NEW YORK STATE | Department of Health | Medicaid Redesign Team

Maternity
Clinical Advisory Group
Clinical Advisory Group Meeting 2

Meeting Date: 8/11

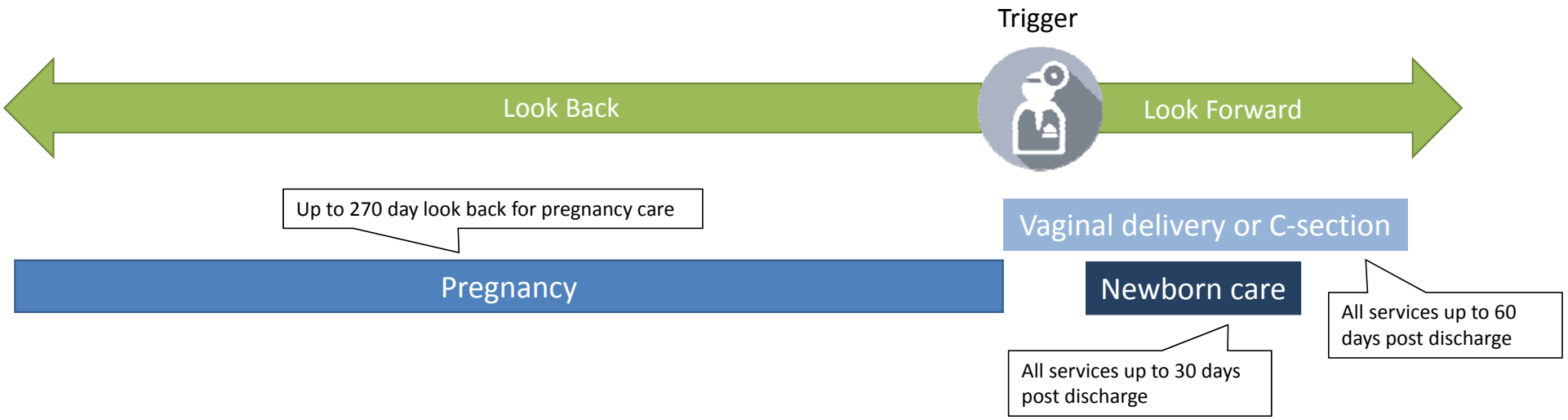
August 2015

Agenda

1. Bundle criteria
2. Characteristics of the Maternity Population in the Medicaid Data
3. Risk Adjustment for Maternity Care
4. Performance Measurements

1. Bundle Criteria

What Does a Complete Maternity Episode Look Like?



Included in bundle:

- **Pregnancy**: Entire pre-natal care period (270 days prior to delivery) is included for both low risk and high risk pregnancies.
- **Delivery**: All related services for delivery including post discharge period (60 days post discharge).
- **Newborn**: Initial baby's hospital stay and all services up to 30 days post discharge.

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The Maternity Bundle Includes All Pregnant Females and Newborns that Meet the Identified Inclusion Criteria

Bundle Inclusion Criteria

Pregnant females who have a claim under a qualifying trigger. The trigger for the maternity bundle is the delivery, either a vaginal delivery or a C-section.
All services for newborns up to 30 days post-discharge are also included in the bundle.

Exclusions

Services for newborns in NICU level 4 are excluded from the maternity bundle.

Note: A mother-newborn link has been implemented to combine mother and Newborn claims, but may be subject to a margin of error.

How Do the In- and Exclusion Criteria Work in Detail?

Pregnancy

Pregnancies that do not end with a vaginal or cesarean delivery will not trigger a maternity bundle. For example:

- Termination of the pregnancy
- Fetus dies during pregnancy (<20 weeks)
- Mother dies during pregnancy

When the fetus dies during the pregnancy (>20 weeks) and is delivered, the maternity bundle is triggered.

Delivery (vaginal or C-section)

- Mother dies during delivery or within 60 days after discharge – The delivery triggers the full maternity bundle.
- Newborn dies during delivery – The delivery triggers the maternity bundle. No newborn episode.

Newborn care

- Newborn in NICU – Services for newborns in NICU level 4 are excluded.
- Newborn dies during first month – The delivery triggers the full maternity bundle.

