

PBGH
PACIFIC BUSINESS
GROUP ON HEALTH

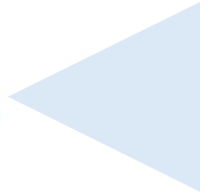
CMQCC

CALIFORNIA MATERNAL
QUALITY CARE COLLABORATIVE


Implementing Maternity Bundled Payment To Reduce Low-risk First-birth Cesarean Births: A Multi-Stakeholder Initiative

Elliott Main MD, CMQCC

Brynn Rubinstein, PBGH



Agenda

- 
1. Pilot Overview (Brynn)
 2. Quality Measures and Trends for Cesarean Birth (Dr. Main)
 3. Data Driven Quality Improvement (Dr. Main)
 4. Payment Reform (Brynn)
 5. Discussion: Lessons Learned

CA Maternity Bundled Payment Pilot Project

In 2012, received funding from Robert Wood Johnson Grant to pilot a multi-pronged approach to bring down NTSV C-section rates.

- 1) Data Transparency
- 2) Quality Improvement
- 3) Payment Reform

Who's involved?

CMQCC—Provides data center and expert training, guidance on utilizing data to improve C-section rates; works directly with hospital staff, leadership

Hospitals and clinicians—Focus on best practices and continuous learning

Health Plans—Provide new payment models to reward appropriate care

PBGH—Offers project management support, serves as facilitator and convener

Project Timeline and Partners

2012: Develop blended super case rate

2013: Recruit hospitals and plans

Enroll hospitals in California Maternal Data Center, if not already submitting

2014: Implement QI at 4 recruited hospitals

Finalize and implement blended case rate with two plans

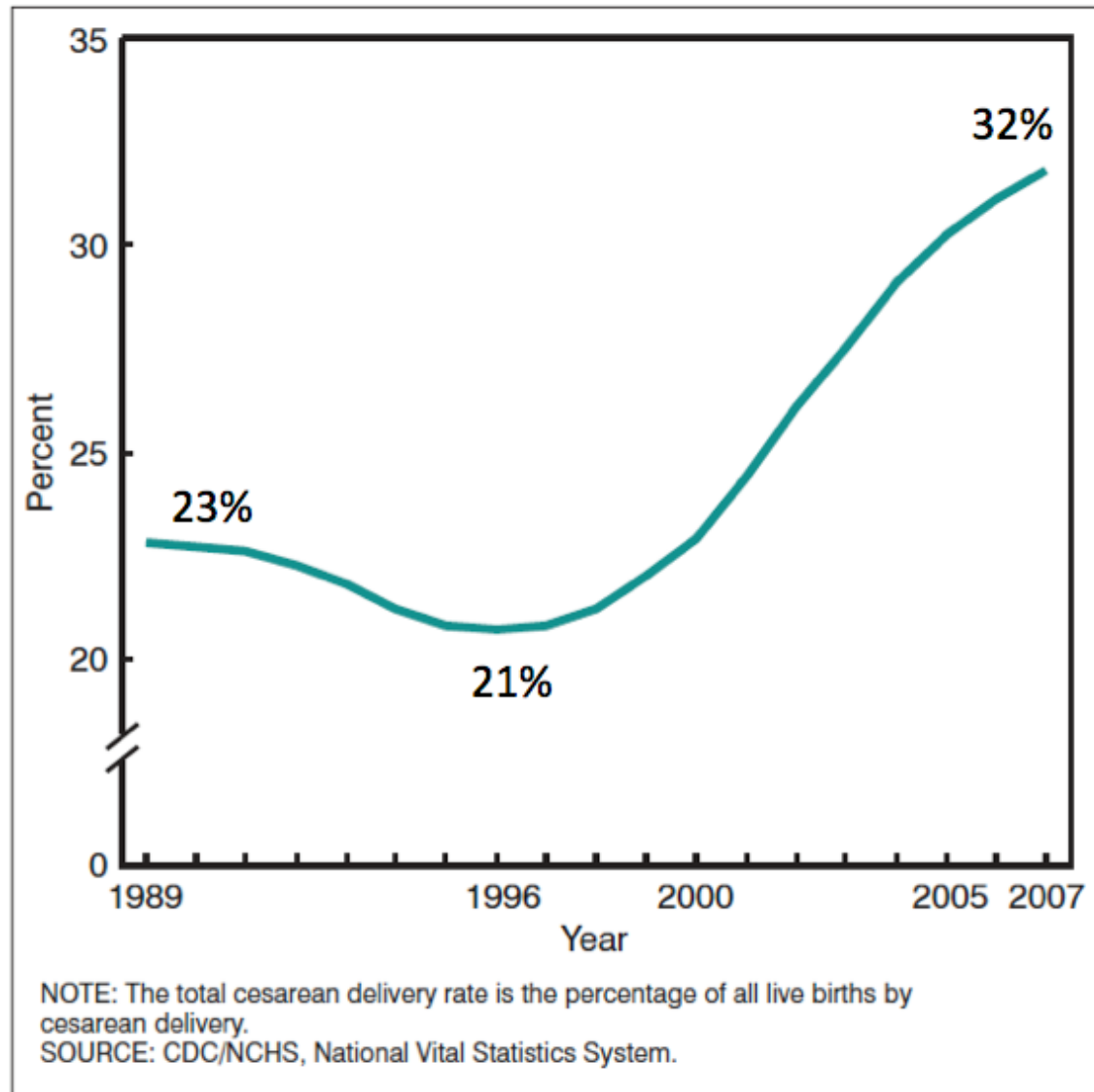
2015: Recruit additional hospitals



Today's Discussion:

- What are the drivers for the rise and variation in Primary CS?
- NTSV (Nulliparous, Term Singleton, Vertex) as the focus for CS Quality Improvement
- Importance of L&D culture, Labor practices, and use of Data
- Multi-strategy approach to address CS rates

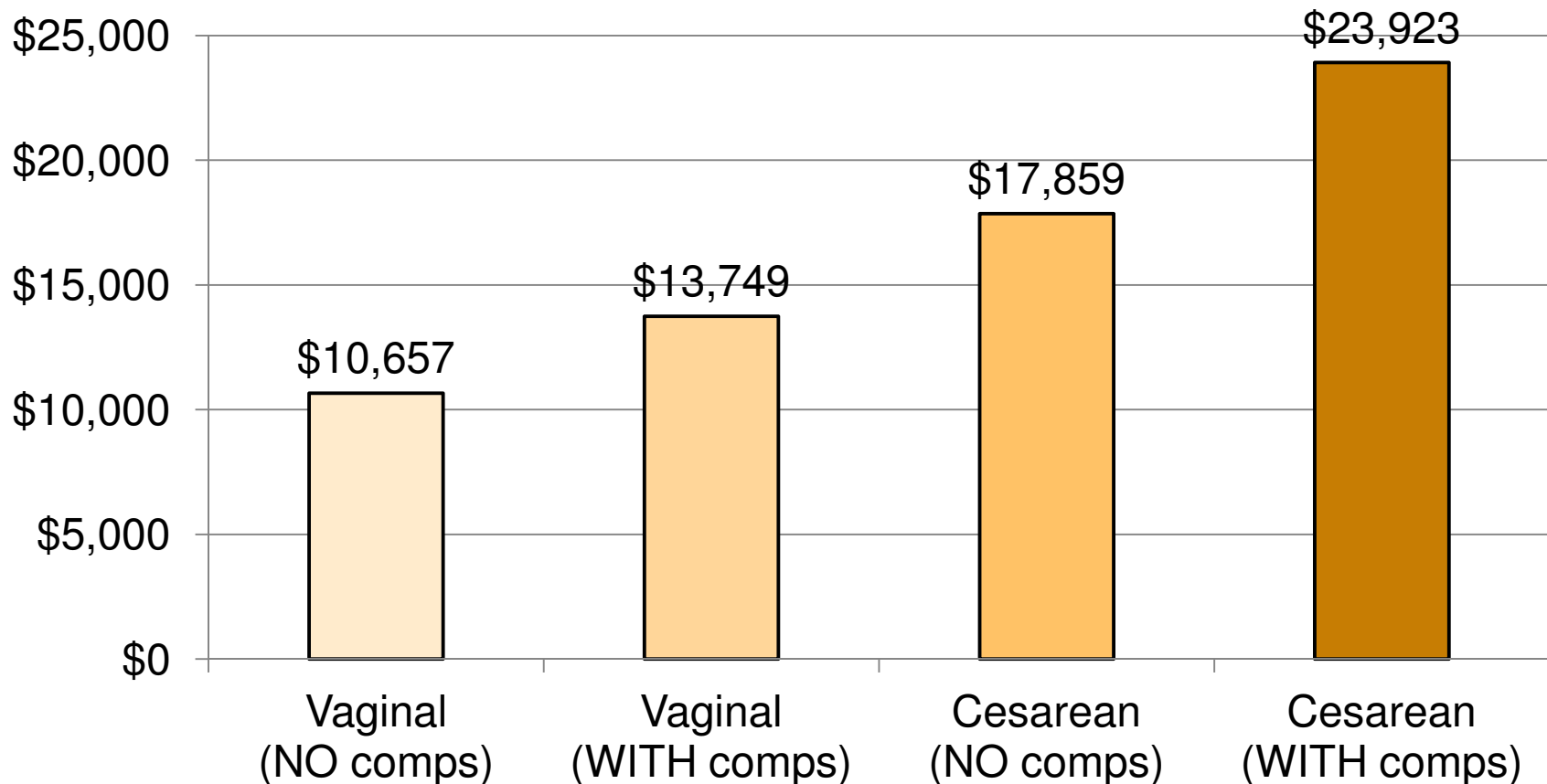
Cesarean Births Have Risen by Over 50% in the Last 10 years



Why should we care about CS rates?

