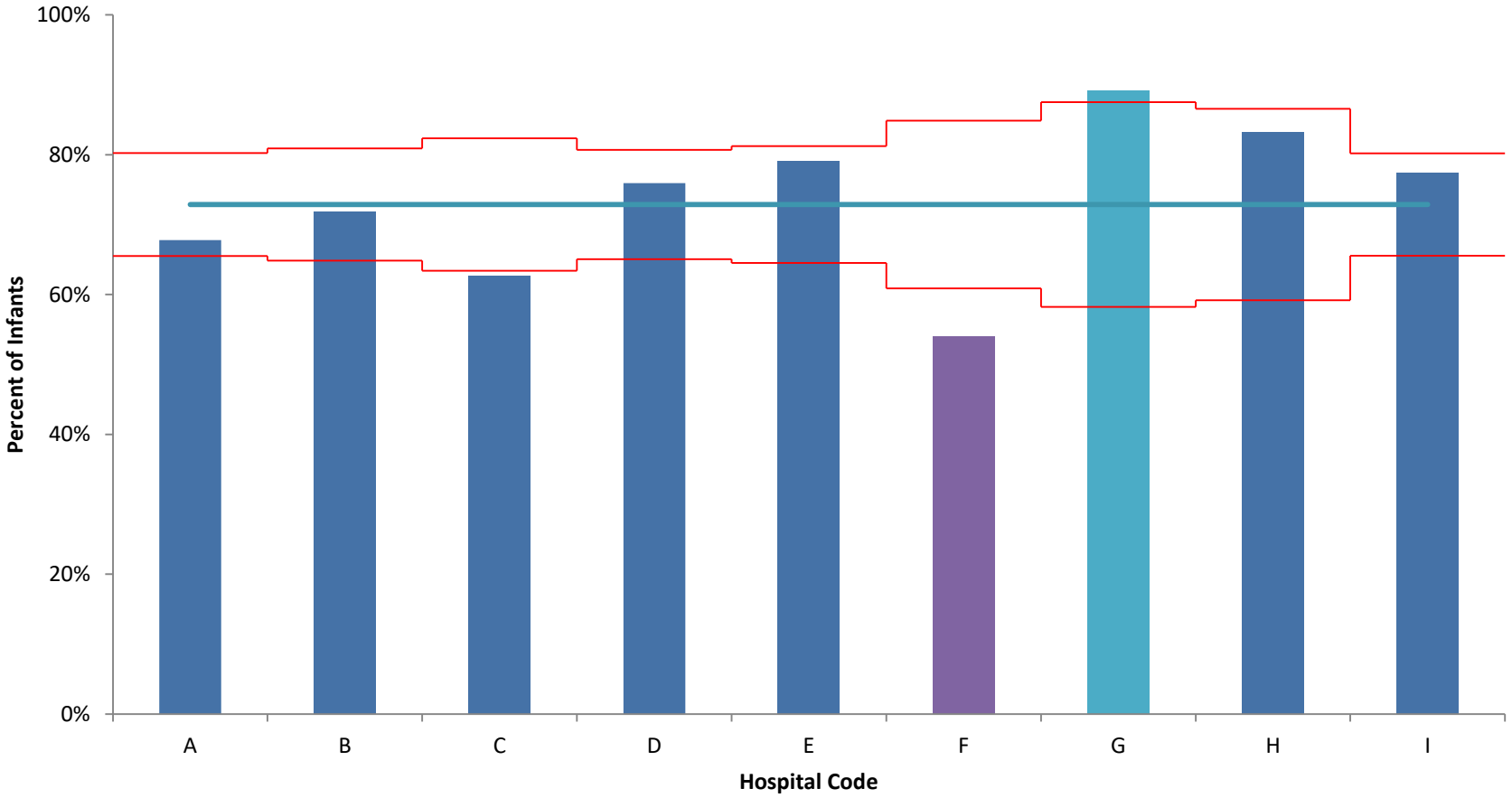
NIV = non-invasive ventilation = nasal ventilation
(positive pressure ventilation via nasal prongs or face mask, including NIPPV, BiPAP, and nasal high-frequency ventilation)

CPAP or NIV Trial before or without ETT all VLBW, 2014 - 2018



	2014	2015	2016	2017	2018
NeoQIC	61%	74%	70%	76%	75%
VON	57%	59%	62%	63%	65%

CPAP or NIV Trial before or without ETT
All VLBW, 2016 - 2018 - p Chart



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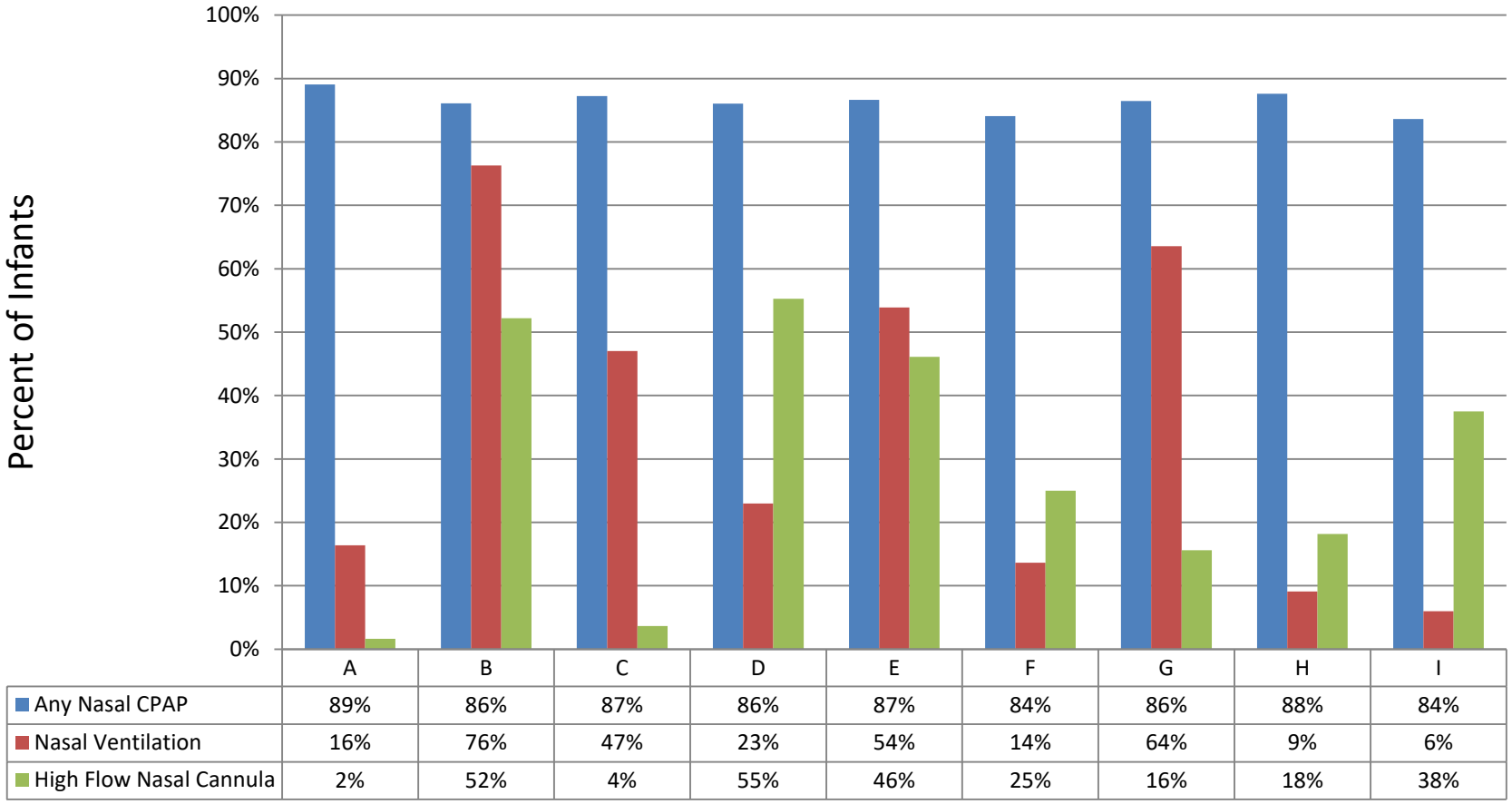
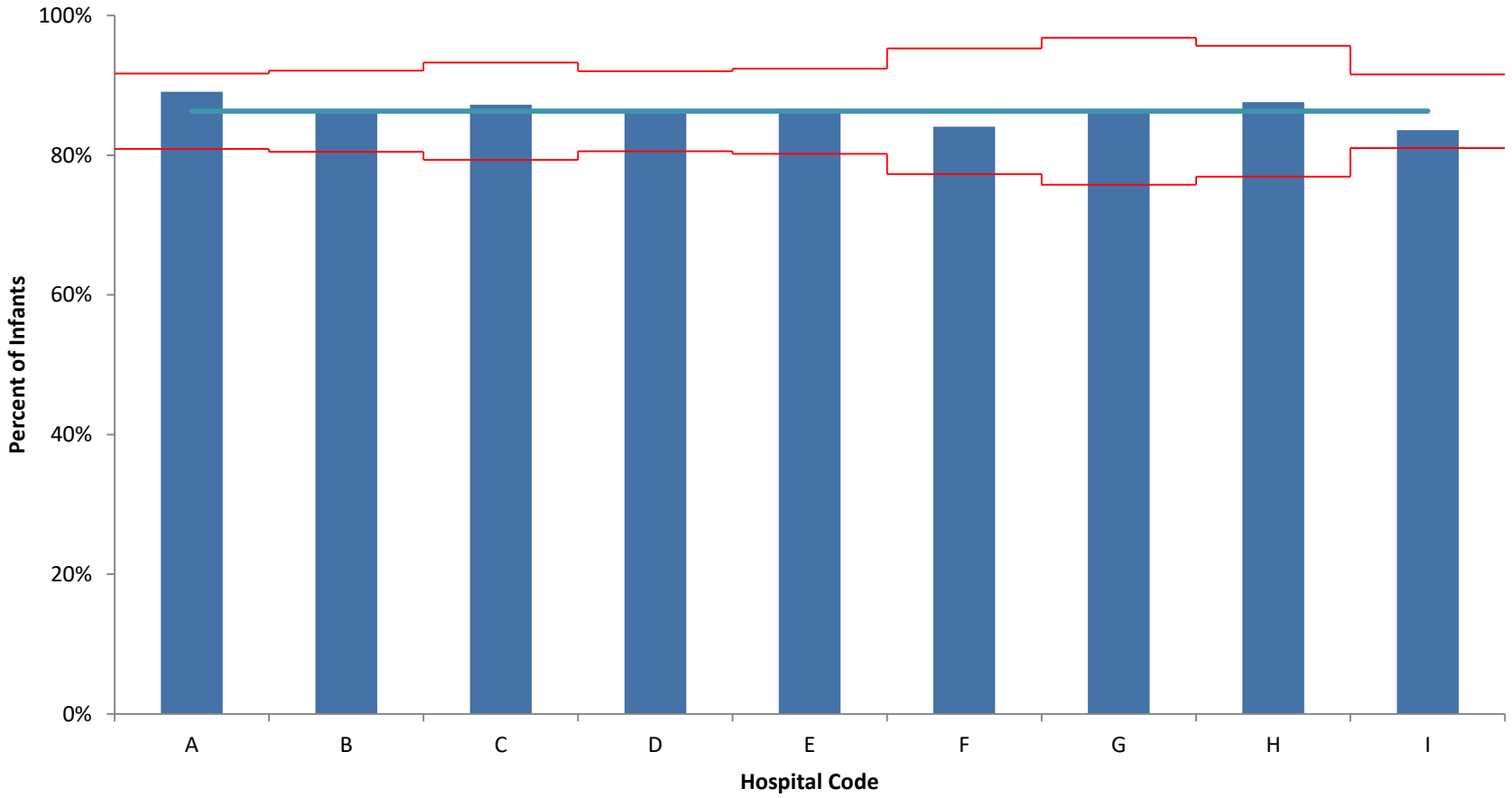
Non-Invasive Support Modes, all VLBW 2016 - 2018

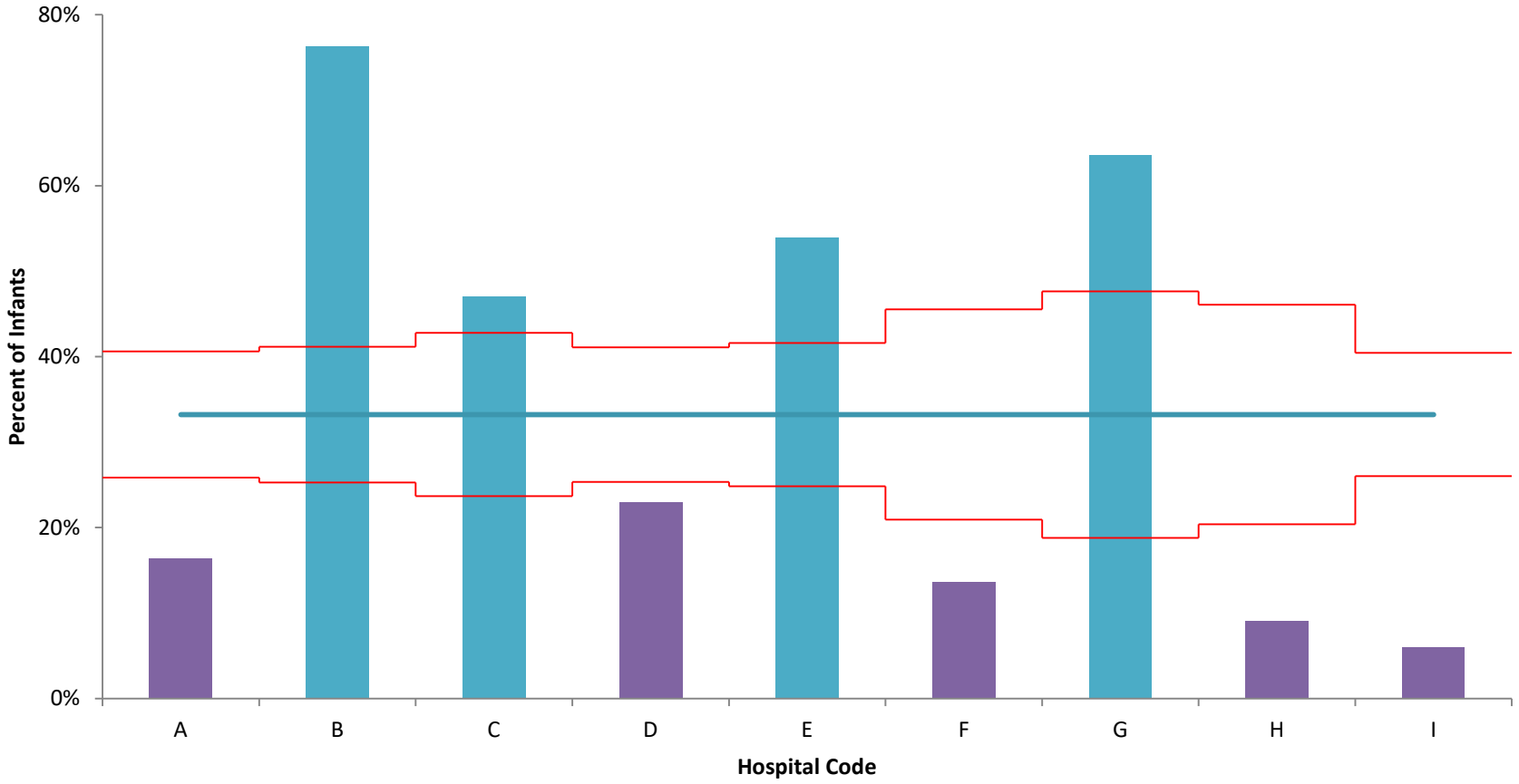


	A	B	C	D	E	F	G	H	I
Any Nasal CPAP	89%	86%	87%	86%	87%	84%	86%	88%	84%
Nasal Ventilation	16%	76%	47%	23%	54%	14%	64%	9%	6%
High Flow Nasal Cannula	2%	52%	4%	55%	46%	25%	16%	18%	38%