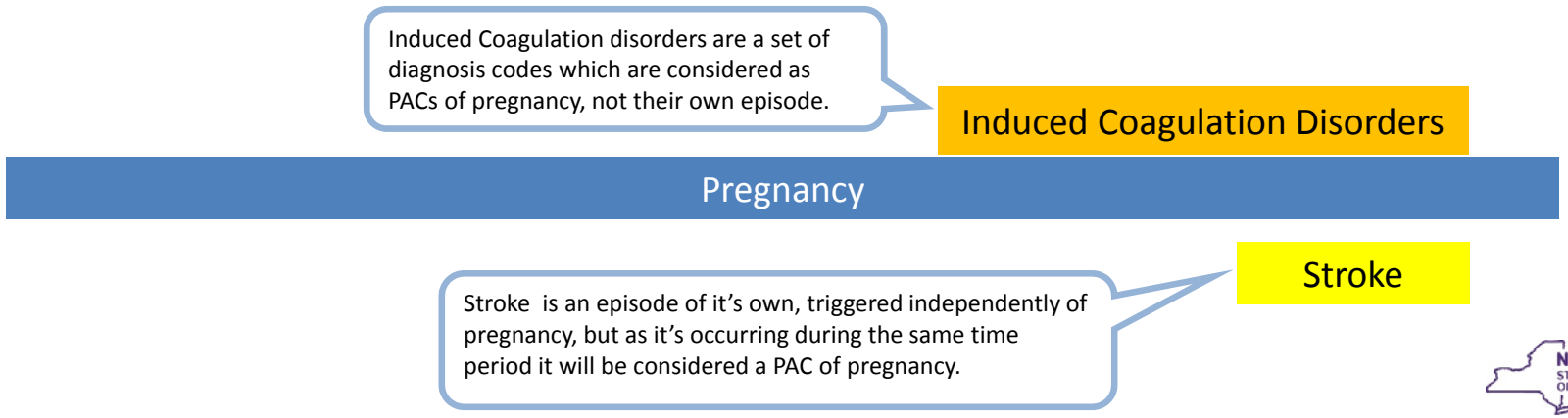
Different Types of PACs for Maternity Care

Potentially Avoidable Complications (PACs) come in two varieties:

(1) Complications related directly to an episode itself (e.g. puerperal sepsis is a PAC in the delivery episode)

(2) Episodes which are themselves considered complications in their entirety if they occur contemporaneously to a parent episode (e.g. stroke).

C-Sections, although considered in the grouper logic to be PACs of a pregnancy episode, have been removed after-the-fact from the list of PACs presented as part of the maternity bundle.



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Positioning LARC Within the Maternity Bundle

- Long-acting, reversible contraception (LARC) is a cost-effective, proven method to lengthen the interconception period but also to prevent e.g. teenage pregnancies
- Including the uptake of LARC as a quality measure would help the impact of the Maternity Bundle.
  - Yet including the *cost* of LARC in the bundle would create the strange incentive that doing *more* would *increase* the cost of the bundle – thus reducing potential shared savings.
  - The positive impact and potential reduction in costs would be incurred in a *next* Maternity bundle.

- *Solution: keep LARC as a FFS activity, yet include quality measure (stimulating LARC) in Maternity Bundle.*

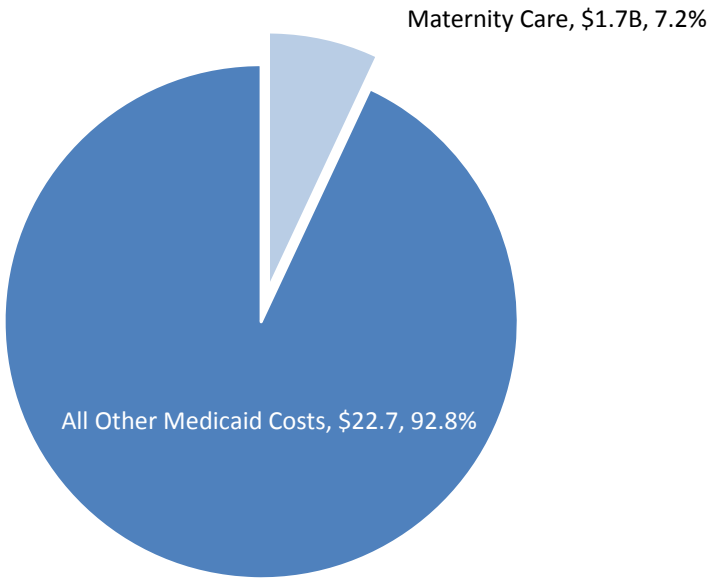
2. Characteristic of the Maternity Population in the Medicaid Data

Total Cost of Maternity Care is $1.7B, 7.2% of Non-Dual Medicaid Expenditures

Total State Cost per year
$1.7B

Total State Volume per year
104K
(Vaginal Deliveries + C-Sections)

Maternity Bundle Costs relative to Total Medicaid Spend
Total Non-Dual Medicaid spend = $27.7B



Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: HCI3/SIM

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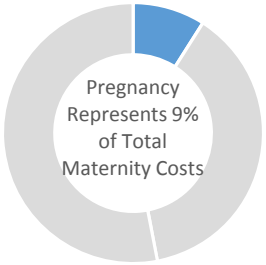
Delivery and Newborn Care Represent 89% of the Total Maternity Costs (data 2012-2013)