- Relentless Rise without Baby or Mother benefit
 - 6% in early 70's, 20% in mid 80's, 33% in 2010
 - CP rates, neonatal seizures unchanged since 1980
 - Maternal complications rising
 - Transfusions, hysterectomies,
 - Placental complications: placenta previa, accreta uncommon but severe and much higher with prior CS
- Costs
 - CS 2x charges and costs for vaginal birth
 - To be discussed further later
- Future abdominal surgery issues (adhesions)

Average US Hospital Charges (2011)



U.S. Agency for Healthcare Research and Quality, *HCUPnet, Healthcare Cost and Utilization Project*. Rockville, MD: AHRQ. Available at: <http://hcupnet.ahrq.gov/>

How Should We Look At CS?

- Prior CS: Repeat CS vs. VBAC
 - Very different decision making
 - 30-50% of hospitals no longer allow VBAC
 - Should be considered in a different “bucket”
- Primary CS:
 - Ideally separate Nullips from Multips
 - Very different outcomes
 - Difficult with billing data alone, so do our best
 - For QI activities we often focus on Nullips

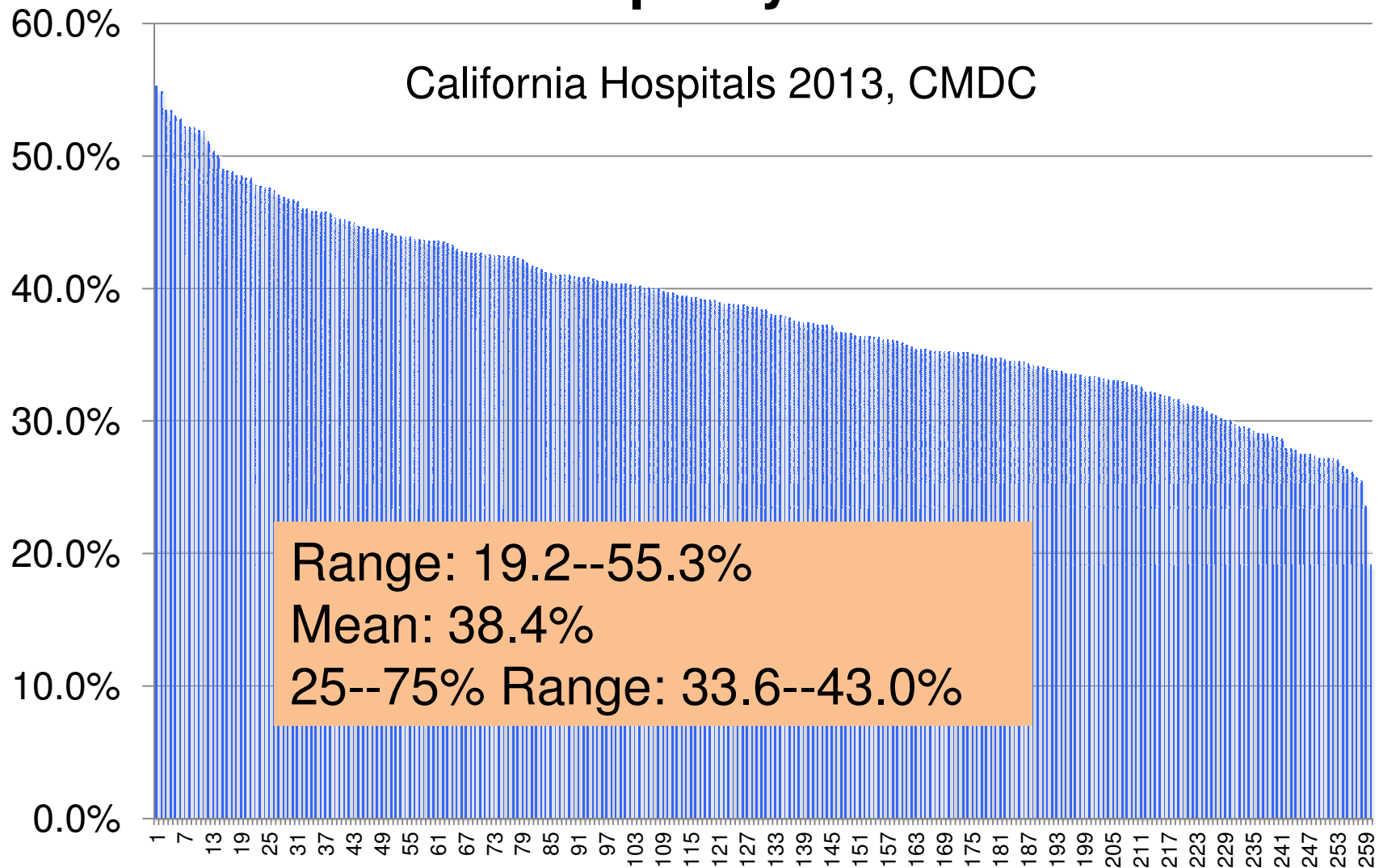
How Different are Multips from Nullips?

- ◆ Multip CS rate \ll Nullip CS rate
 - ◆ 1/6 to 1/10th of rate
- ◆ This makes Primary CS rate unreliable
 - ◆ Very dependent on the proportion of Nullips
 - ◆ A low rate of First Births can lower the primary rates by 30-40%
 - ◆ High proportions of first birth are “Mal-distributed”, many more in city hospitals and less in suburban ones.



Nulliparity Rate

California Hospitals 2013, CMDC



Importance of the First Birth

- If you have a CS in the first labor, over 90% of ALL your subsequent births will be by Cesarean Section
- If you have a vaginal birth in the first labor, over 90% of ALL your subsequent births will be vaginal

A Classic Example of “Path Dependency”

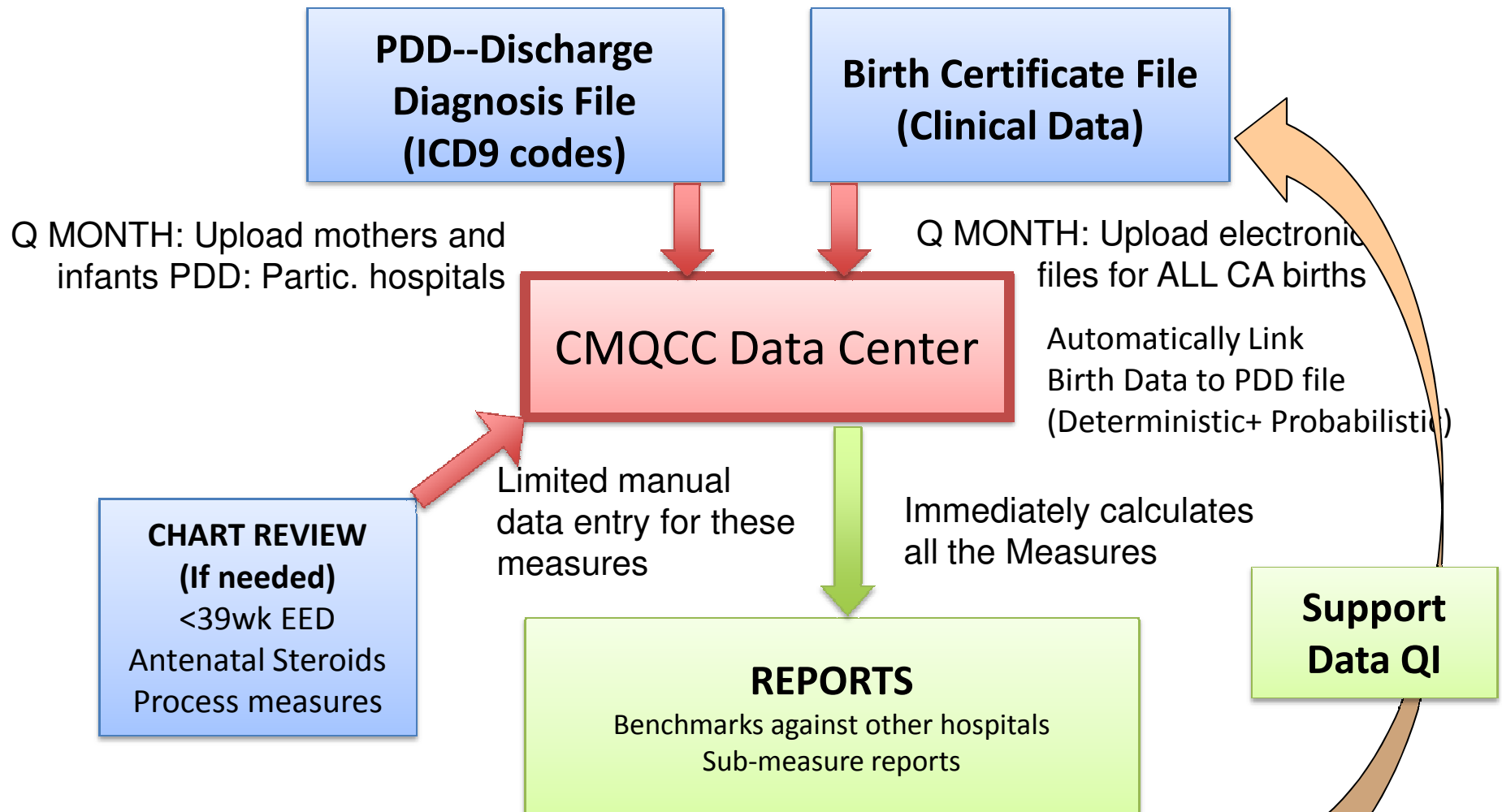
How do we focus QI activity on preventing First-birth (Primary) Cesarean sections?