Nasal CPAP Use, All VLBW, 2016 – 2018
p Chart

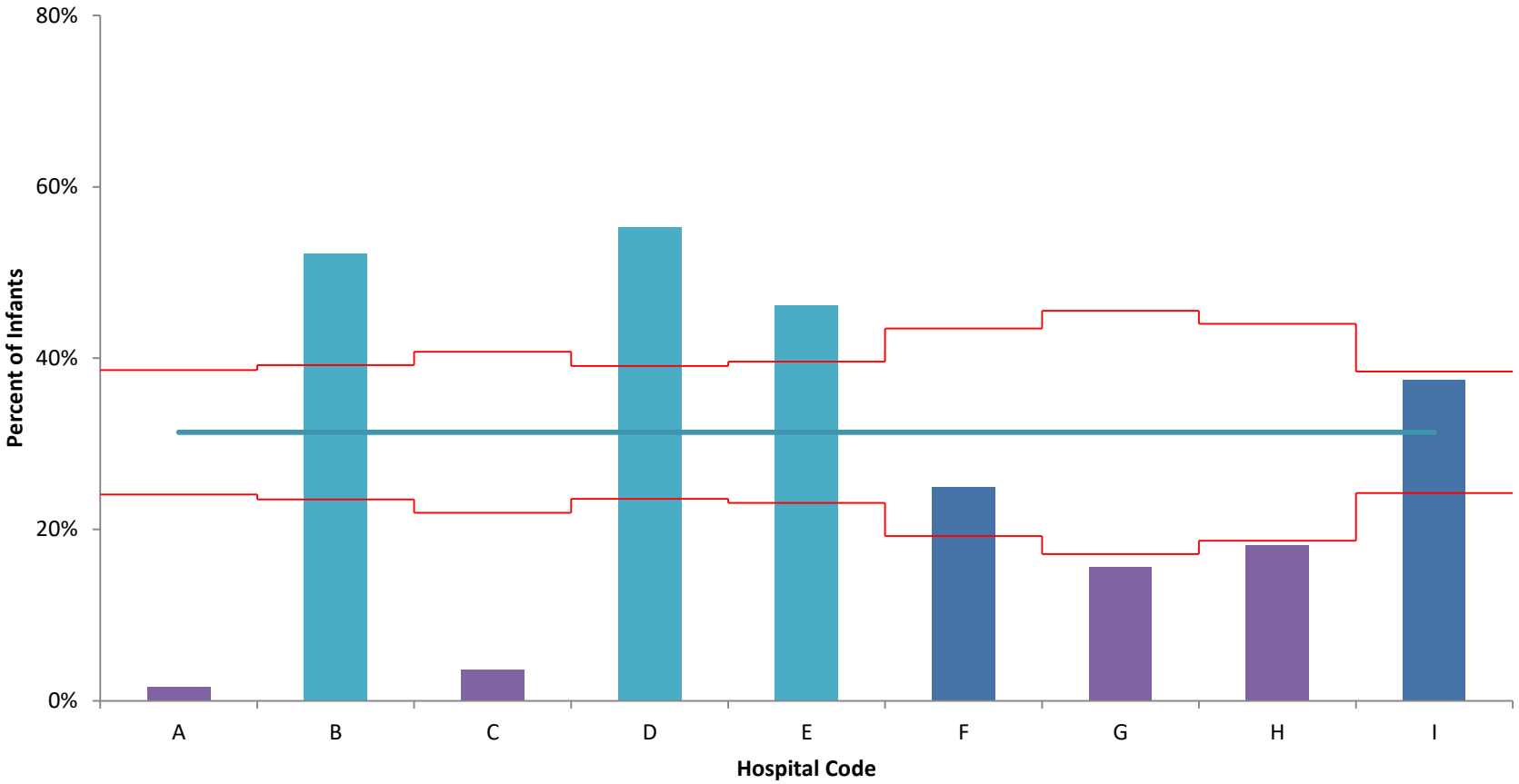


Nasal Ventilation, All VLBW, 2016 – 2018
p Chart



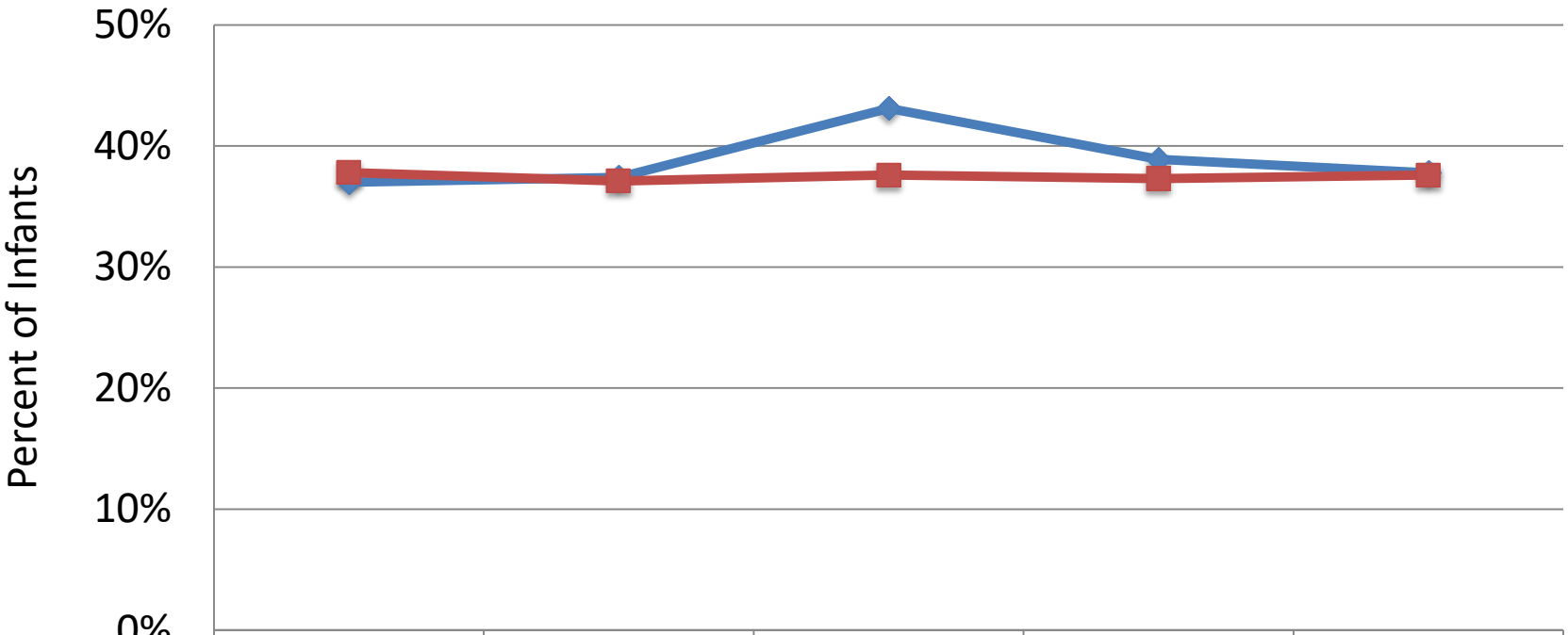
neoQIC

High Flow Nasal Cannula Use, All VLBW
2016 - 2018 - p Chart



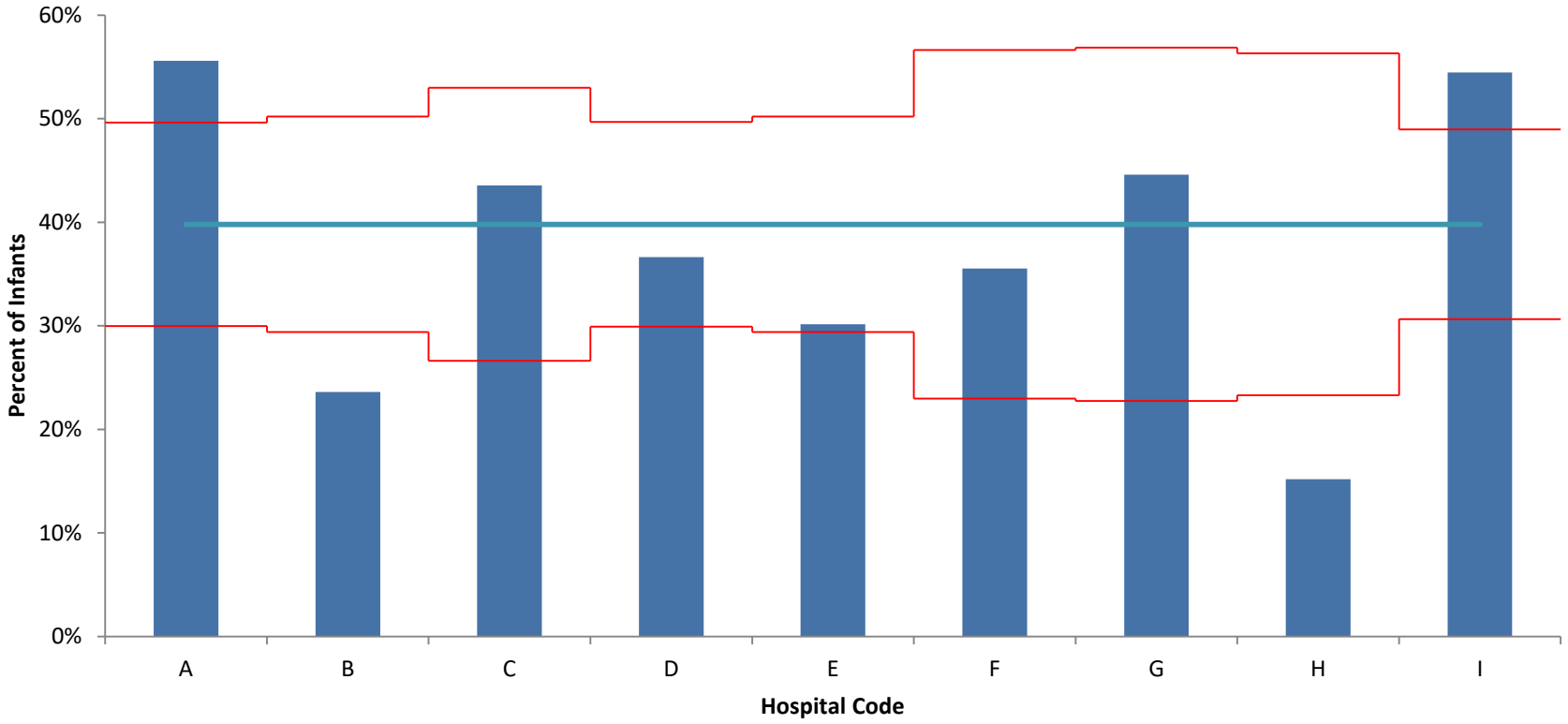
neoQIC

Intubation and Ventilation After Trial of CPAP or NIV, 2014 - 2018



	2014	2015	2016	2017	2018
NeoQIC	37%	37%	43%	39%	38%
VON	38%	37%	38%	37%	38%

Intubation and Ventilation After Trial of CPAP or NIV, 2016 – 2018
p Chart



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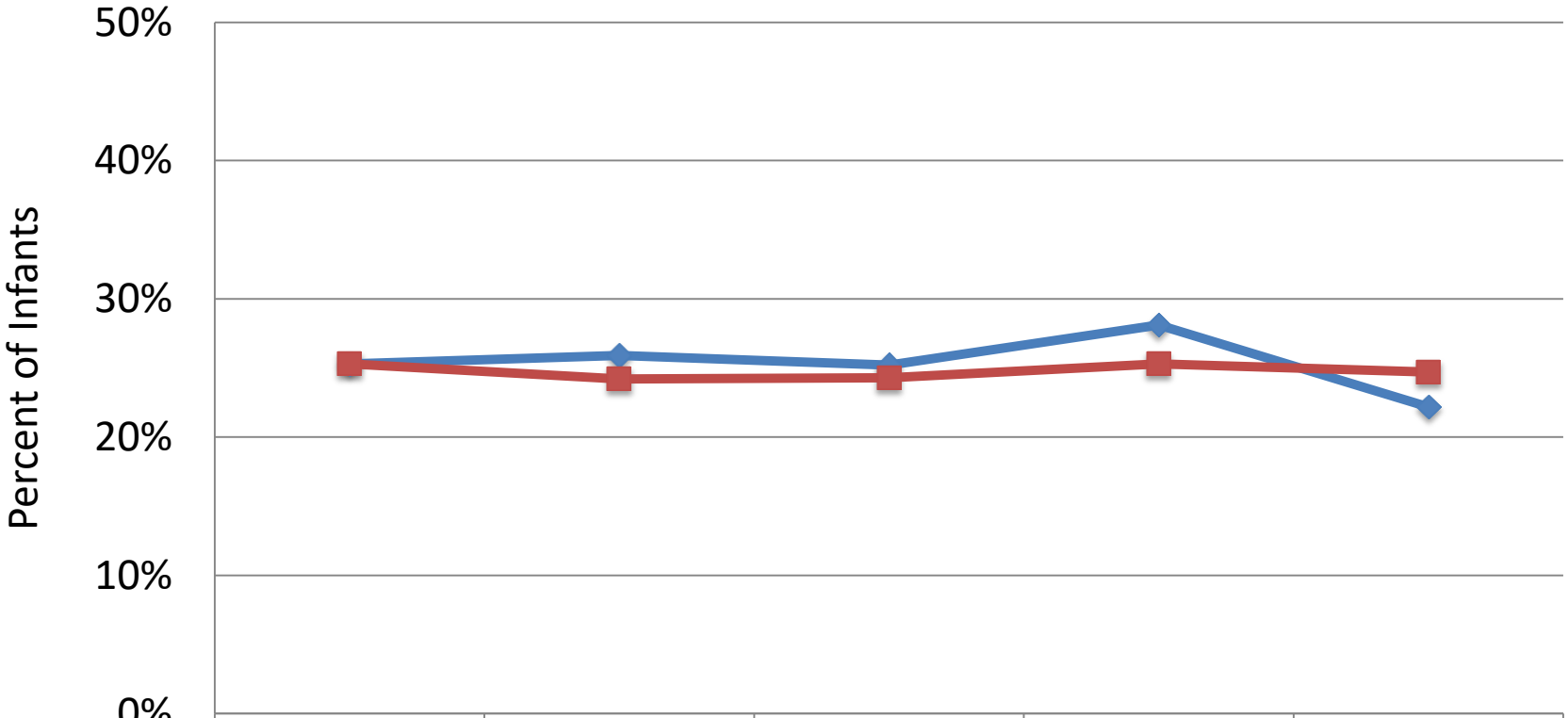
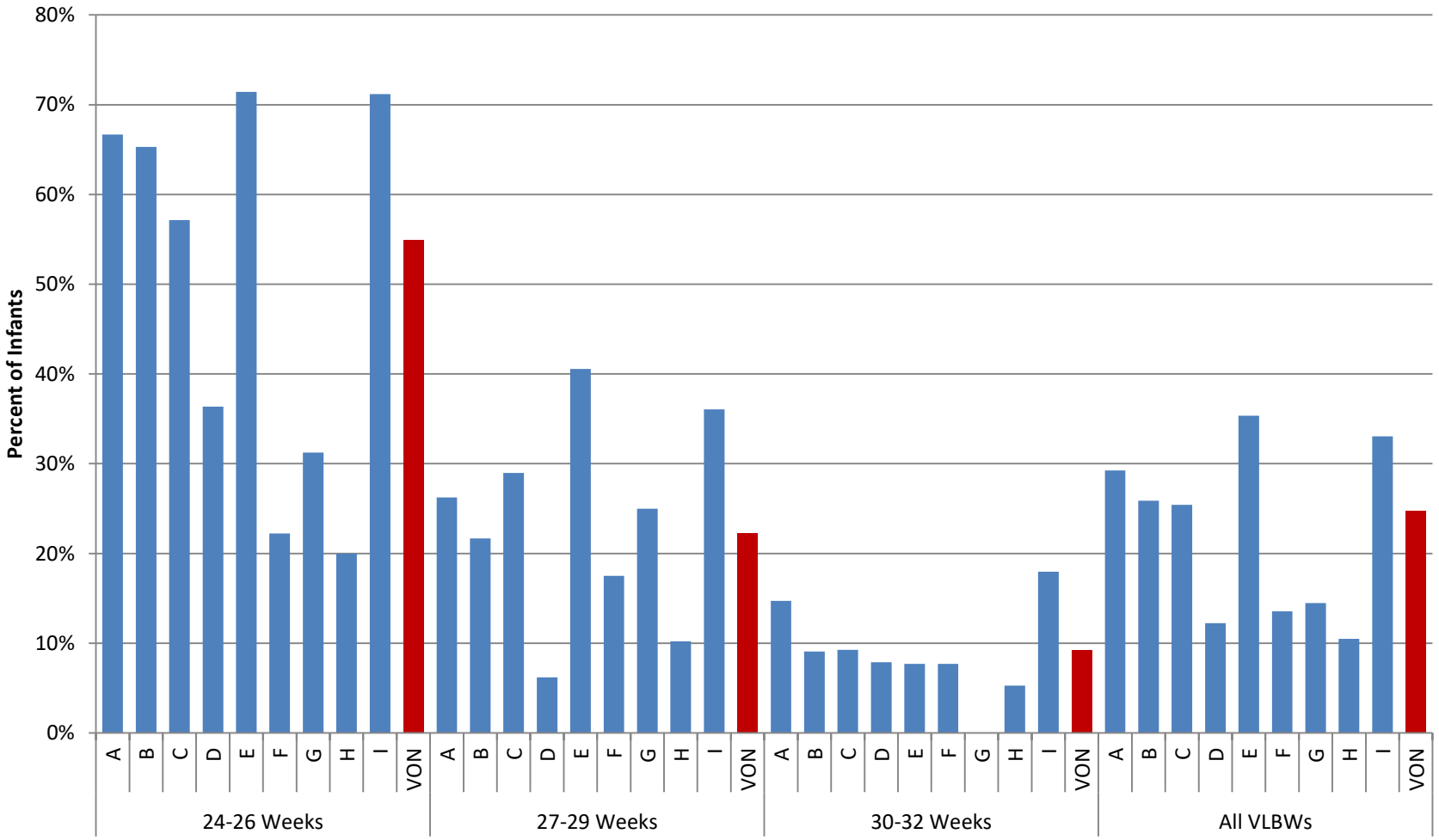
Outcomes