NTSV Cesarean Section Rate: Performance Measure

- ◆ Risk Stratified:
 - ◆ First-birth, term ,singleton ,vertex (head-first)
 - ◆ Removes mutiparas, multiple gestations, prematures, and breeches
- ◆ Widely Adopted in U.S.
 - ◆ ACOG: Task Force on Cesarean Section rates (2000)
 - ◆ National Health Measure: Healthy Person 2010 and 2020
 - ◆ Hospital regulator: The Joint Commission
 - ◆ Payers (insurance): Govt, private insurance companies

CMQCC Maternal Data Center

Low-burden/High-value















Mantra: "If you use it, they will improve it"

Public Reporting

Inform choice via public websites and infographics

- ◆ Hospital-level metrics published on CHCF's CalQualityCare.Org in December 2013
 - Metrics based on 2012 statewide data
 - ◆ NTSV Cesarean Section (PC-02)
 - ◆ Episiotomy Rate (NQF)
 - ◆ VBAC Rate (AHRQ)
 - If 3 or fewer VBACs, listed as "Do not routinely provide"
- ◆ 2013 metrics ready and will be similarly reported
- ◆ Thinking ahead to 2014
 - ◆ Unexpected Newborn Complications

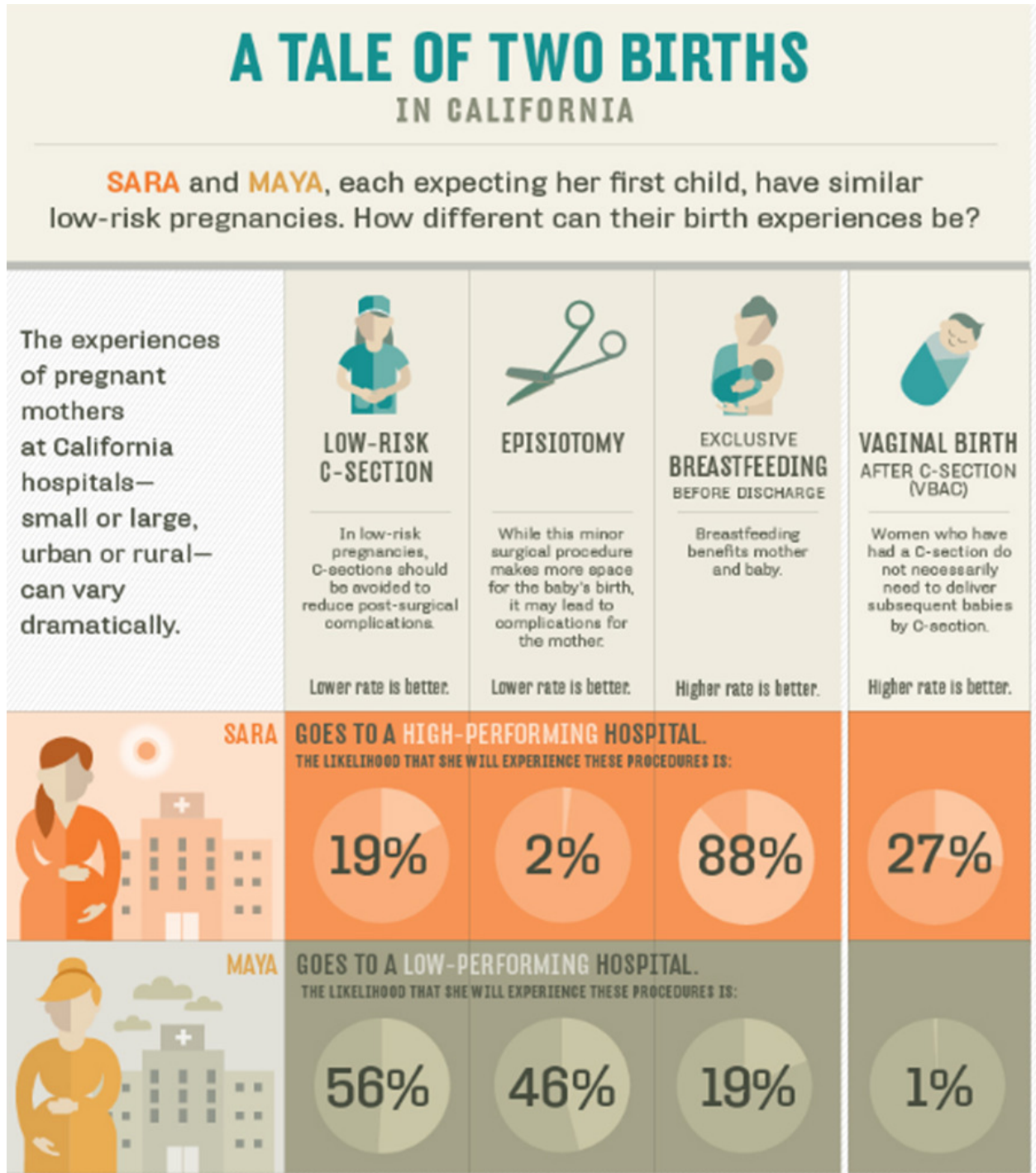
CalQualityCare.Org

	1	2	3	
Mother & Baby ?	Hospital A	Hospital B	Hospital C	State Average
C-Section Rate (NTSV)	 AVERAGE 32.70% (lower is better)	 AVERAGE 28.10% (lower is better)	 BELOW AVERAGE 36.20% (lower is better)	27.80% (lower is better)
Breastfeeding Rate	 AVERAGE 59.30%	 AVERAGE 54.60%	 AVERAGE 59.30%	63.20%
Episiotomy Rate	 AVERAGE 24.20% (lower is better)	 AVERAGE 14.10% (lower is better)	 AVERAGE 16.30% (lower is better)	13.50% (lower is better)
VBAC Rate	 NOT RATED NA	 BELOW AVERAGE 2.20%	 AVERAGE 4.70%	8.30%
VBAC Routinely Available	No	Yes	Yes	NA

CHCF Infographic

Released November 2014

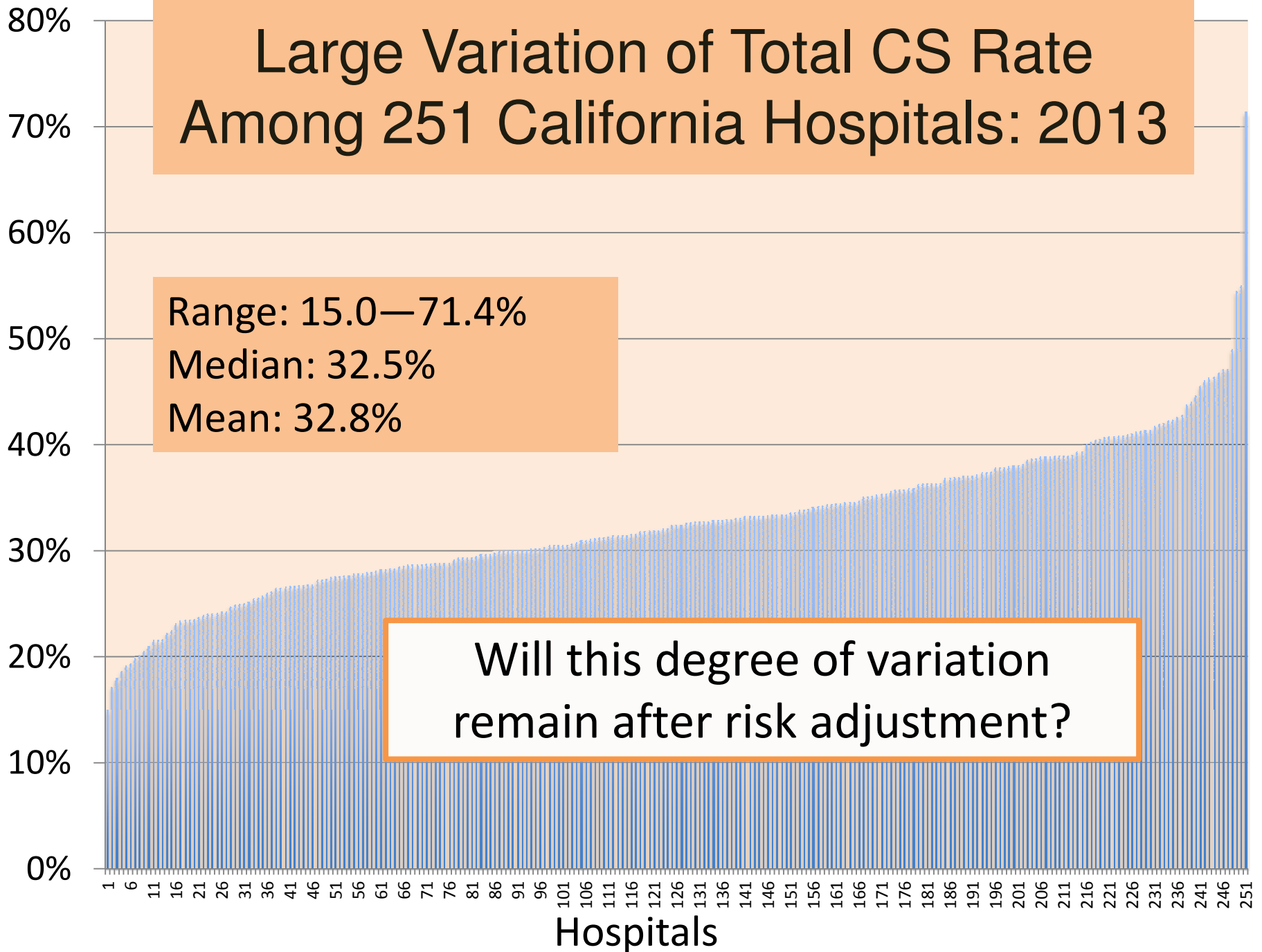
CHCF reports over 11,000 page views in first week and very positive feedback



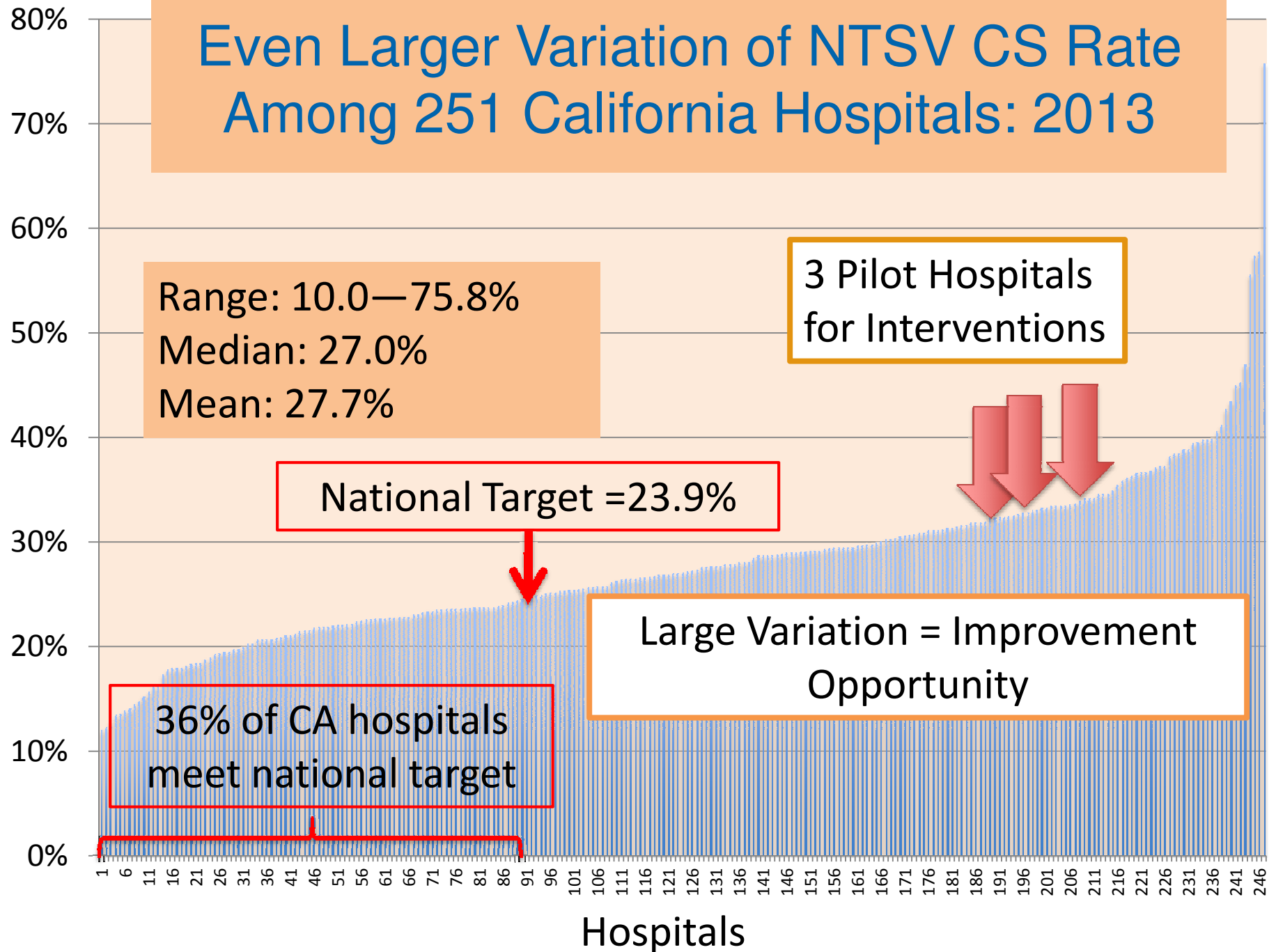
Large Variation of Total CS Rate Among 251 California Hospitals: 2013

Range: 15.0—71.4%
Median: 32.5%
Mean: 32.8%

Will this degree of variation remain after risk adjustment?



Even Larger Variation of NTSV CS Rate Among 251 California Hospitals: 2013



National NTSV Variation Among States NCHS 2013 Data

◆ Lowest:

- ◆ Utah-16.7%
- ◆ New Mexico-17.3%
- ◆ Hawaii-19.6%
- ◆ Idaho-19.8%

◆ Highest:

- ◆ Alabama- 31.2%
- ◆ Louisiana- 31.4%
- ◆ Florida- 31.9%
- ◆ New Jersey- 33.1%

Osterman MJK, Martin JA. Trends in low-risk cesarean delivery in the United States, 1990–2013. National vital statistics reports; vol 63 no 6. Hyattsville, MD: National Center for Health Statistics. 2014

A Data-Driven Quality Improvement Program for Reducing Cesarean Deliveries

- ◆ Analysis of drivers for NTSV CS
- ◆ New National Guidelines for Labor Mgmt
 - ◆ ACOG: Task Force on Cesarean Section rates (2000)
 - ◆ Turned into simple check-lists
- ◆ Physician and Nursing Education
- ◆ Monthly data reports for NTSV CS
 - ◆ Hospital-level rates
 - ◆ Provider-level rates
- ◆ Admin and MD Leadership!

First Birth (Nullip) CS QI Pathways

Which is the driver in my hospital??

- Latent phase (early labor) admission
- Nullip labor induction
 - Esp. with unfavorable cervix
- Dystocia/Failure to progress
 - Arrest or protraction disorder
- Non-reassuring Fetal Status
 - Oxytocin/misoprostol associated tachysytole
- 2nd Stage (failure of descent)
- Predicted (“impending”) macrosomia
- Patient choice