CLD Rates, all VLBW, 2014-2018

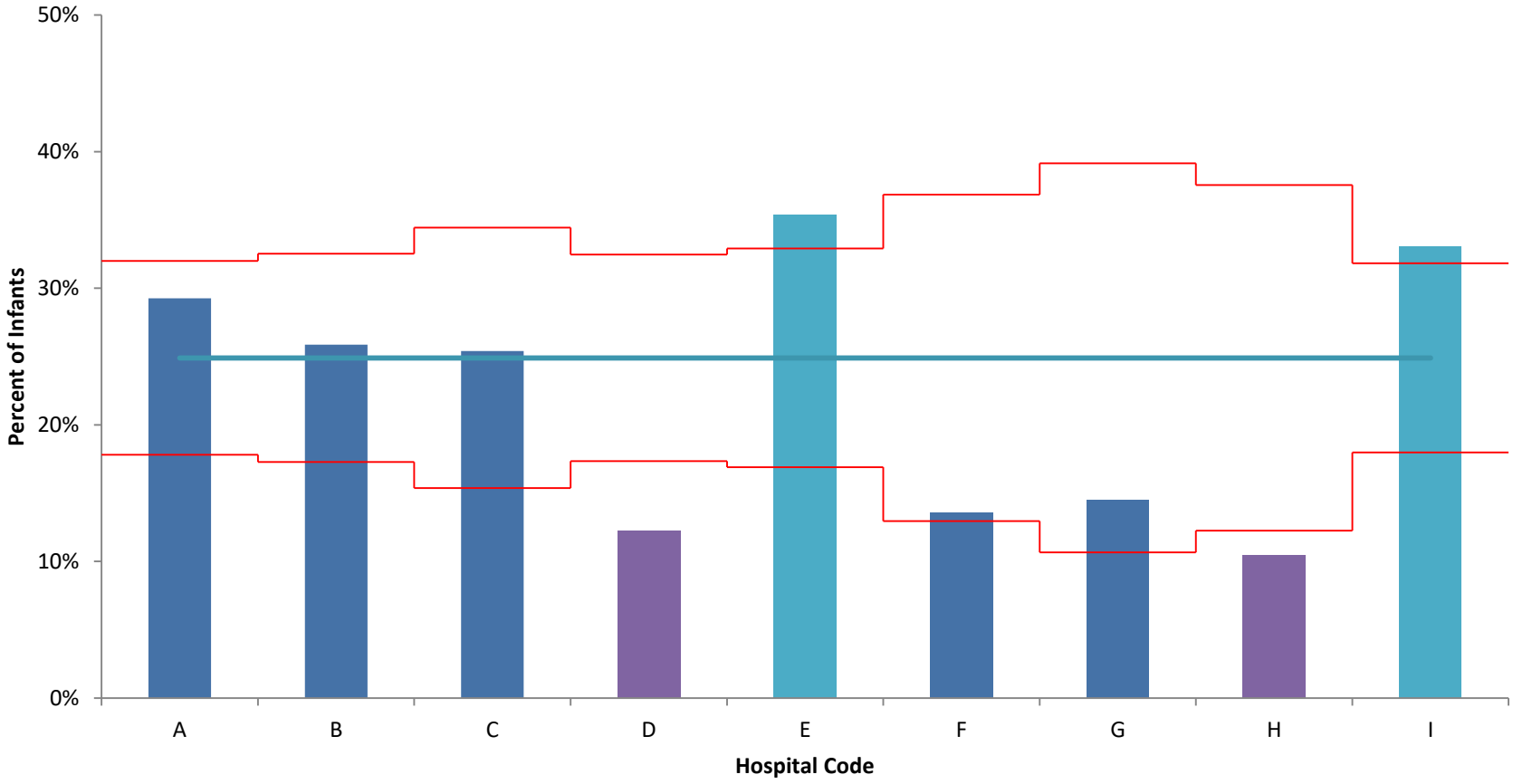


	2014	2015	2016	2017	2018
NeoQIC	25%	26%	25%	28%	22%
VON	25%	24%	24%	25%	25%

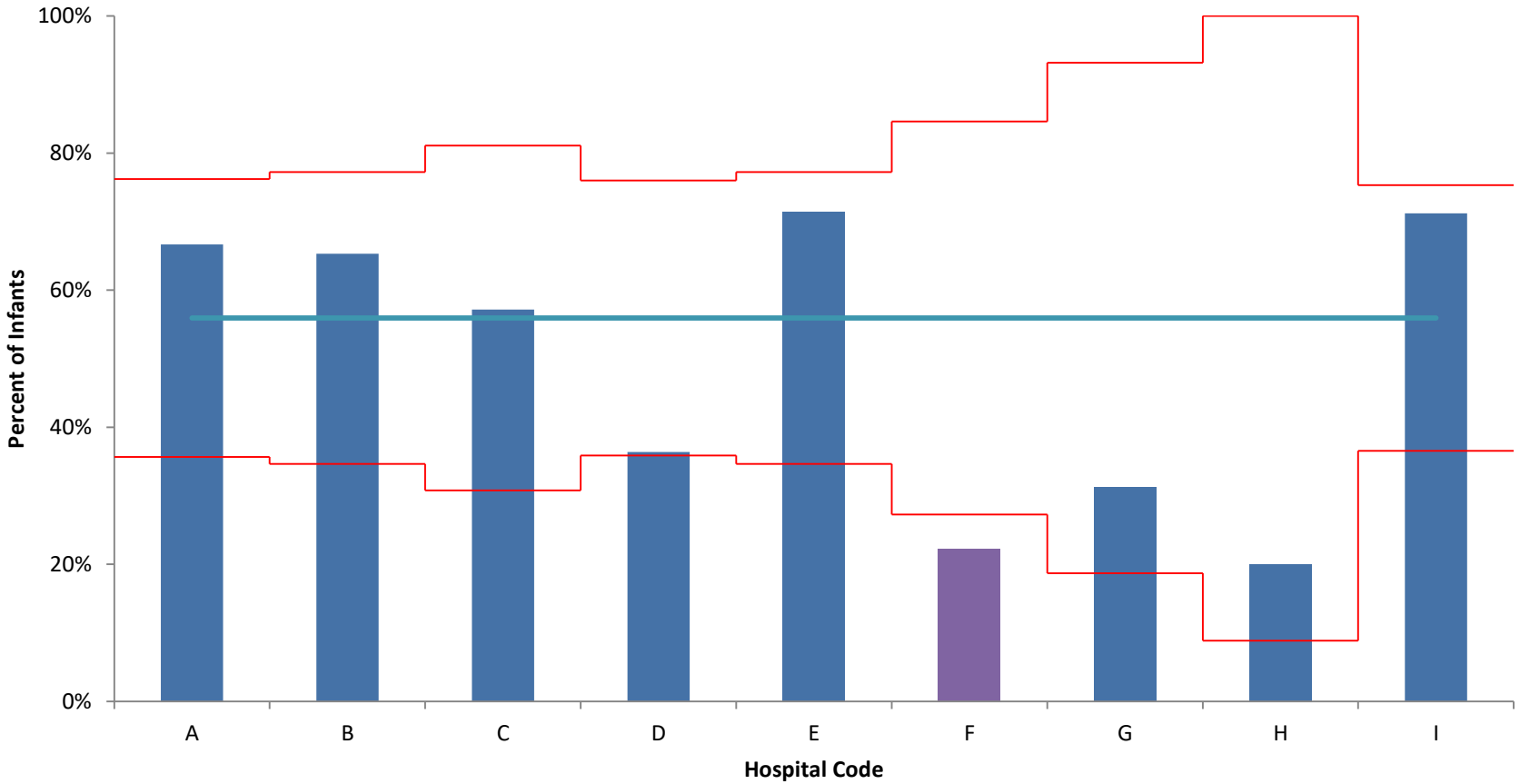
CLD Rates by GA, VLBW Infants, 2016-2018



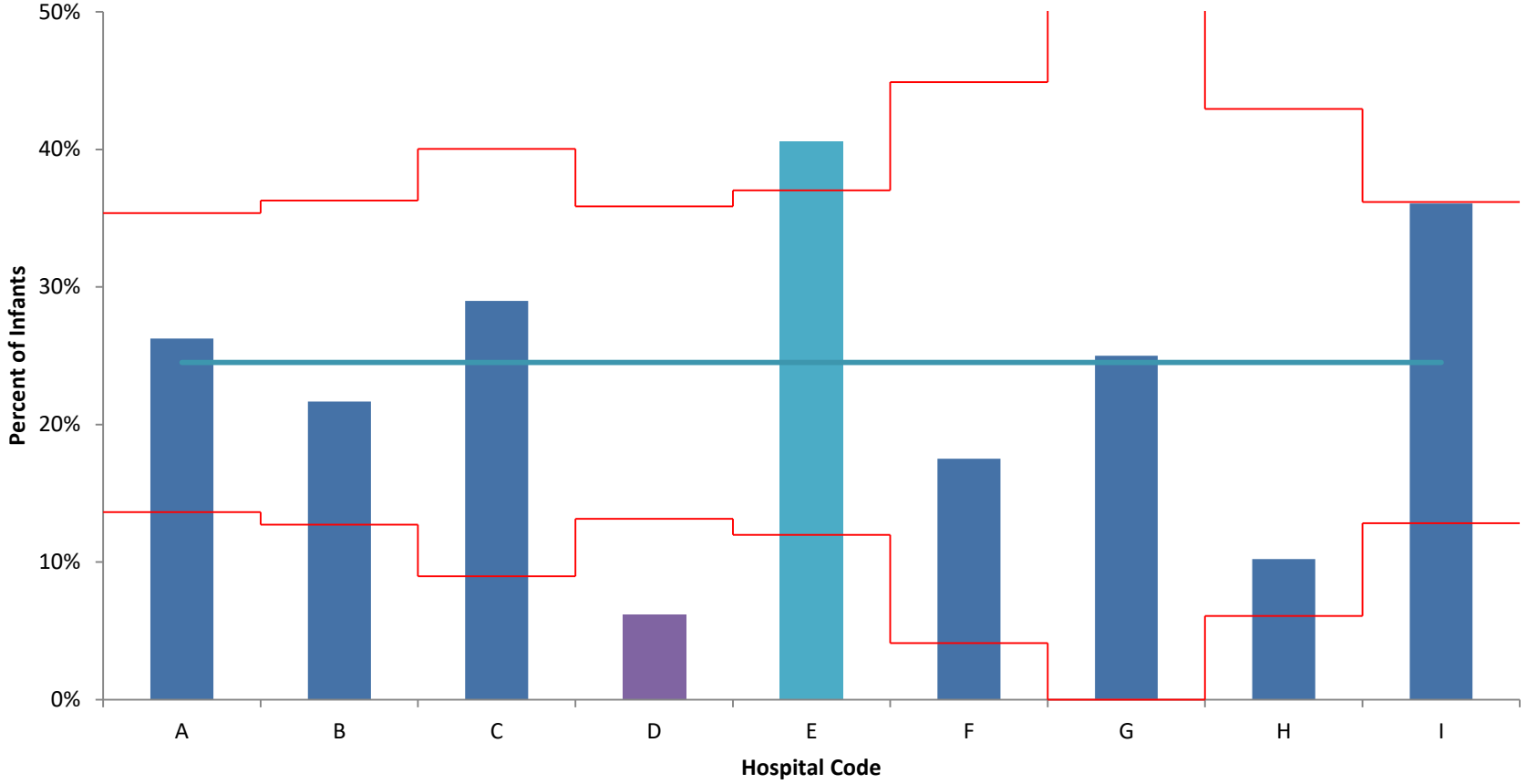
CLD Rates, all VLBW, 2016 – 2018
p Chart



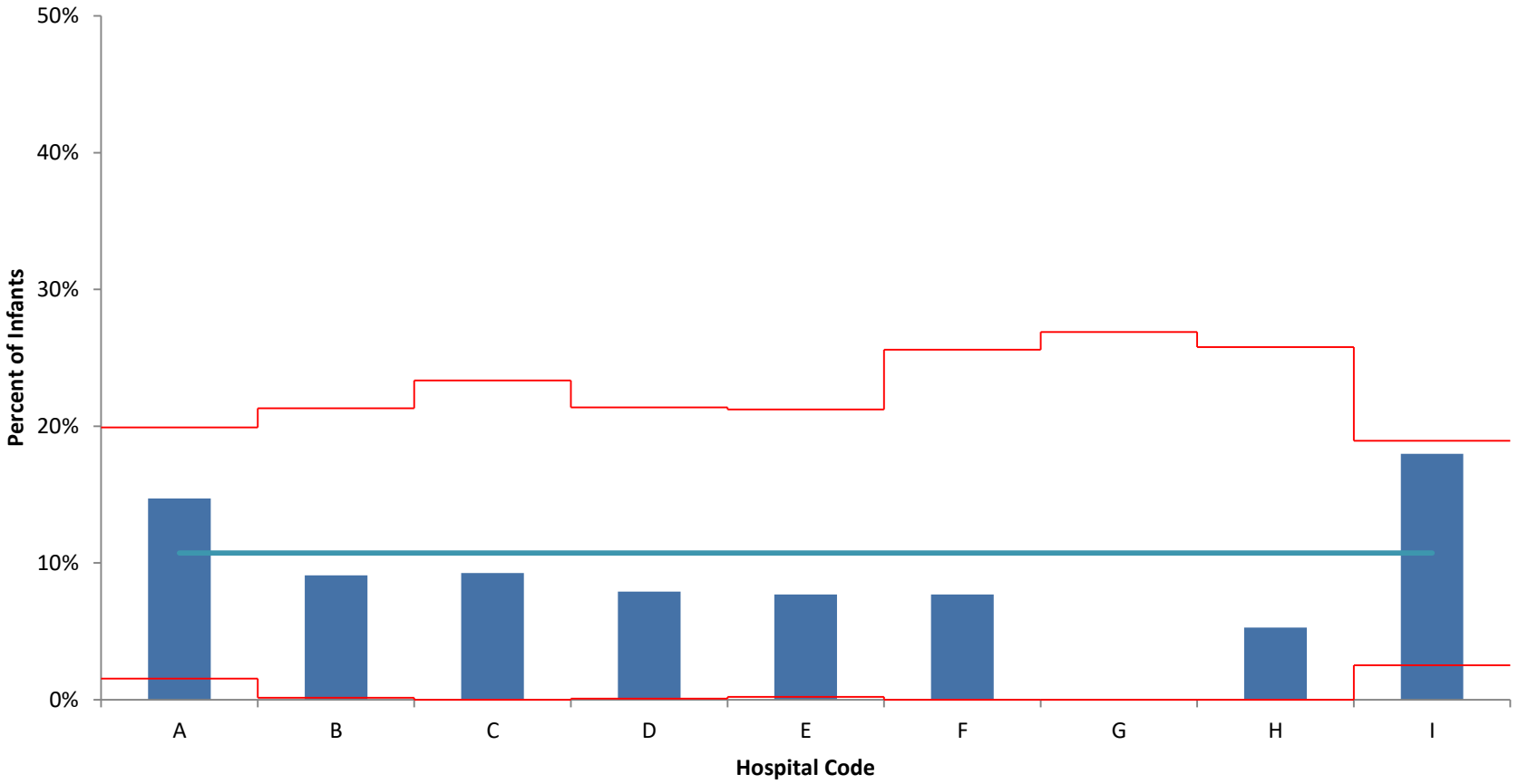
CLD Rates, 24 - 26 wks GA, 2016 – 2018
p Chart



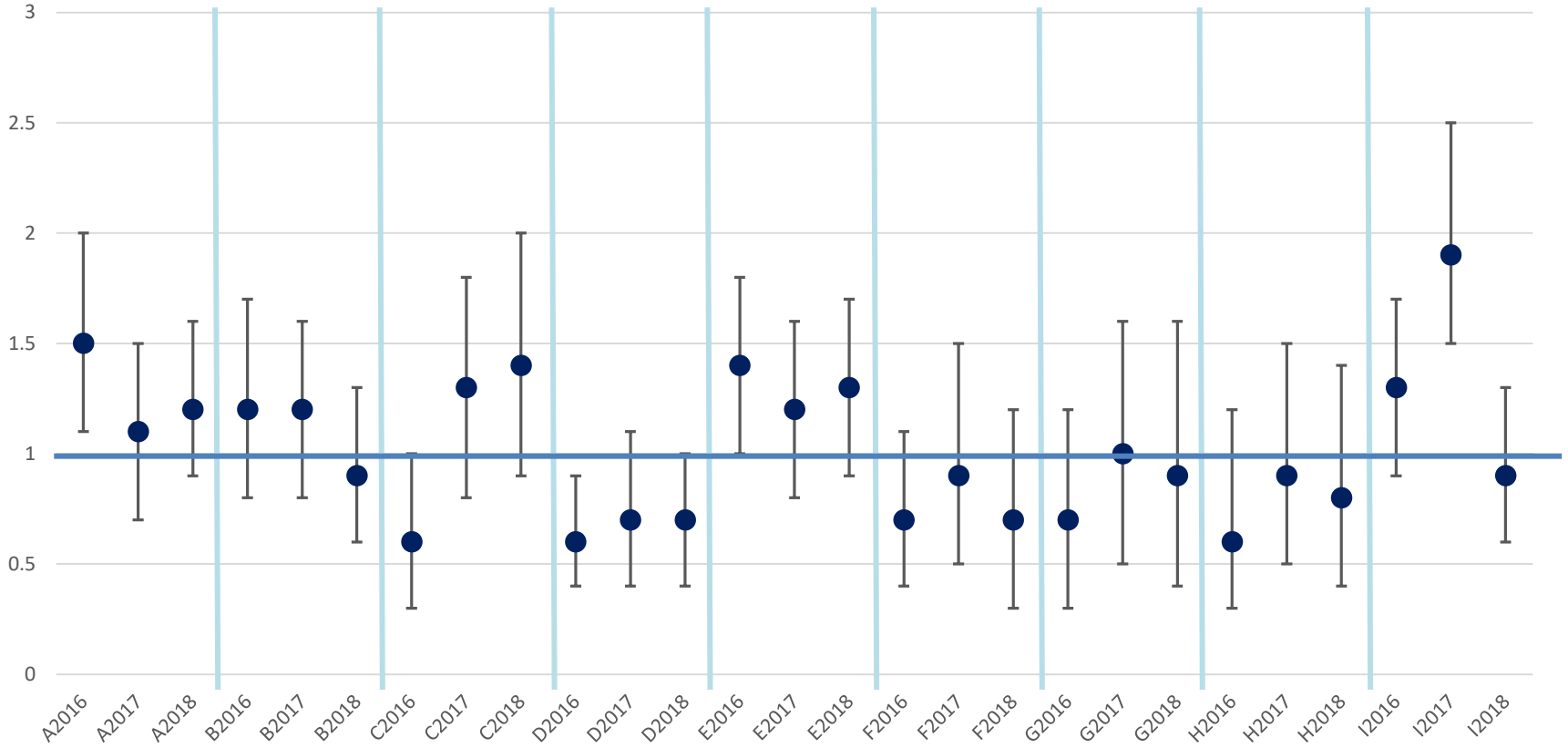
CLD Rates, 27 - 29 wks GA, 2016 – 2018
p Chart



CLD Rates, 30 - 32 wks GA, 2016 – 2018
p Chart



Shrunken Standardized Morbidity Ratio for CLD and 95% CI, 2016 - 2018



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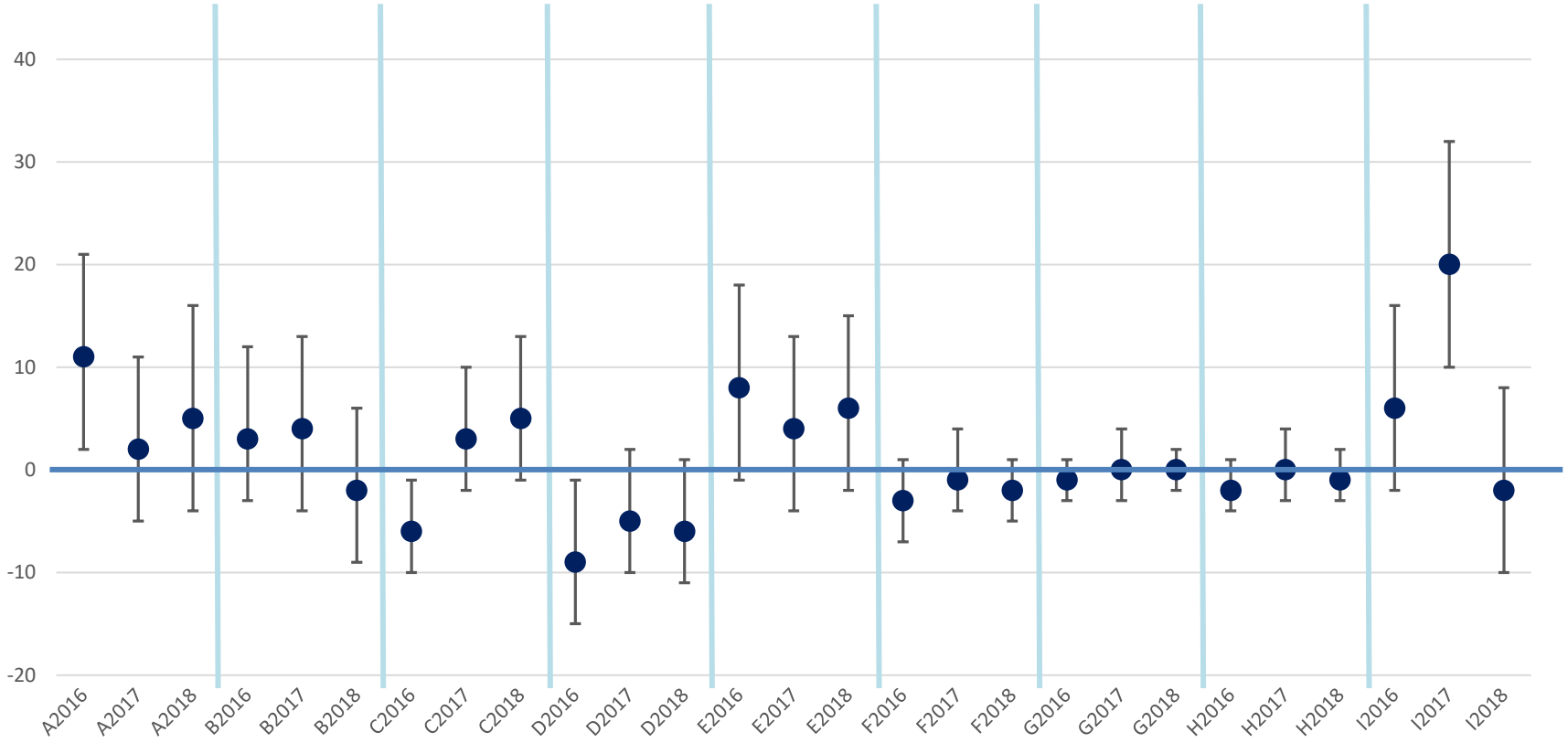
Observed Minus Expected Cases of CLD and 95% CI, 2016 - 2018



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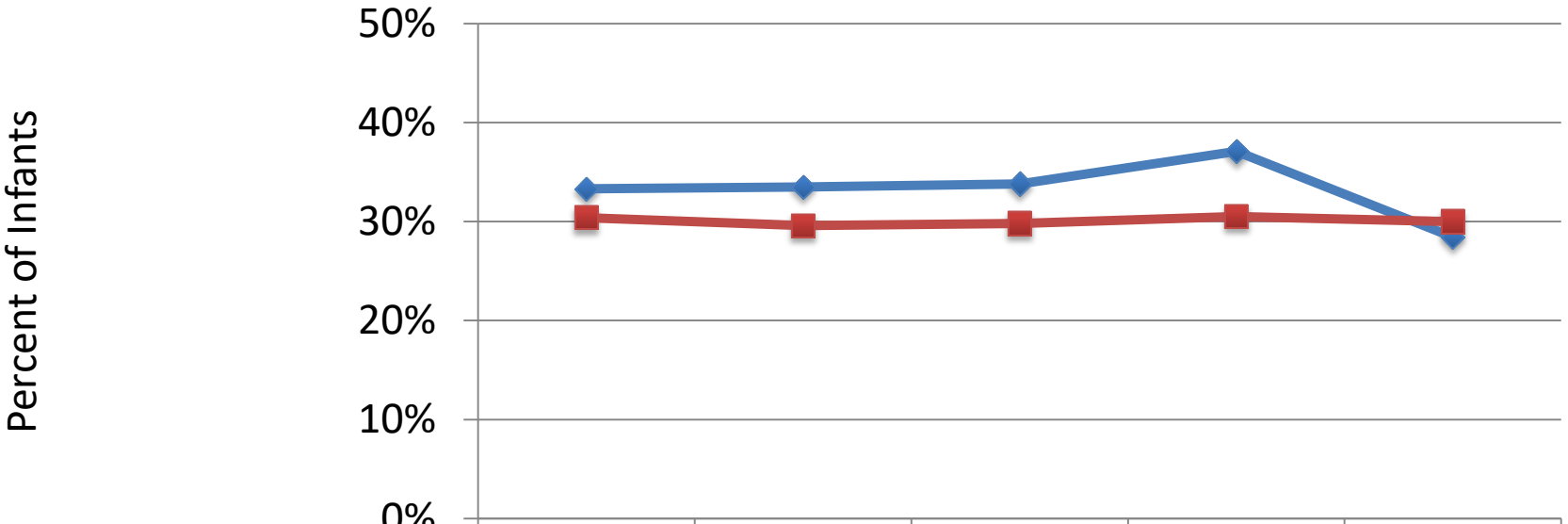
SMR and O-E by Hospital and Year

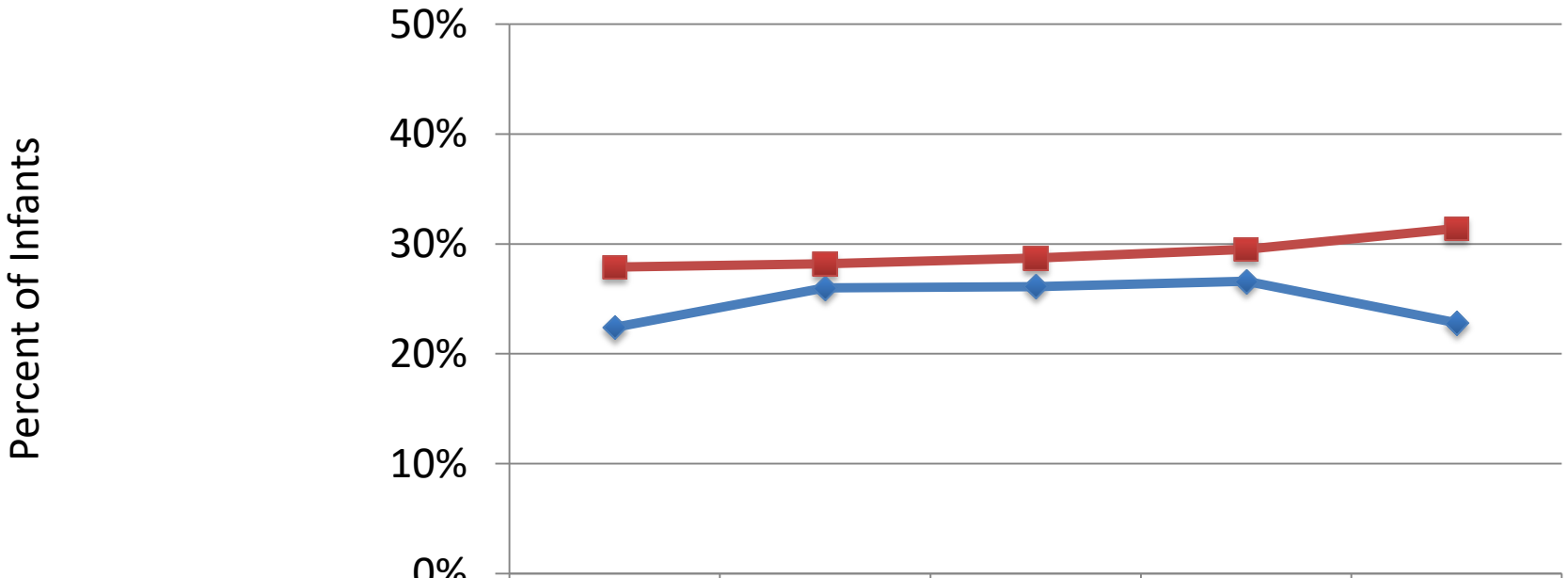
Hospital Code	Year	SMR(Shrunken)	O-E(Shrunken)
A	2016	1.5	11
	2017	1.1	2
	2018	1.2	5
B	2016	1.2	3
	2017	1.2	4
	2018	0.9	-2
C	2016	0.6	-6
	2017	1.3	3
	2018	1.4	5
D	2016	0.6	-9
	2017	0.7	-5
	2018	0.7	-6
E	2016	1.4	8
	2017	1.2	4
	2018	1.3	6
F	2016	0.7	-3
	2017	0.9	-1
	2018	0.7	-2
G	2016	0.7	-1
	2017	1	0
	2018	0.9	0
H	2016	0.6	-2
	2017	0.9	0
	2018	0.8	-1
I	2016	1.3	6
	2017	1.9	20
	2018	0.9	-2