Sample Hospital

Hospital Trend

Benchmark Comparisons

System Comparisons

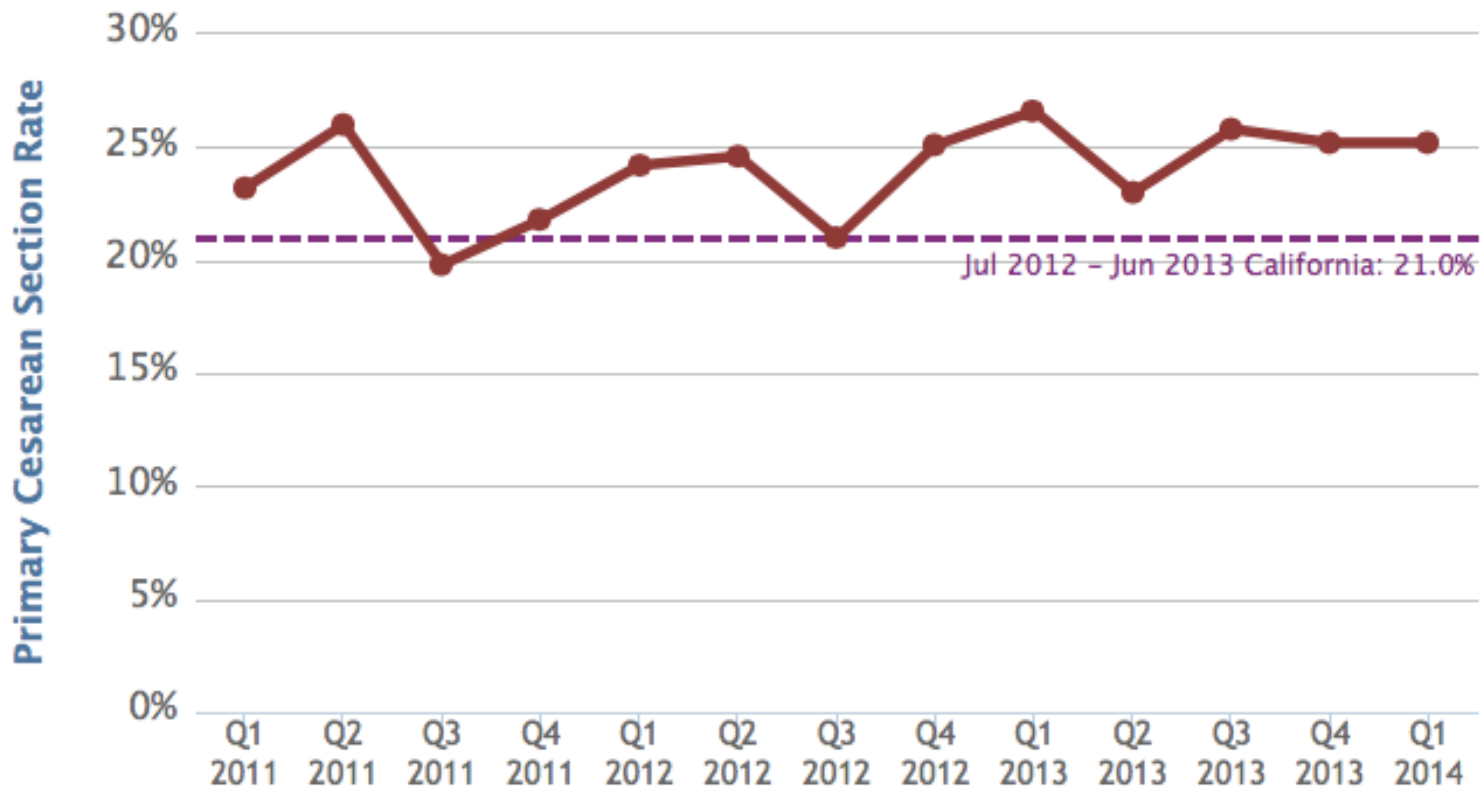
Payer Comparisons

Provider Comp

! CMDC receives birth certificate data approximately 45 days after the end of each month. This means the data for April 2014 available around June 15th 2014.

Rate of Cesarean Section among women with no prior Cesarean.

[See full definition.](#)



Measure Analysis

Frequency

- Monthly
- Quarterly
- Annually

Corrected

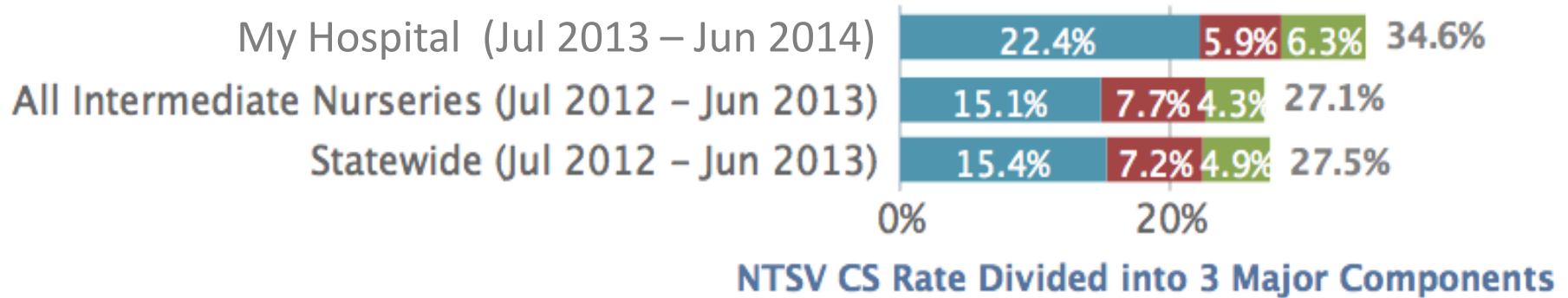
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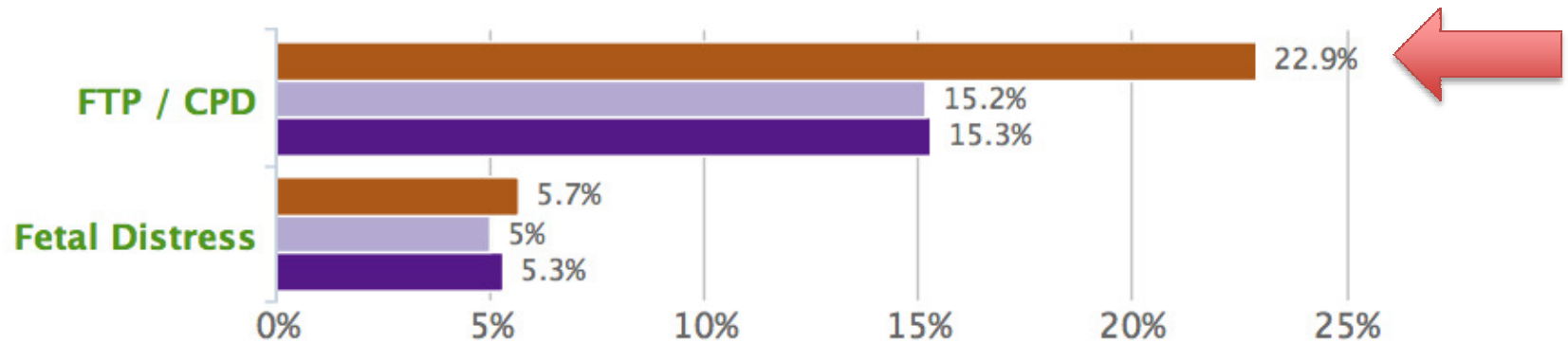
PNG (image)

CSV (Excel)

What are the Drivers of My NTSV CS Rate?



Spontaneous Labor



Proportion of the *NTSV Spontaneous Labor* population that had a CS for the specific indication

Induced Labor



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS



Society for
Maternal-Fetal
Medicine

OBSTETRIC CARE CONSENSUS

Number 1 • March 2014

Safe Prevention of the Primary Cesarean Delivery

New National Guidelines for Defining Labor
Abnormalities and Management Options



Table 3. Recommendations for the Safe Prevention of the Primary Cesarean Delivery

Recommendations	Grade
<i>First stage of labor</i>	
A prolonged latent phase (eg, greater than 20 hours in nulliparous women and greater than 14 hours in multiparous women) should not be an indication for cesarean delivery.	Strong recommendation
Slow but progressive labor in the first stage of labor should not be an indication for cesarean delivery.	Strong recommendation
Cervical dilation of 6 cm should be considered the threshold for the active phase of most women in labor. Thus, before 6 cm of dilation is achieved, standards of active phase progress should not be applied.	Strong recommendation
Cesarean delivery for active phase arrest in the first stage of labor should be reserved for women at or beyond 6 cm of dilation with ruptured membranes who fail to progress despite 4 hours of adequate uterine activity, or at least 6 hours of oxytocin administration with inadequate uterine activity and no cervical change.	Strong recommendation

Safe prevention of the primary cesarean delivery. Obstetric Care Consensus No. 1. American College of Obstetricians and Gynecologists. Obstet Gynecol 2014;123:693–711.

ACOG/SMFM Criteria for Dystocia: Checklist

1. Diagnosis of Dystocia/Arrest Disorder

(All 3 should be present)

- Cervix 6 cm or greater
- Membranes ruptured, then
- No change X 4 hours with Adequate Uterine activity

2. Diagnosis of Failed Induction before 6 cm dilation

(both should be present)

- Bishop Score \geq 6 cm before elective induction
- Oxytocin used for a minimum of 12 hrs after membrane rupture

3. Diagnosis of Failed Induction after 6 cm dilation

(see criteria 1)

Provider Comparison Report in Hospital

Display performance for all hospital's providers for specific measures

(Currently available for Active track facilities)