Supplemental Oxygen at 36wks, all VLBWs, 2014 - 2018



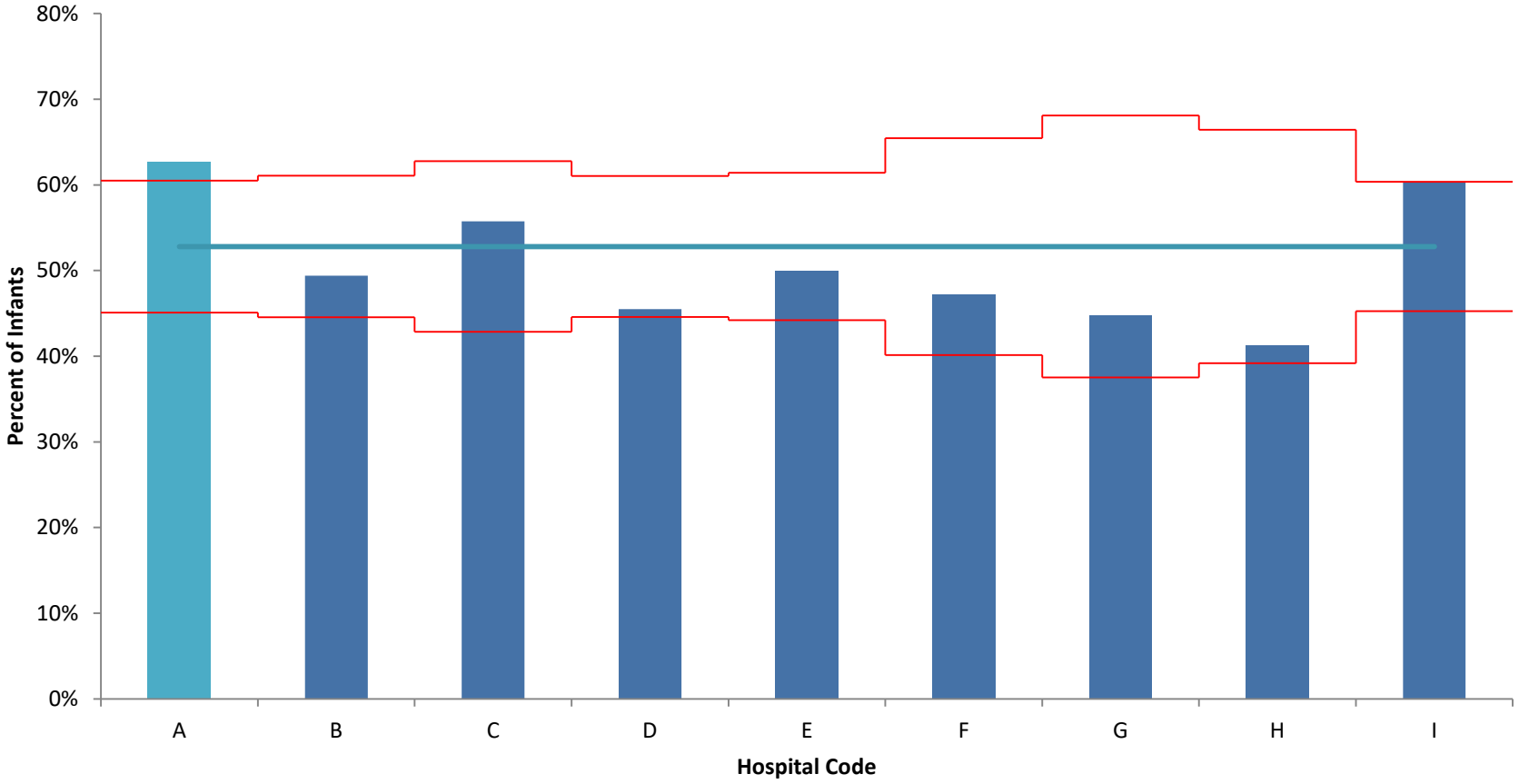
	2014	2015	2016	2017	2018
NeoQIC Supplemental Oxygen	33%	34%	34%	37%	28%
Von Supplemental Oxygen	30%	30%	30%	31%	30%

Support Beyond Supplemental Oxygen at 36wks, all VLBWs, 2014 - 2018



	2014	2015	2016	2017	2018
NeoQIC Non-LFNC Support	22%	26%	26%	27%	23%
VON Non-LFNC Support	28%	28%	29%	30%	31%

Surfactant Use, all VLBW, 2016 – 2018
p Chart



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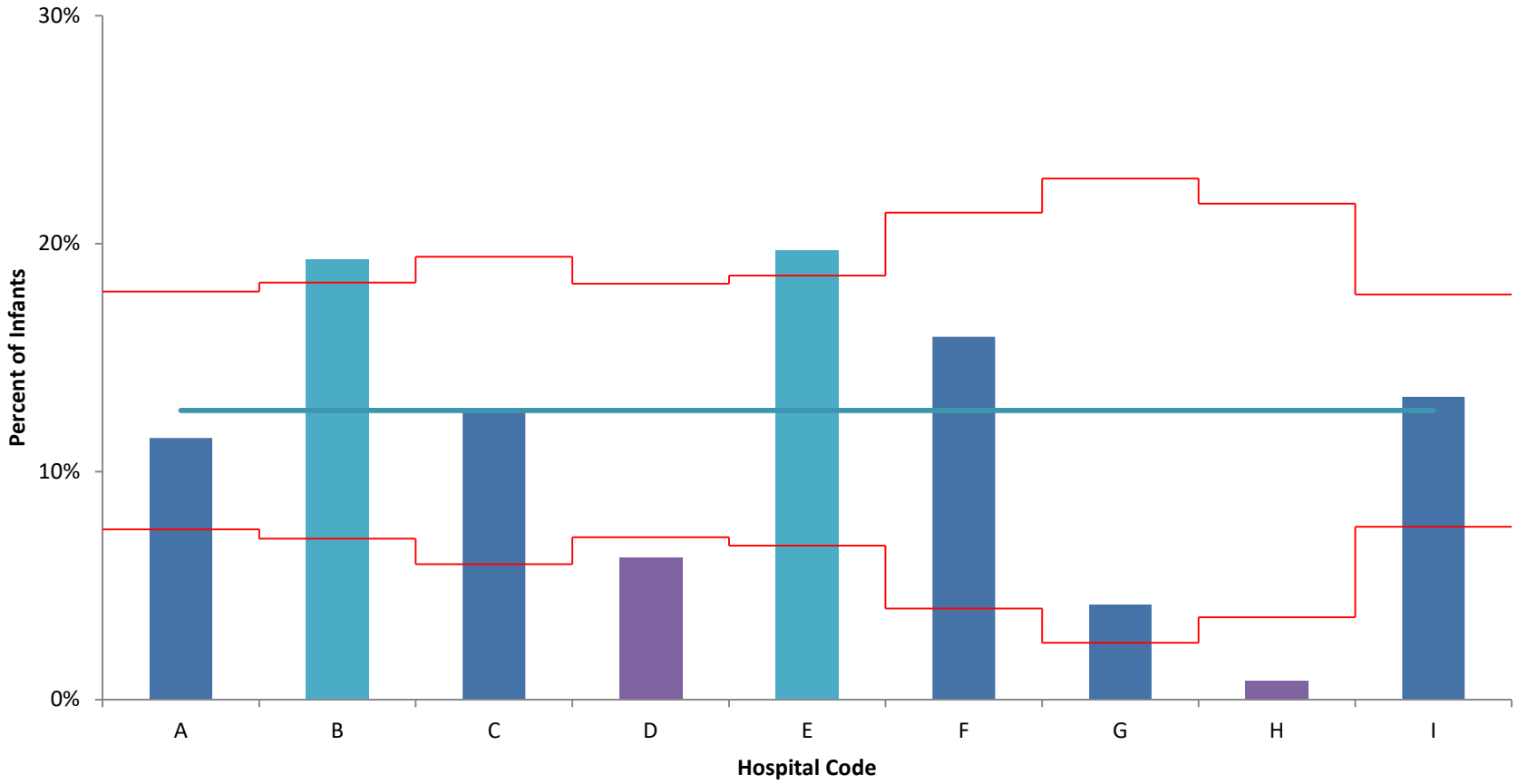
Steroids for CLD, all VLBW, 2016 - 2018
p Chart



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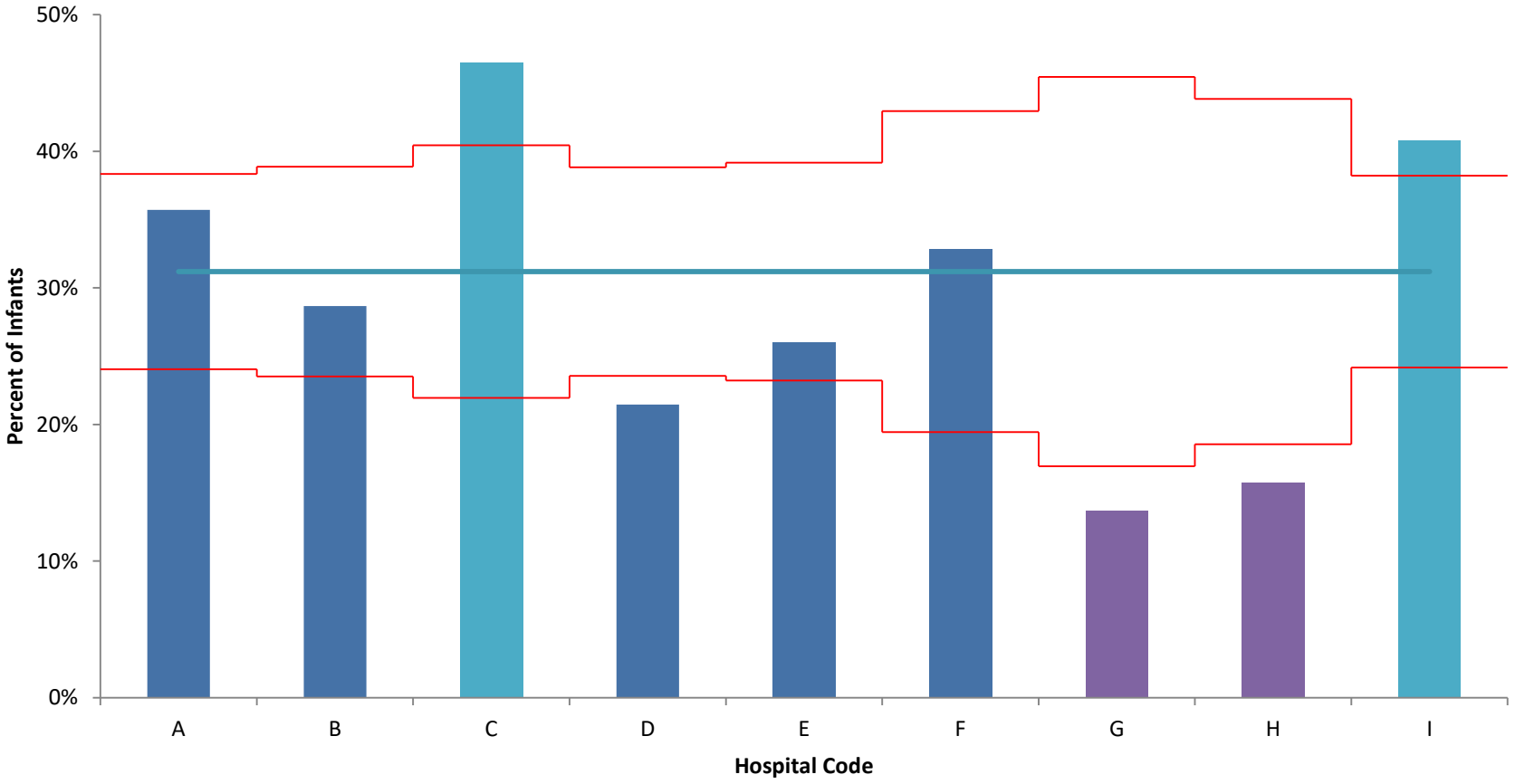
Intubation in the DR, All VLBW, 2016 - 2018
p Chart



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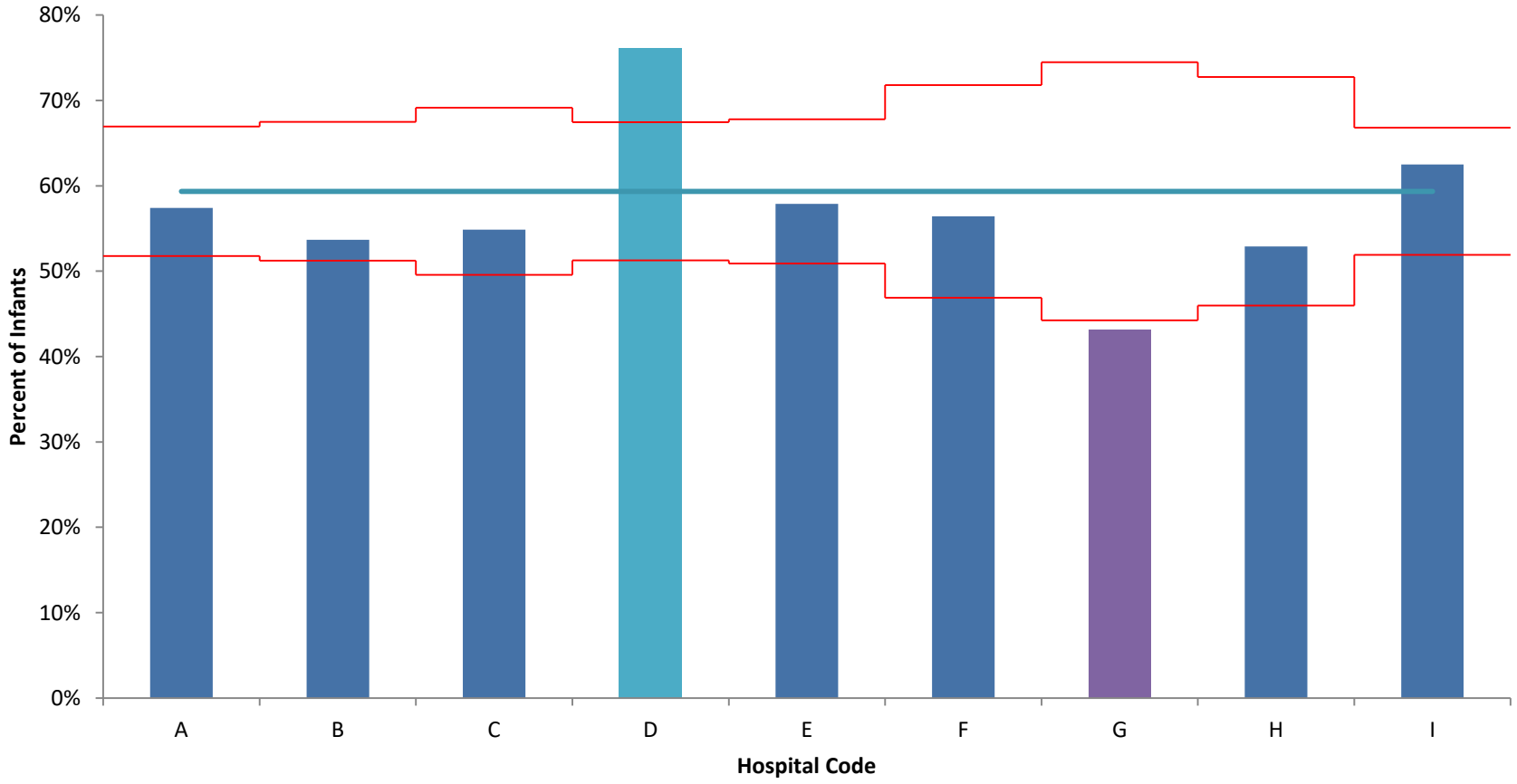
Nasal CPAP in the DR, All VLBW, 2016 - 2018
p Chart



Thank you for submitting your data and taking our survey!