Cesarean Section Rate-Nullip, Term, Singleton, Vertex (PC-02) NTSV Ces

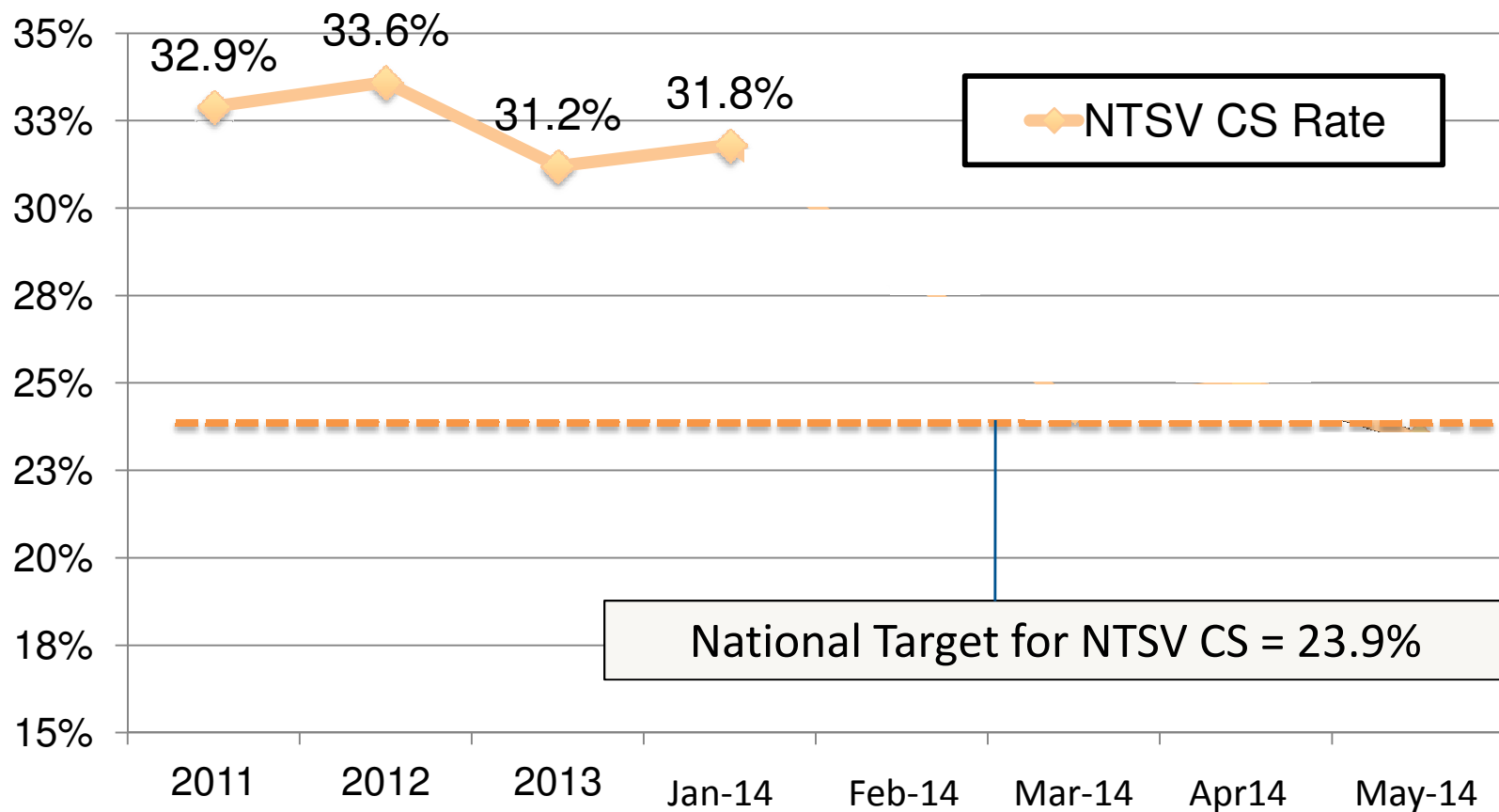
Hospital Trend
Benchmark Comparisons
System Comparisons
Payer Comparisons

Start Date* Frequency*

	Total Deliveries	Q2 2013	Q3 2013	Q4 2013	Q1 2014
Springfield General	2165	40.2% <i>(88/219)</i>	30.7% <i>(66/215)</i>	32.5% <i>(66/203)</i>	34.5% <i>(71/206)</i>
Abshire, Loyce	102	14.3% <i>(1/7)</i>	25.0% <i>(2/8)</i>	33.3% <i>(2/6)</i>	25.0% <i>(2/8)</i>
Beier, Ramon	30	25.0% <i>(1/4)</i>	33.3% <i>(2/6)</i>	33.3% <i>(1/3)</i>	0.0% <i>(0/1)</i>
Champlin, Jose	67	57.1% <i>(4/7)</i>	83.3% <i>(5/6)</i>	0.0% <i>(0/7)</i>	0.0% <i>(0/4)</i>
Champlin, Lessie	39	33.3% <i>(1/3)</i>	20.0% <i>(1/5)</i>	50.0% <i>(2/4)</i>	100.0% <i>(2/2)</i>
Cronin, Hudson	83	25.0% <i>(2/8)</i>	28.6% <i>(2/7)</i>	62.5% <i>(5/8)</i>	57.1% <i>(4/7)</i>

CMQCC Data-Driven QI: NTSV CS

Pilot Hospital: Orange County



This is the same “Orange County” as depicted in the popular television show. This is the hospital where most of these mothers deliver...

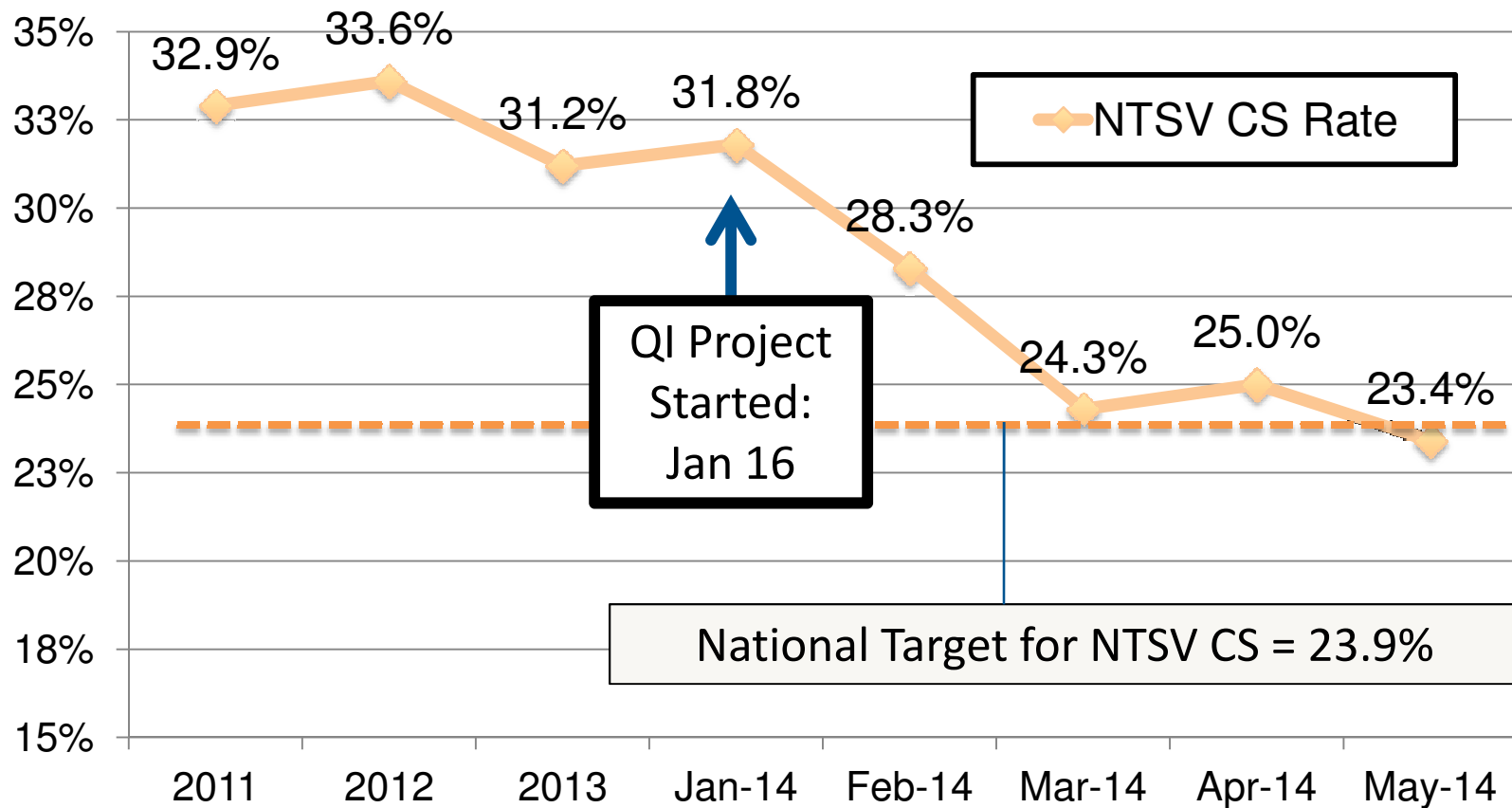


Not the easiest population to start with...