QI for BPD: Does it Work? A Brief Review of the Literature

Helen Healy

Potentially Better Practices

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Potentially Better Practices

Non-Invasive Support

- CPAP
- NIPPV
- HFNC
- NAVA

Modes & Delivery Interfaces

Invasive Support

- Conventional Ventilation
  - Pressure v. Volume
- High Frequency
- Intubation/Extubation

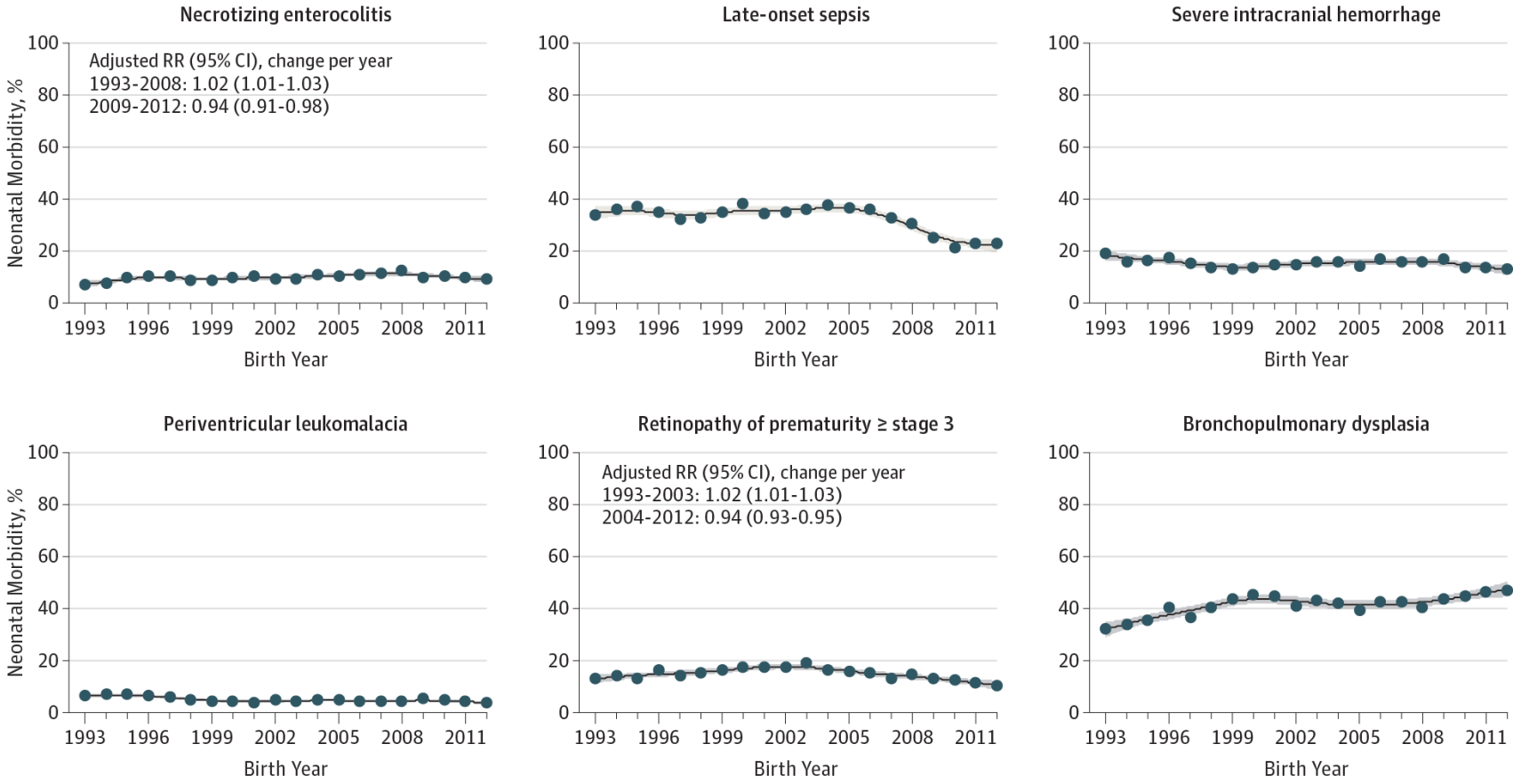
Medication Based Interventions

- Surfactant
  - LISA, INSURE
- Caffeine
  - Dose, length
- Diuretics
- Steroids
  - Which, when
- Azithromycin
- Vitamin A
- Inhaled agents

Adjunct Interventions

- PDA Management
- Fluid Restriction
- Feeding Method
- Nutrition

BPD Outcomes Over Time
1993 - 2012



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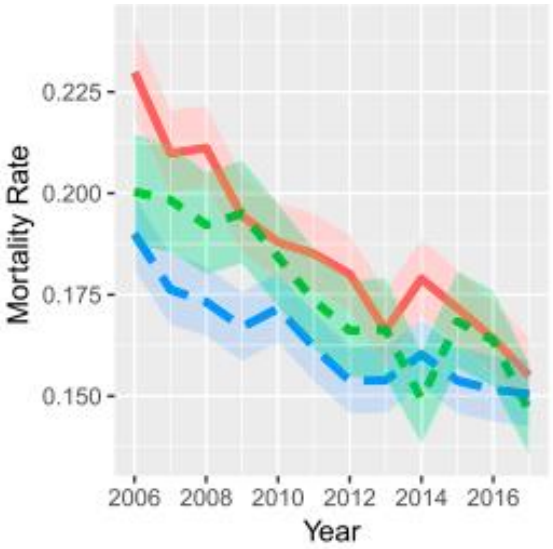
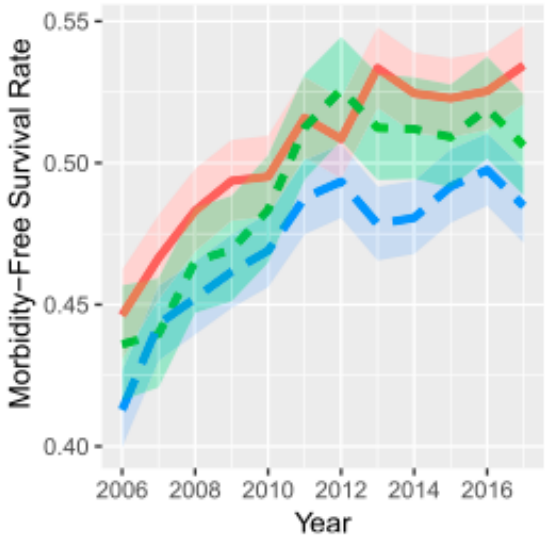
Stoll et al., 2015

BPD Outcomes Over Time by Race and Ethnicity 2006 - 2017





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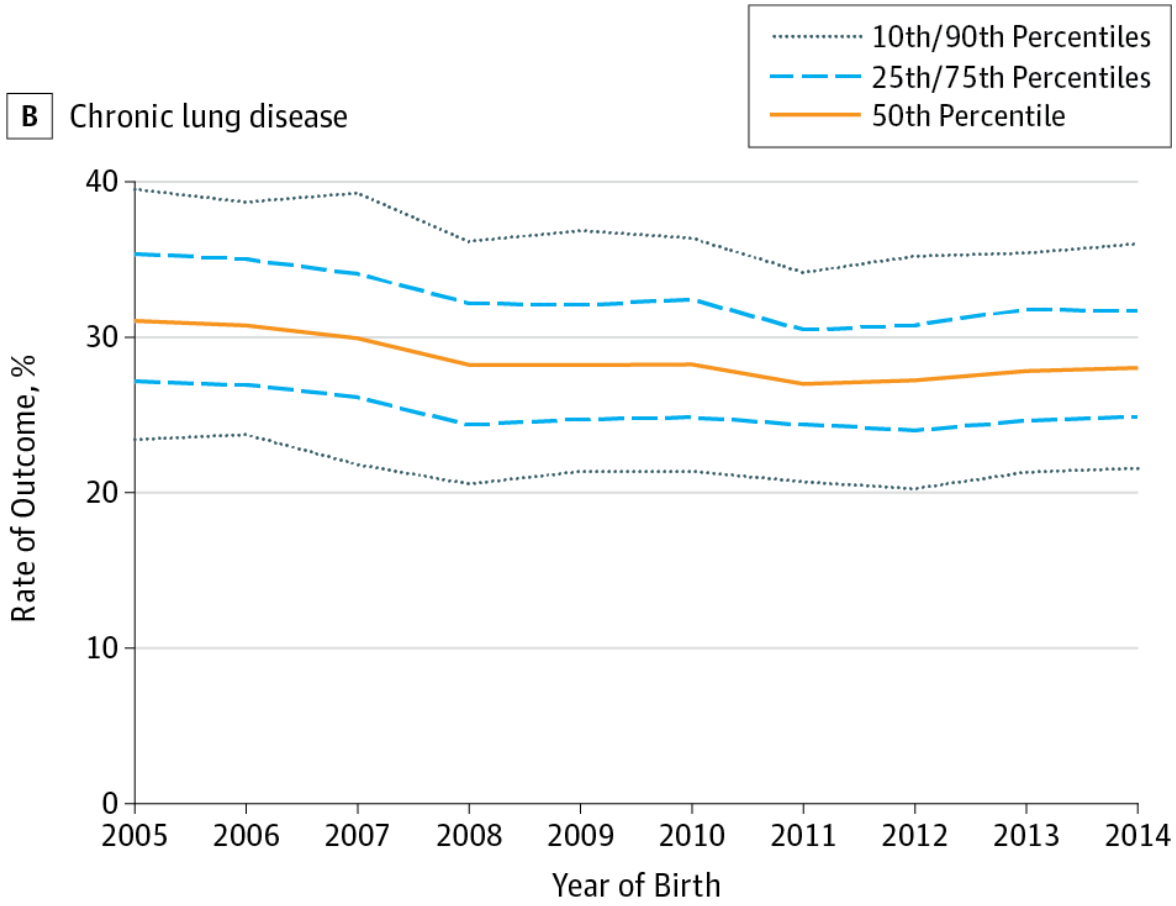
Boghossian et al., 2019

Risk-Adjusted Rates of Outcomes at the 10 - 90th Percentiles, 2005 - 2014



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Horbar et al., 2017

VON Newborn Improvement Collaborative for Quality (NIC/Q & NIC/Q 2000)

- 9 centers formed focus group, used QI methods, to decrease CLD rates
- 9 PBPs identified (57 actually implemented)
- **Did not significantly change CLD rate or severity**
- **Decreased dexamethasone use from 49% to 22% of infants 501-1250g**

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Pfister & Goldsmith, 2010; Burch et al, 2003
Kaempf et al, 2003; Sharek et al., 2003

NIC/Q 2002 – Breathsavers Group

- 16 centers (19 hospitals)
- Goal: reduce BPD in VLBW infants by 10% of the pre NIC/Q 2002 rate (2001 vs. 2003)
- Secondary: decrease oxygen days, ventilator days and steroid use
- Centers supported in use of QI methods

TABLE 1 PBPs to Reduce BPD

PBPs	Level of Evidence[a]	References
First-tier recommendations		
Decrease sentinel events such as unplanned extubations and air leak syndromes	3	25–28
Extubate infants from assisted ventilation as soon as possible	5	5, 37, and 38
Increase use of permissive hypercapnia	2	4, 5, 16, 17, and 20
Monitor V_T of mechanically ventilated patients	4	16, 17, and 37–41
Improve team work in the DR	5	42 and 43
Improve use of surfactant in the DR	1	10 and 11
Second-tier recommendations		
Use NeoPuff instead of hand ventilation	5	42 and 43
Use vitamin A	1	12 and 13
Target Spo_2 lower than traditional normal, adult Spo_2 values	2	14, 15, and 29–36
Minimize use of supplemental O_2 in the DR by titrating Fio_2 and monitoring Spo_2	3	29–36
Close a PDA early in the neonatal course (medical or surgical)	3	22–24
Provide consistent respiratory management	5	46 and 47
Provide blended O_2 in the DR and during transport to the NICU	5	29–36

V_T indicates tidal volume; DR, delivery room; Spo_2, pulse oxygen saturation; Fio_2, fraction of inspired oxygen.

[a] Muir Gray classification system.[9]

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Pfister & Goldsmith, 2010
Payne et al., 2006

NIC/Q 2002 – Breathsavers Group

Results

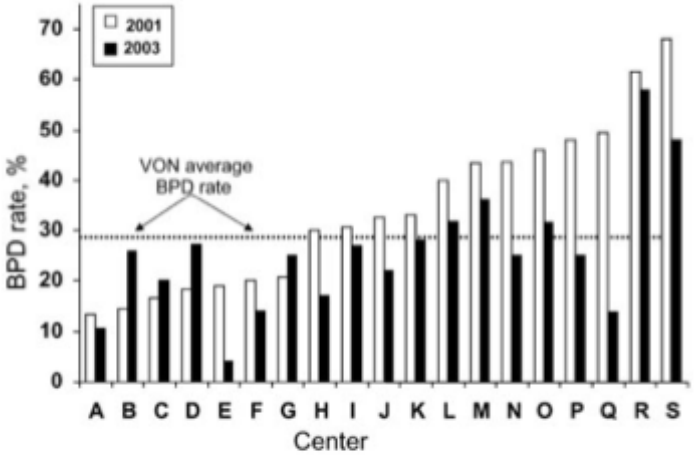


FIGURE 1
Participating hospitals are represented along the x-axis, and BPD rates are noted along the y-axis. Rates for the baseline (2001) and follow-up (2003) years are presented. The average BPD rate for the entire VON VLBW database was the same for 2001 and 2003: 29%. That average rate is represented by the dotted line.

- BPD rates varied
  - 2001: 13.4 - 66.7%
  - 2003: 4.0 - 58.3%
- **Outcome: 27% reduction in BPD**
- Process measures: significant changes made to surfactant in DR, time to surfactant, use of conventional ventilation

Payne et al., 2006

Randomized Control Trials of Quality Improvement

Neonatal Research Network: Randomized Control Trial of QI

- Goal: improve rates of survival free of BPD for infants less than 1250g
- 3 Centers identified as best performers
- 14 Centers randomized; 7 received intervention of QI methods to implement PBPs
- PBPs: reduce oxygen exposure and mechanical ventilation; 27 specific interventions were benchmarked
- **Results: BPD Rates did NOT differ between control and intervention group**

Walsh et al., 2007

Canadian Neonatal Network: Randomized Control Trial of QI

- Simultaneous Cluster RTC
  - 6 units randomized to QI to address BPD
  - 6 units to QI to address nosocomial infection
  - 5 other units used as additional comparisons
- PBPs: The individual groups decided which PBPs to implement
- **Results: Significant reduction in BPD in intervention vs. control groups**

Lee et al., 2009

Local Quality Improvement

Themes

- Quality Improvement for BPD Prevention has used bundles (multiple changes)
- Units demonstrating changes so far tend to be small-mid sized units, community or academic affiliated
- Multidisciplinary teams used
- Literature review and education always included
- Most teams visited at least one other NICU

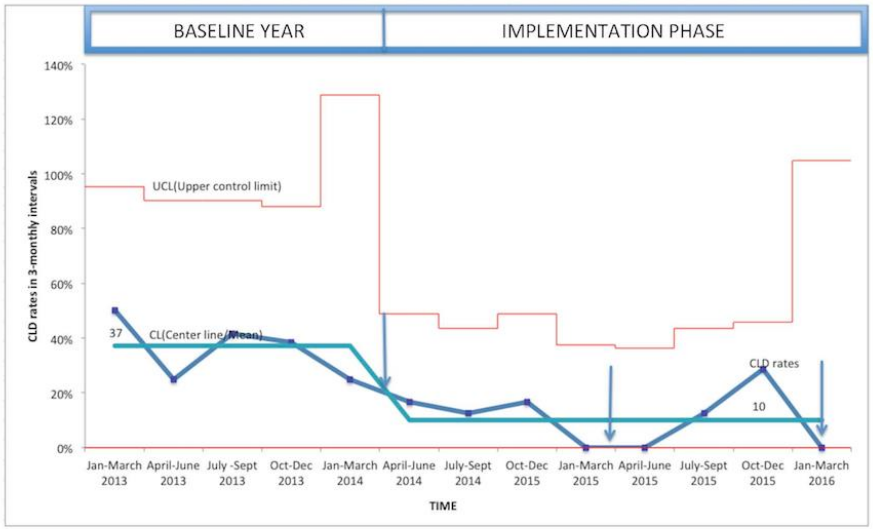
St. Elizabeth's Medical Center

- 5 PBPs to limit mechanical ventilation, supplemental oxygen, and bronchopulmonary dysplasia in newborn infants less than 33 weeks' gestation
- **Non-significant reduction in BPD rate, 17% vs. 8% overall (p = .27)**
- **Among BW < 1500g BPD rate was 29% vs. 11% (p = .08)**
- **Significant difference in hypotension in first 24 hours, 33% vs. 15% (p = .03)**
- No difference in pneumothorax, PDA treatment, ROP, NEC, LOS or others.

Levesque et al., 2011

South Shore Hospital

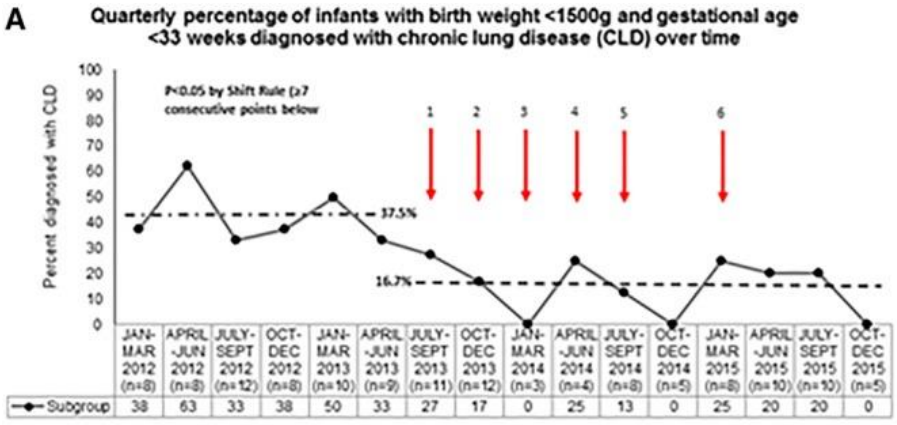
- Objective: reduce CLD by 10% among VLWB infants by implementing a consistent respiratory care bundle
- **CLD rate fell 37 – 10%**
- **Criteria met for special cause variation in outcome and process measures**

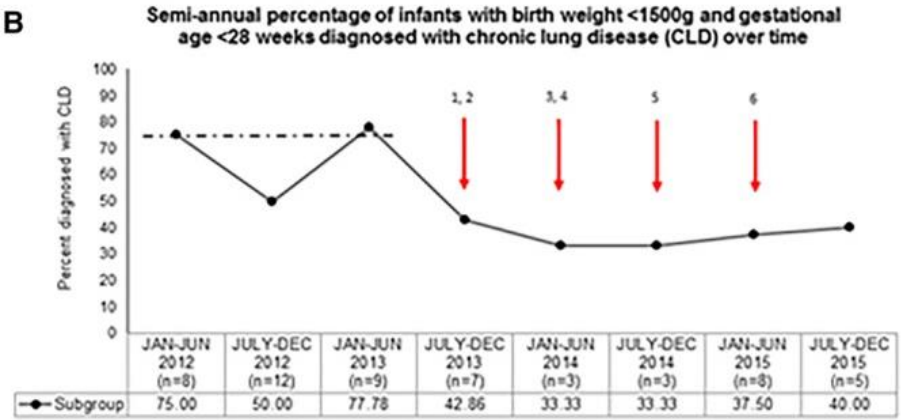


Kubicka et al., 2018

Boston Medical Center

- Aim: to reduce the incidence of CLD among VLBW infants born at younger than 33 weeks GA by 50% between the baseline period (Jan 1, 2012-June 20, 2013) and the intervention period (July 1, 2013 – Dec 31, 2015).
- **Reduced incidence of CLD in VLBW born < 33 weeks GA by 55.5% from 37.5% to 16.7%**





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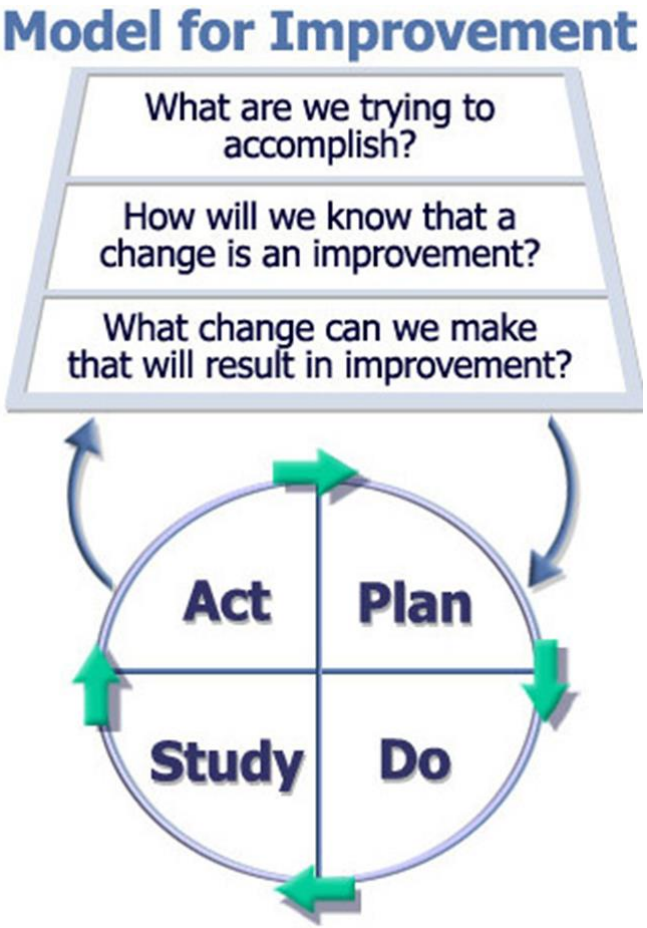
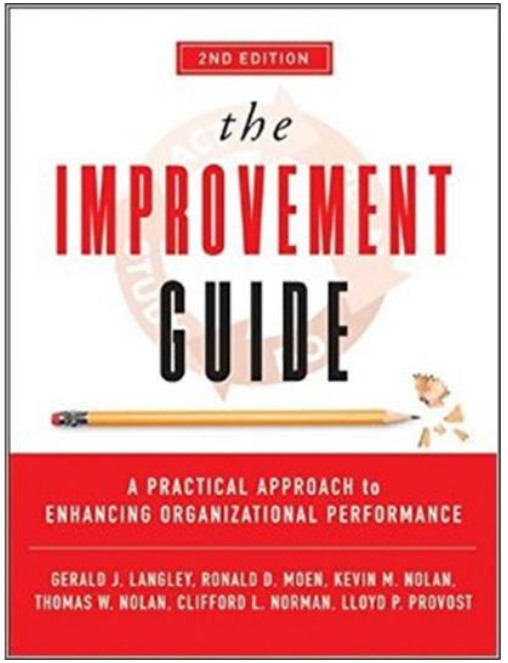
Levesque et al., 2019

Approaches to Collaborative QI: What Approach Do We Take?

Munish Gupta

How do we do QI?





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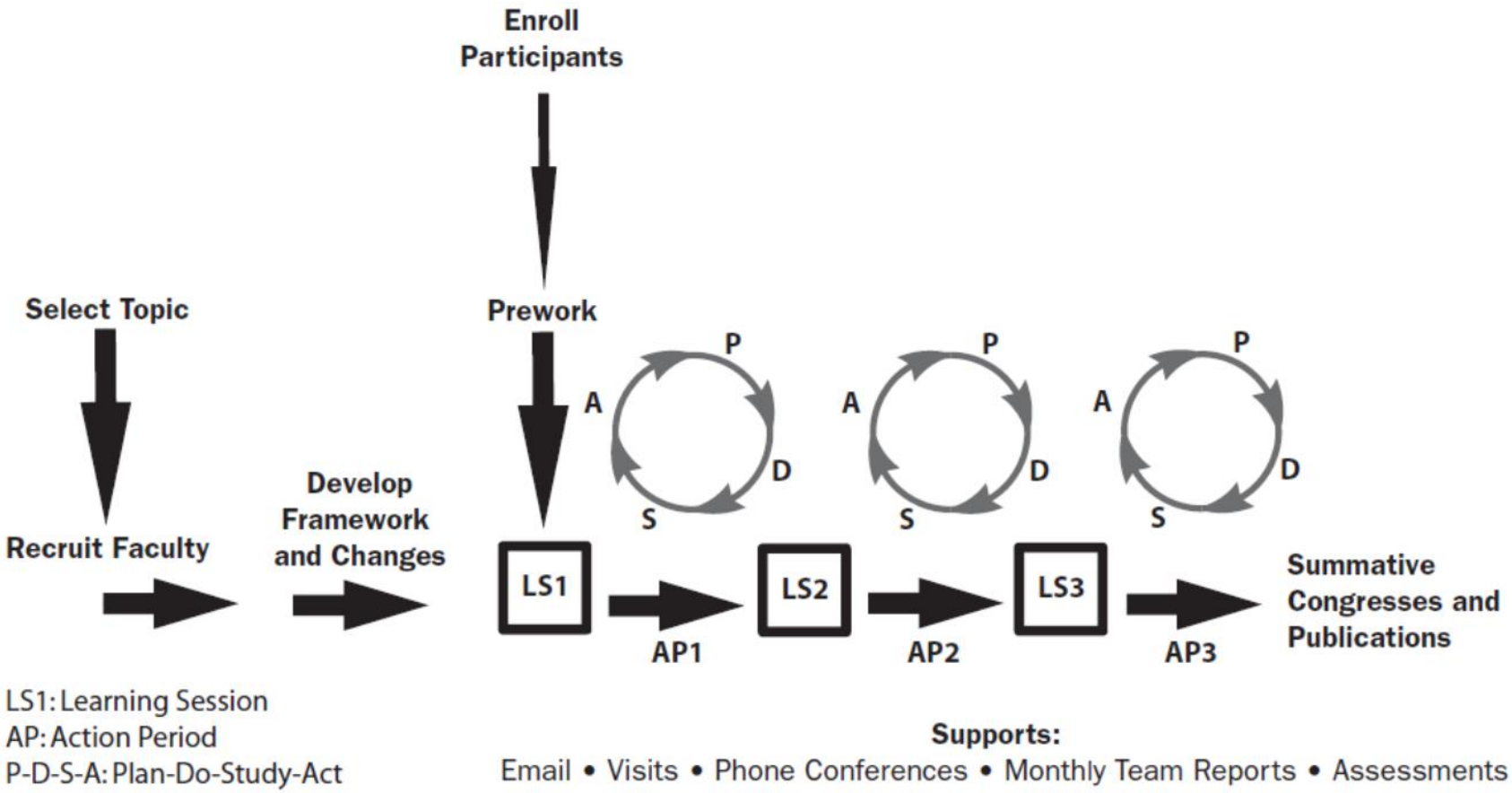
Collaborative QI

Figure 2. Breakthrough Series Model



Collaborative QI: One Approach

1. Hospital engagement
2. Common overall aims
3. Common measures
4. Local specific aims and changes
5. Use data to drive improvement!

Collaborate and share openly.

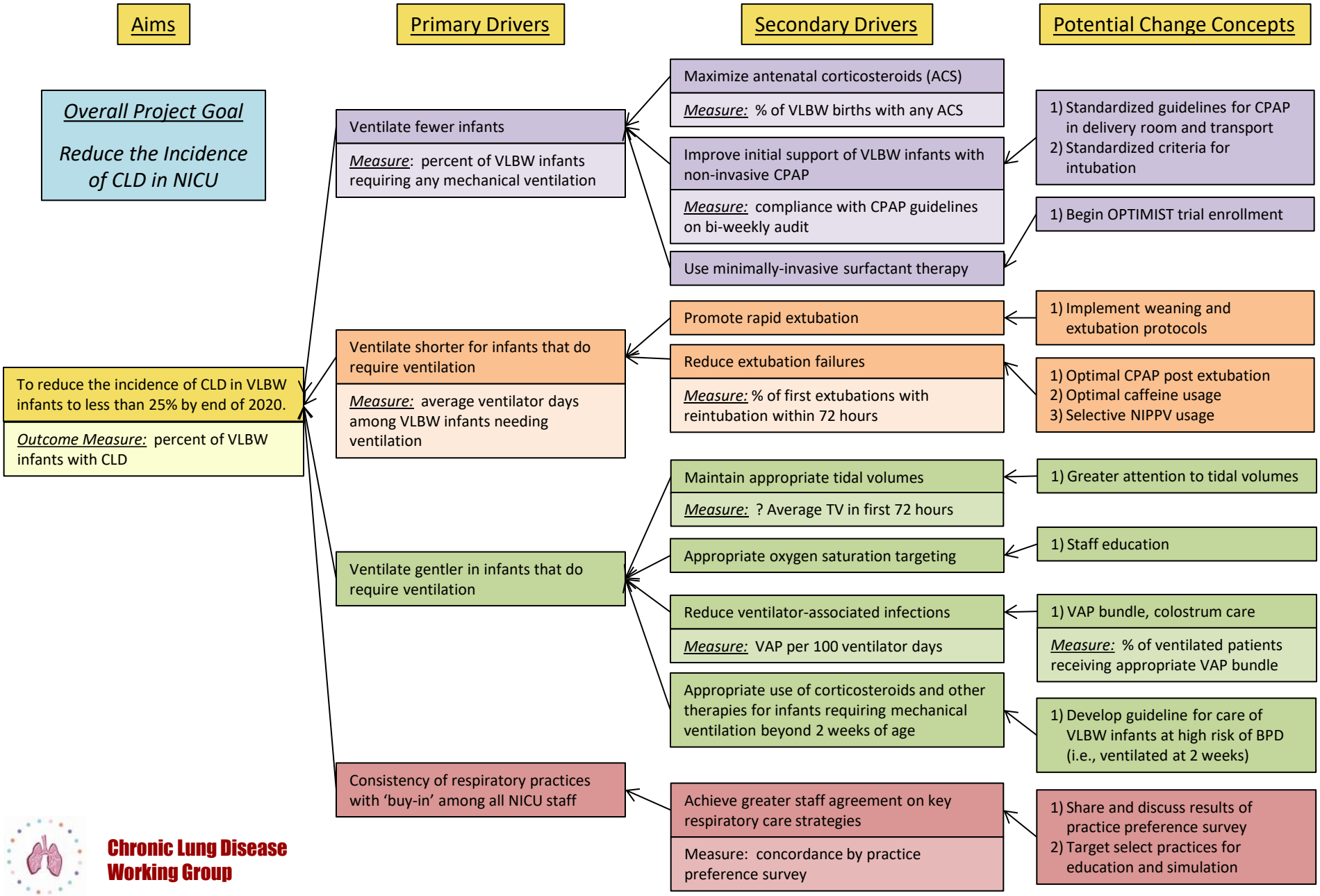
Use multidisciplinary teams.

Proposal

- Each team commits to using model for improvement to do local QI project
- We use common framework for aims, measures, and PDSA cycles, with agreed upon timeline for each step
- We use collaborative to share local steps
- We use VON data to monitor progress
- We can consider other measures in future

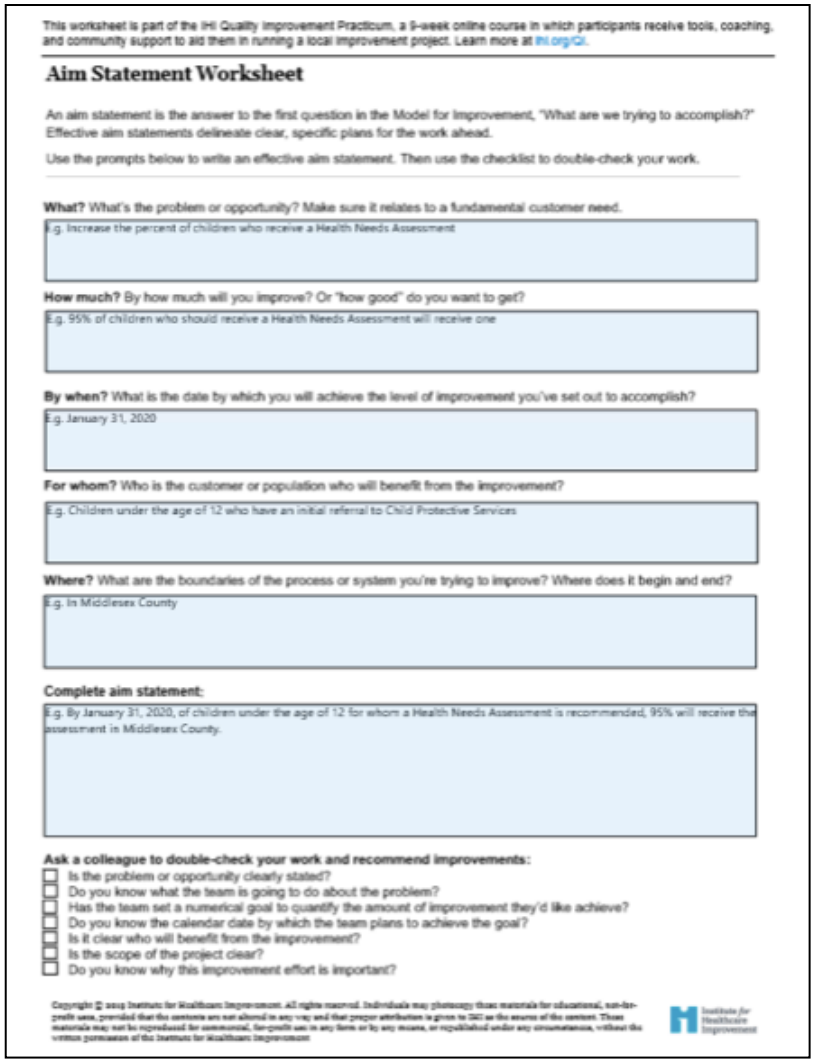
Updated 9/5/19

CLDWG Key Driver Diagram 2019



Chronic Lung Disease Working Group

Identifying a Specific Aim for Local QI



This worksheet is part of the IHI Quality Improvement Practicum, a 9-week online course in which participants receive tools, coaching, and community support to aid them in running a local improvement project. Learn more at ihi.org/QI.