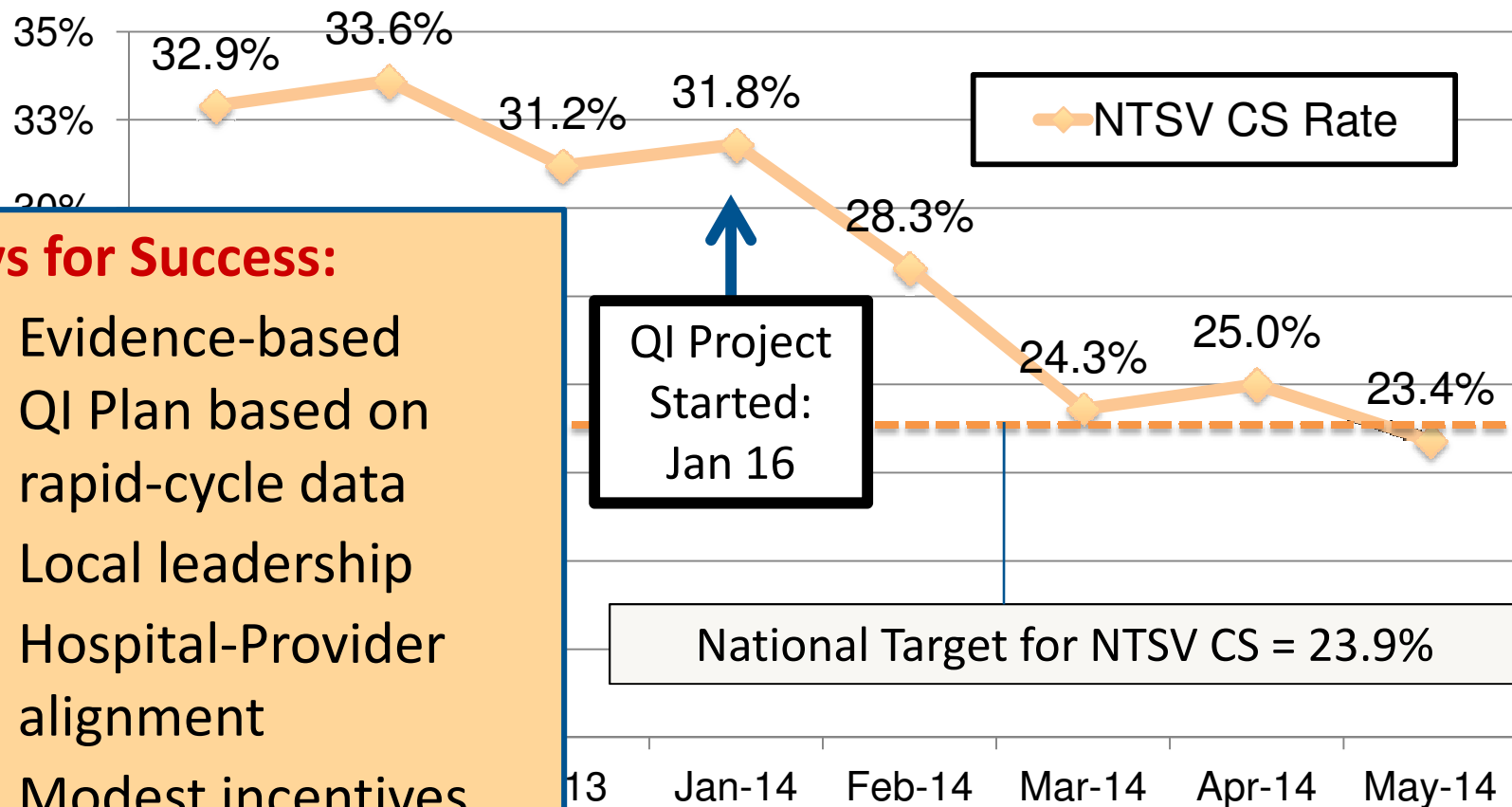
CMQCC Data-Driven QI: NTSV CS

Pilot Hospital: PBGH / RWJ CS Collaborative



CMQCC Data-Driven QI: NTSV CS

Pilot Hospital: PBGH / RWJ CS Collaborative



Keys for Success:

1. Evidence-based QI Plan based on rapid-cycle data
2. Local leadership
3. Hospital-Provider alignment
4. Modest incentives (shared savings)

Low-risk First-birth (NTSV) Cesarean Reduction Project

Period	Hospital 1	Hospital 2	Hospital 3
Yr 2011	32.9% Baseline	29.6% Baseline	26.3% Baseline
Yr 2012	33.6% Baseline	31.1% Baseline	26.8% Baseline
Yr 2013	31.2% Baseline	32.9% Baseline	28.5% Baseline
Jan-14	31.8% QI START Jan 16	30.40% Baseline	26.40% Baseline
Feb-14	28.7%	28.40% Baseline	34.90% Baseline
Mar-14	24.3%	33.70% QI START Mar 20	27.30% Baseline
Apr-14	25.0%	26.40%	33.30% QI START April 15
May-14	23.4%	24.90%	22.00%
Jun-14	28.2%	28.10%	26.20%
Jul-14	27.6%	24.10%	24.80%
Aug-14	23.7%	24.70%	24.60%
Sep-14	22.0%	22.50%	31.90%
Oct-14	25.7%	28.80%	

Comment: had an immediate and sustained reduction after the medical staff and hospital leadership together embraced the project.

2011-13 mean=	32.6%
QI mean=	25.0%

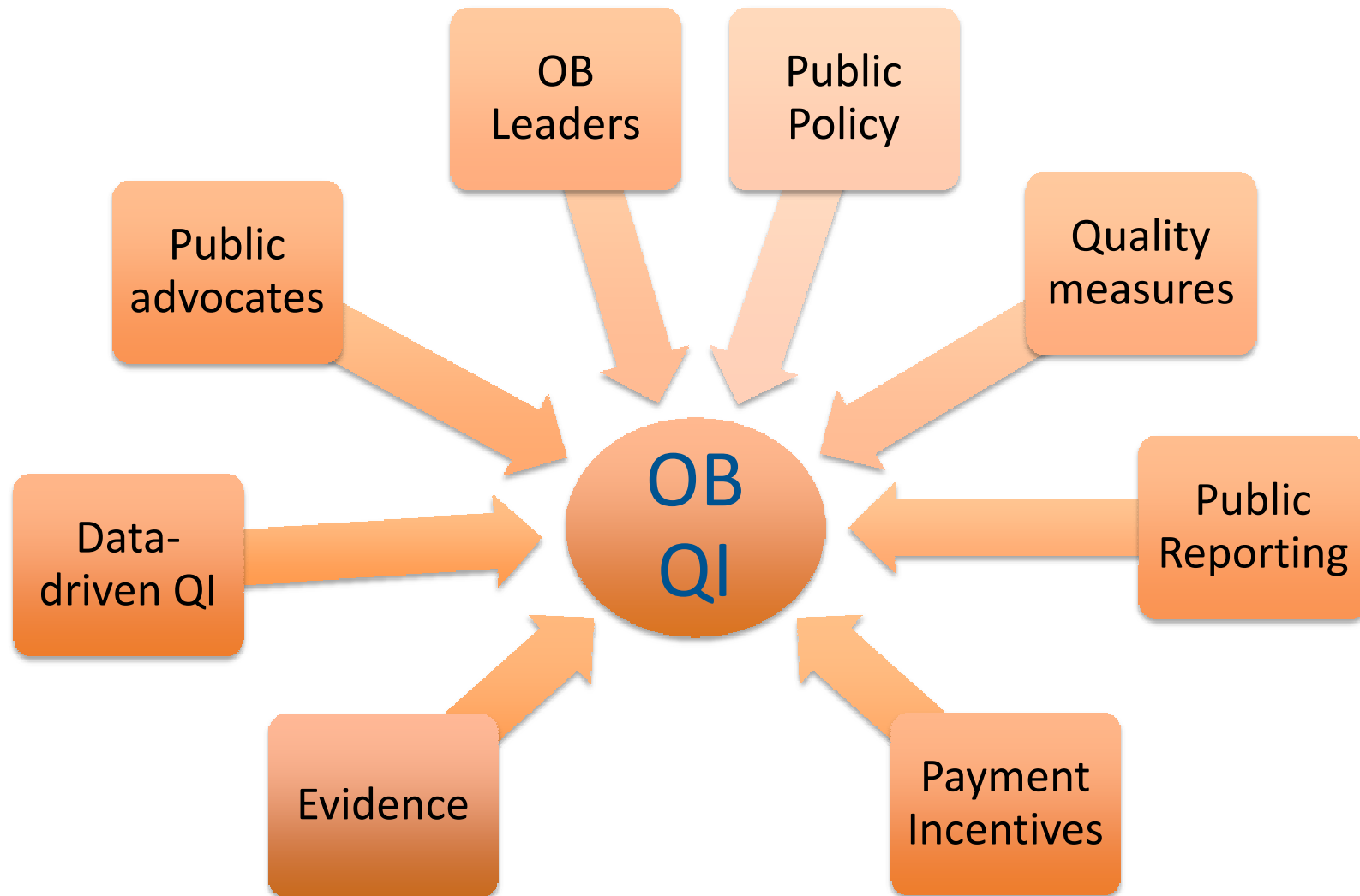
Comment: had an immediate and sustained reduction after the medical staff and hospital leadership together embraced the project.

2011-13 mean=	31.2%
QI mean=	24.9%

Comment: had a history of QI projects for CS reduction but had "wandered" in recent months. It's starting point was lower than the others but still has seen a reduction.

2011-13 mean=	27.2%
QI mean=	25.9%

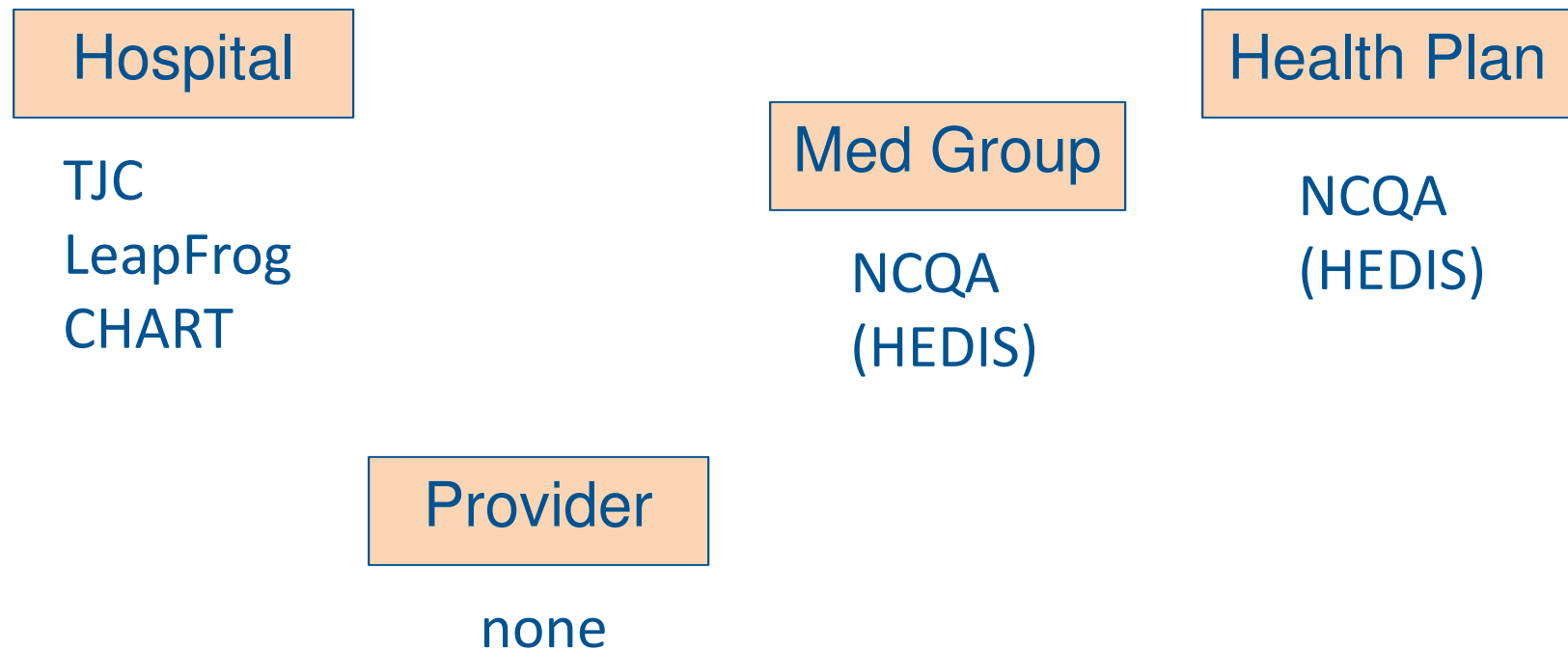
Collaborative Action: Collective Impact



Multiple Pressure Points are much more effective than one or two alone

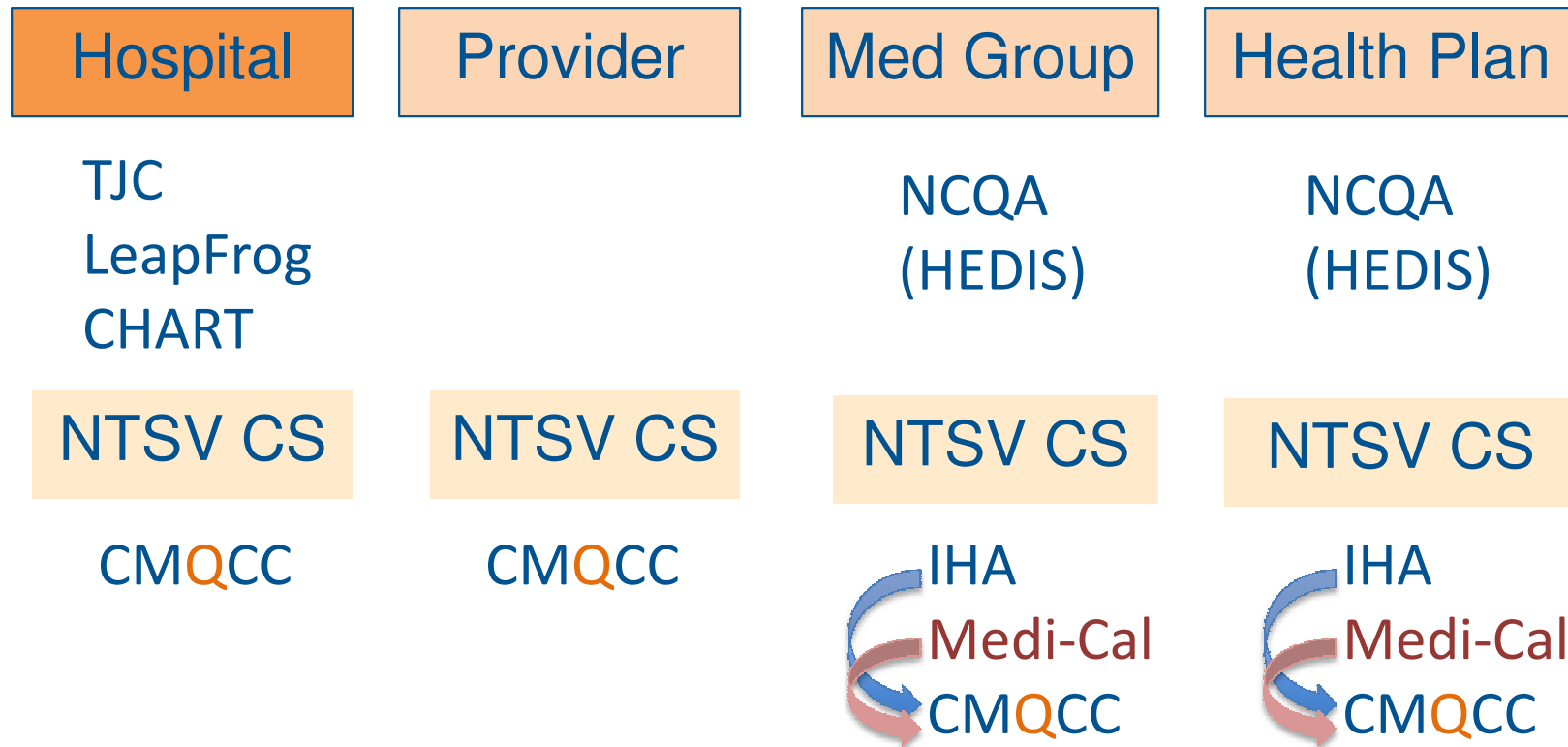
Alignment of Quality Measures to Support QI Actions at Multiple Levels of Care

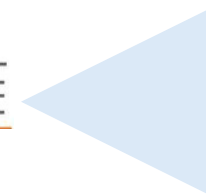
Current Practice: No Alignment!!



Alignment of Quality Measures to Support QI Actions at Multiple Levels of Care

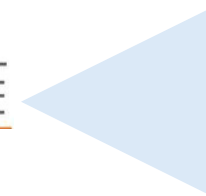
Goal: align as many as possible





Maternity Blended Case Rate

- **Single rate for delivery whether vaginal or C-section.**
- Case rate begins on date of admission for the delivery.
- Covers all services rendered during a woman's hospitalization for labor and delivery.
- Case rate for the hospital and the physicians will be aligned, but contracted separately, in order to avoid regulatory complexities.



What could cause this initiative to fail in five years time?

Hospital CEO:

Failure to incentivize evidence-based standards for intervention.

Physician:

Failure to engage consumer.

Hospital staff:

Lack of physician ownership of problem.

Health Plan:

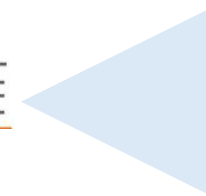
Failure to align all moving parts (e.g. data, QI, payment).

Data Transparency

Lessons Learned

- ◆ CMDC serves foundation for payment reform and QI.
- ◆ Otherwise...





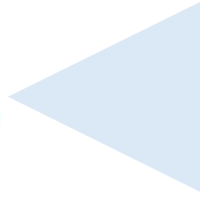
Payment Reform

Lessons Learned

- ◆ Payment has direct impact on hospital behavior and decision to embrace QI.
- ◆ One contract with one health plan affects change for an entire hospital.
- ◆ Payment is an effective stick when supported QI serves as carrot.

Unanswered questions

- ◆ What is the right or appropriate carrot stick balance?
- ◆ Should both physicians and hospitals be included in payment disincentives? Incentives?



Hospital Engagement

Lessons Learned

- ◆ A physician champion and administrative champion is critical
- ◆ Gain buy in from all hospital staff and include nurses as partners
- ◆ Employers/purchasers can be a strong ally

Unanswered questions

- ◆ How do we recruit middle adopters?
- ◆ What is the role of payment versus QI in changing behaviors?