Aim Statement Worksheet

An aim statement is the answer to the first question in the Model for Improvement, "What are we trying to accomplish?" Effective aim statements delineate clear, specific plans for the work ahead.

Use the prompts below to write an effective aim statement. Then use the checklist to double-check your work.

What? What's the problem or opportunity? Make sure it relates to a fundamental customer need.

E.g. Increase the percent of children who receive a Health Needs Assessment

How much? By how much will you improve? Or "how good" do you want to get?

E.g. 95% of children who should receive a Health Needs Assessment will receive one

By when? What is the date by which you will achieve the level of improvement you've set out to accomplish?

E.g. January 31, 2020

For whom? Who is the customer or population who will benefit from the improvement?

E.g. Children under the age of 12 who have an initial referral to Child Protective Services

Where? What are the boundaries of the process or system you're trying to improve? Where does it begin and end?

E.g. In Middlesex County

Complete aim statement:

E.g. By January 31, 2020, of children under the age of 12 for whom a Health Needs Assessment is recommended, 95% will receive the assessment in Middlesex County.

Ask a colleague to double-check your work and recommend improvements:

- ☐ Is the problem or opportunity clearly stated?
- ☐ Do you know what the team is going to do about the problem?
- ☐ Has the team set a numerical goal to quantify the amount of improvement they'd like achieve?
- ☐ Do you know the calendar date by which the team plans to achieve the goal?
- ☐ Is it clear who will benefit from the improvement?
- ☐ Is the scope of the project clear?
- ☐ Do you know why this improvement effort is important?

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Team Time!
Identifying a Specific Aim for Local QI Efforts and Report Out

Next Steps

MOC 4 Eligibility Coming Soon

Survey of Interdisciplinary Groups in Healthcare Tool (SIGHT) Project

Website

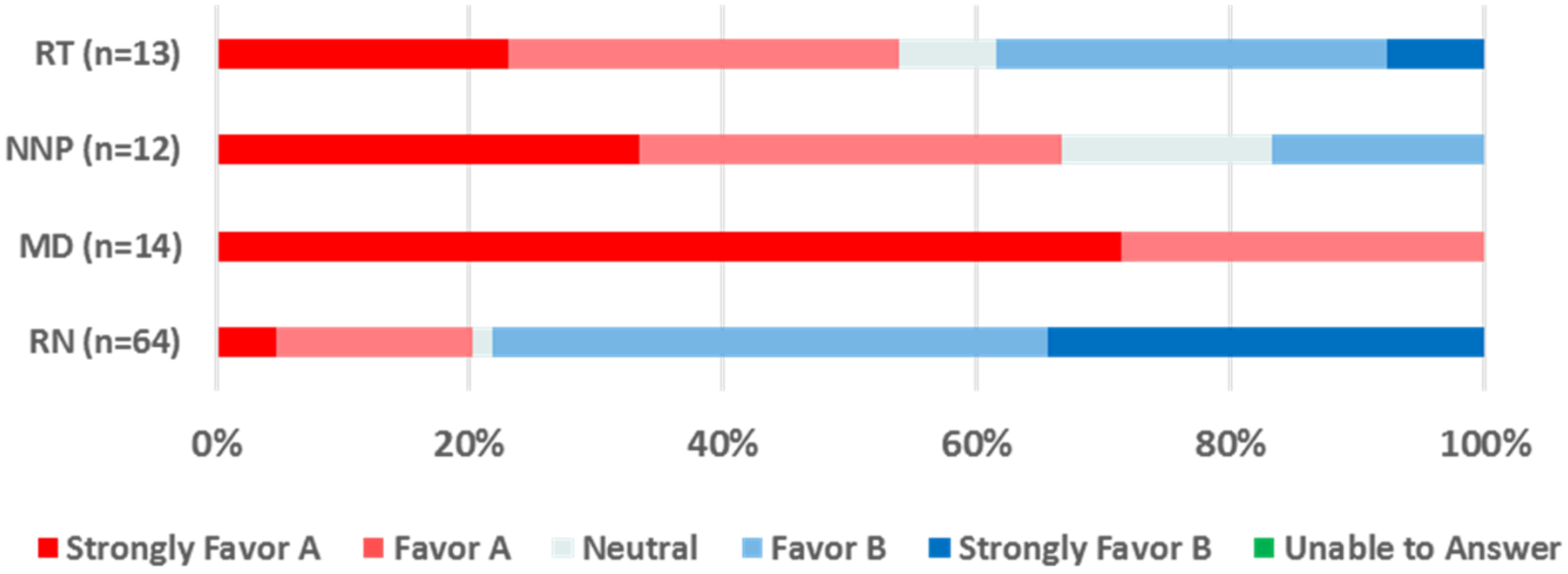
SIGHT!

- Vignette-based survey to measure practice preferences among NICU staff
- Can measure variability WITHIN a NICU and BETWEEN NICUs
- Can be used as measure in QI project
- Can identify priorities for improvement
- Current survey: 14 vignettes

A 1 day old 23 3/7 weeks infant, birth weight of 500 gm, following a full course of antenatal steroids and two doses of surfactant, is now on settings of 16/5 x 18, with FiO2 of 21% without significant apnea. Do you favor:

A. Extubation to positive pressure (CPAP)

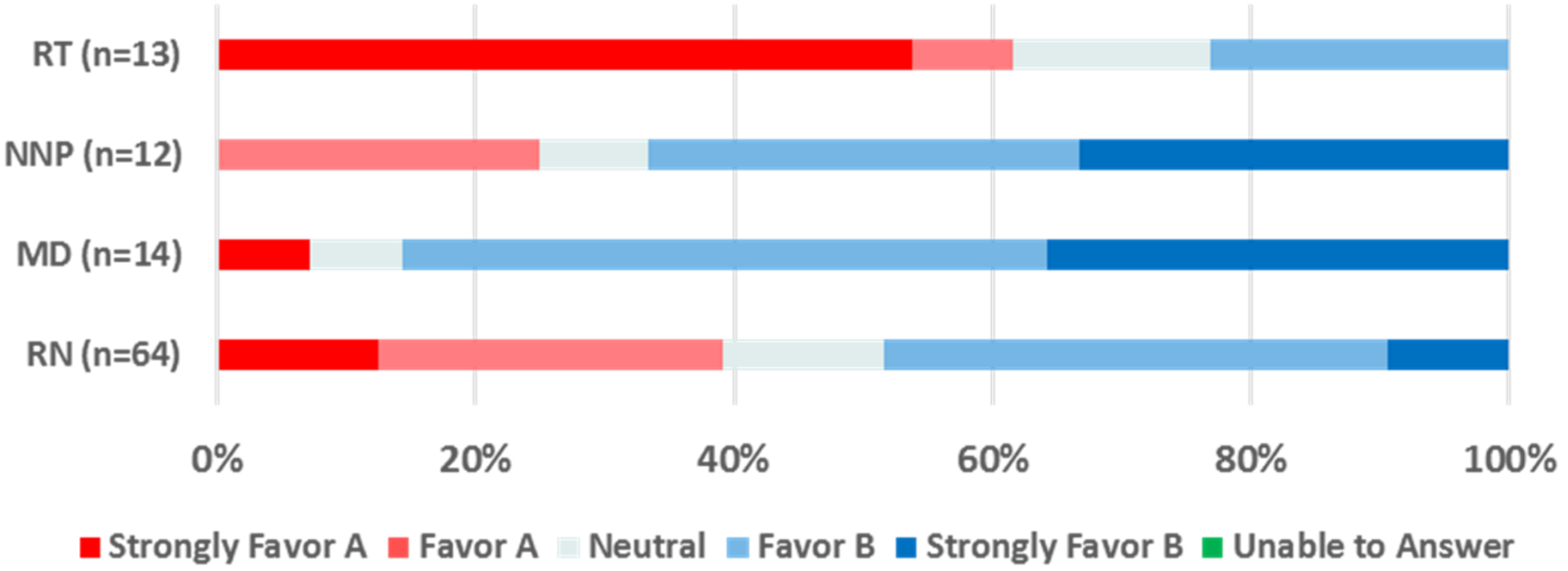
B. Continuing intubation on low settings

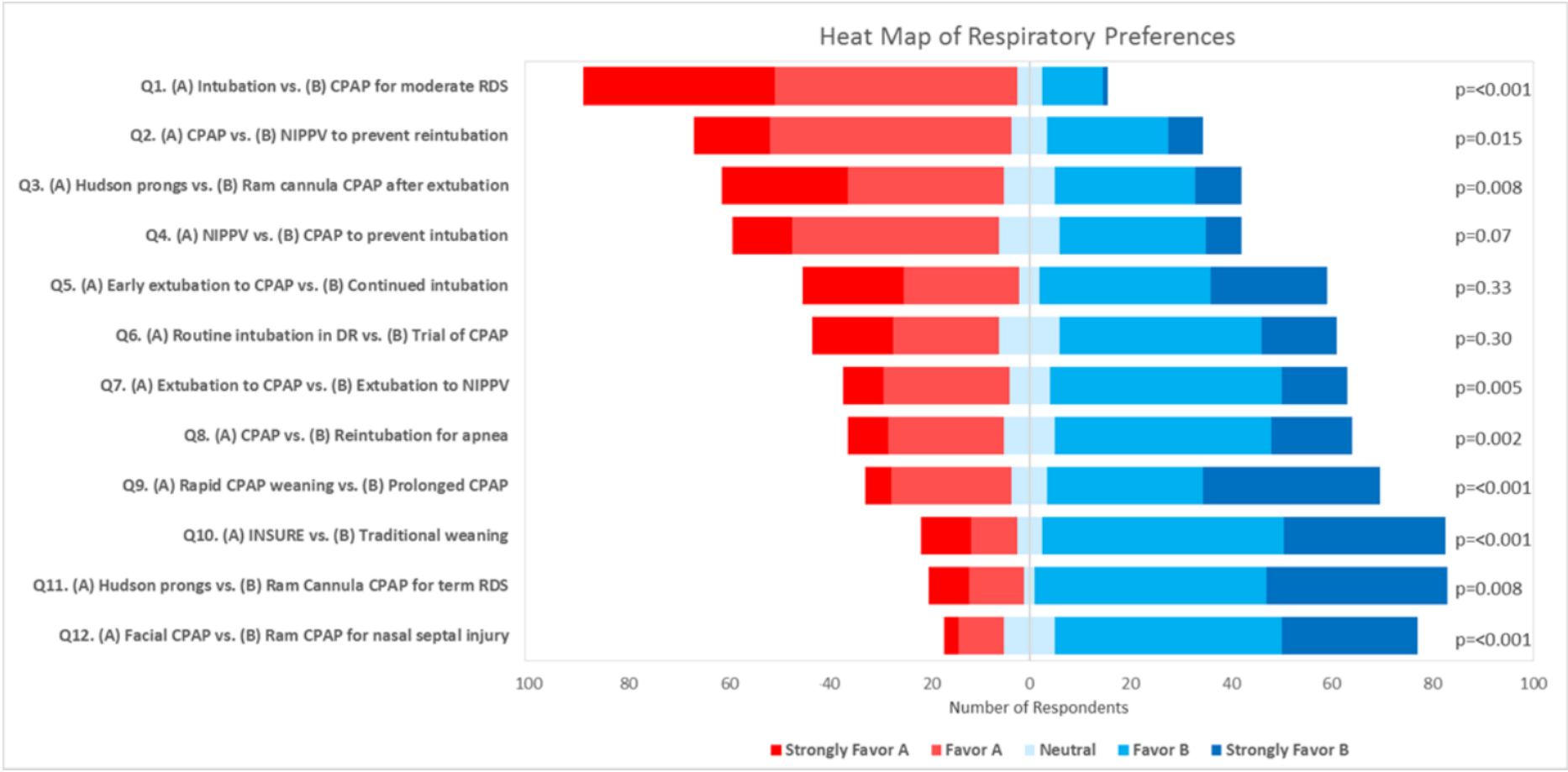


An infant is born at 24 3/7 weeks gestation with birth weight 550 gm following a full course of antenatal steroids. In the delivery room, the infant is active and has appropriate saturations with face mask CPAP and 30% FiO2. Do you favor:

A. Intubation in the delivery room

B. Continuing CPAP in the delivery room




Heat Map of Respiratory Preferences
Q1. (A) Intubation vs. (B) CPAP for moderate RDS
Q2. (A) CPAP vs. (B) NIPPV to prevent reintubation
Q3. (A) Hudson prongs vs. (B) Ram cannula CPAP after extubation
Q4. (A) NIPPV vs. (B) CPAP to prevent intubation
Q5. (A) Early extubation to CPAP vs. (B) Continued intubation
Q6. (A) Routine intubation in DR vs. (B) Trial of CPAP
Q7. (A) Extubation to CPAP vs. (B) Extubation to NIPPV
Q8. (A) CPAP vs. (B) Reintubation for apnea
Q9. (A) Rapid CPAP weaning vs. (B) Prolonged CPAP
Q10. (A) INSURE vs. (B) Traditional weaning
Q11. (A) Hudson prongs vs. (B) Ram Cannula CPAP for term RDS
Q12. (A) Facial CPAP vs. (B) Ram CPAP for nasal septal injury
p=<0.001
p=0.015
p=0.008
p=0.07
p=0.33
p=0.30
p=0.005
p=0.002
p=<0.001
p=<0.001
p=0.008
p=<0.001
100 80 60 40 20 0 20 40 60 80 100
Number of Respondents
Strongly Favor A
Favor A
Neutral
Favor B
Strongly Favor B

Abbreviated clinical vignettes	RT vs. RN	RT vs. NNP	RT vs. MD	RN vs. NNP	RN vs. MD	NNP vs. MD
Q1. Intubation vs. CPAP for moderate RDS	0.219	0.210	0.059	0.816	0.148	0.313
Q2. CPAP vs. NIPPV to prevent reintubation	0.632	0.543	0.270	0.693	0.031	0.123
Q3. Hudson prongs vs. Ram cannula CPAP after extubation	0.567	0.070	0.021	0.007	0.000	0.774
Q4. NIPPV vs. CPAP to prevent intubation	0.010	0.797	0.908	0.001	0.001	0.580
Q5. Early extubation to CPAP vs. Continued intubation	0.004	0.338	0.003	0.000	0.000	0.023
Q6. Routine intubation in DR vs. Trial of CPAP	0.013	0.004	0.001	0.074	0.005	0.529
Q7. Extubation to CPAP vs. Extubation to NIPPV	0.003	0.098	0.403	0.461	0.001	0.028
Q8. CPAP vs. Reintubation for apnea	0.154	0.931	0.034	0.147	0.000	0.042
Q9. Rapid CPAP weaning vs. Prolonged CPAP	0.021	0.788	0.362	0.090	0.351	0.540
Q10. INSURE vs. Traditional weaning	0.122	0.410	0.107	0.013	0.002	0.499
Q11. Hudson prongs vs. Ram Cannula CPAP for term RDS	0.543	0.144	0.028	0.167	0.013	0.466
Q12. Facial CPAP vs. Ram CPAP for nasal septal injury	0.096	0.013	0.006	0.079	0.058	0.848

Look for Doodle to Schedule Spring Meeting Soon!