Pregnancy
Episode volume
194,123

Total episode costs
$ 302.7m

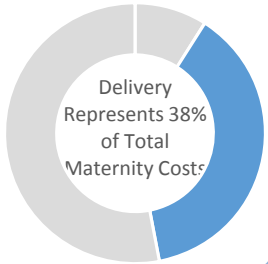
Average episode costs:
$ 1,554



Delivery
Episode volume
204,095

Total episode costs
$ 1,249.9m

Average episode costs:
$ 6,119



Vaginal delivery or C-section

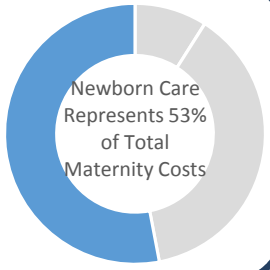
Pregnancy

Newborn care

Newborn care
Episode volume
248,083

Total episode costs
$ 1,760.9m

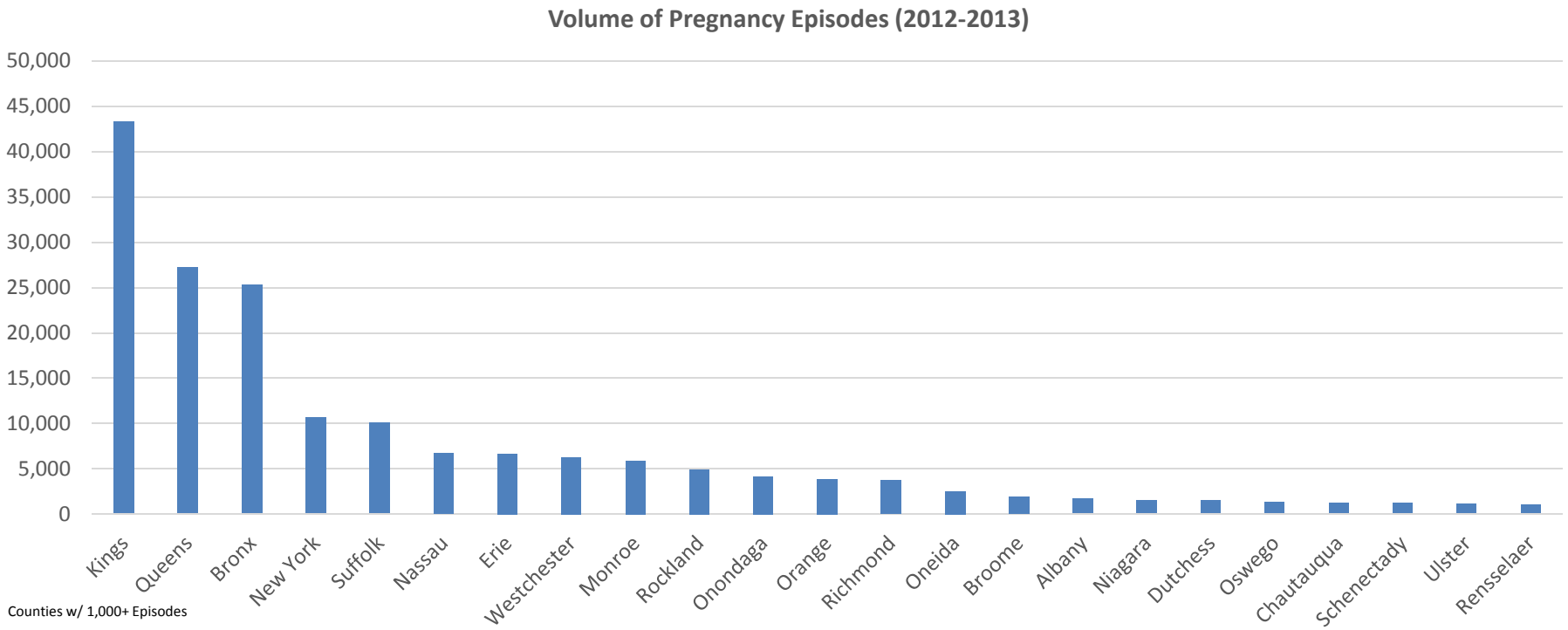
Average episode costs:
$ 7,098



Note: Differences in "episode volume" between episodes is caused by different inclusion and exclusion criteria. For example, a mother may have given birth (in the "delivery" episode) but not been enrolled long enough prior to the birth event to have a "pregnancy" episode.

Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: HCI3/SIM *Not risk-adjusted or cost standardized.*

Downstate Counties Drive Episode Volume



Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: HCI3

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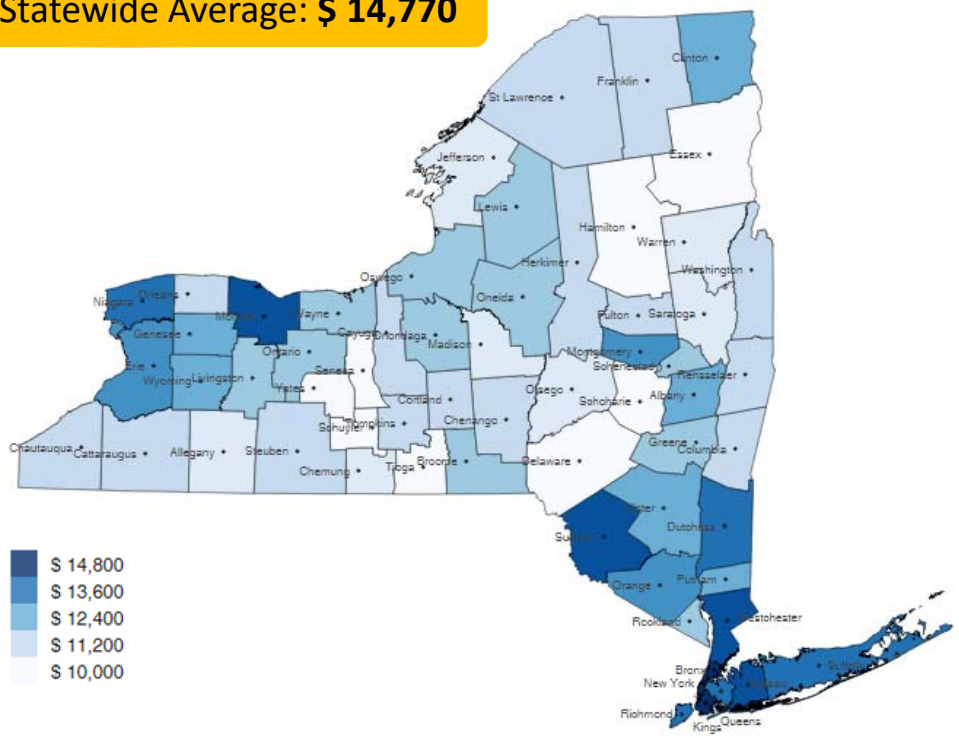
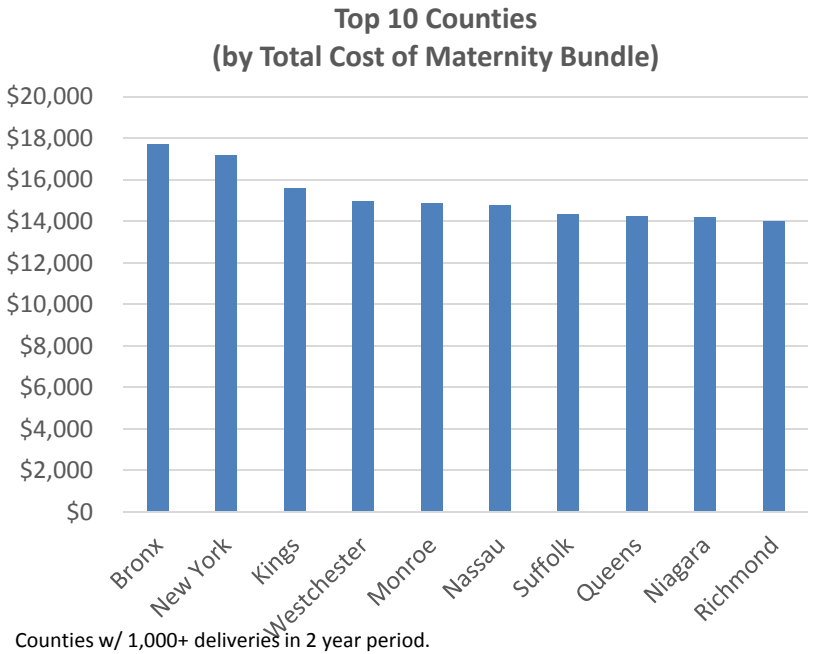
Average Cost by County Differ Between $9,401 and $17,733

Statewide Average: **$ 14,770**





Counties w/ 1,000+ deliveries in 2 year period.

Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: HCI3/SIM. *Not risk-adjusted or cost standardized.*

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Four Important Costs Drivers for the Maternity Bundle are Price, Volume, PACs and Service Mix

Cost Drivers

Price

The price of a service can vary based on providers' own costs (e.g. wages).
In NYS, we will in the beginning only use price-standardized data.

Volume

The volume of services rendered (e.g. doing 1 blood test vs. 5 in the first 2 months).

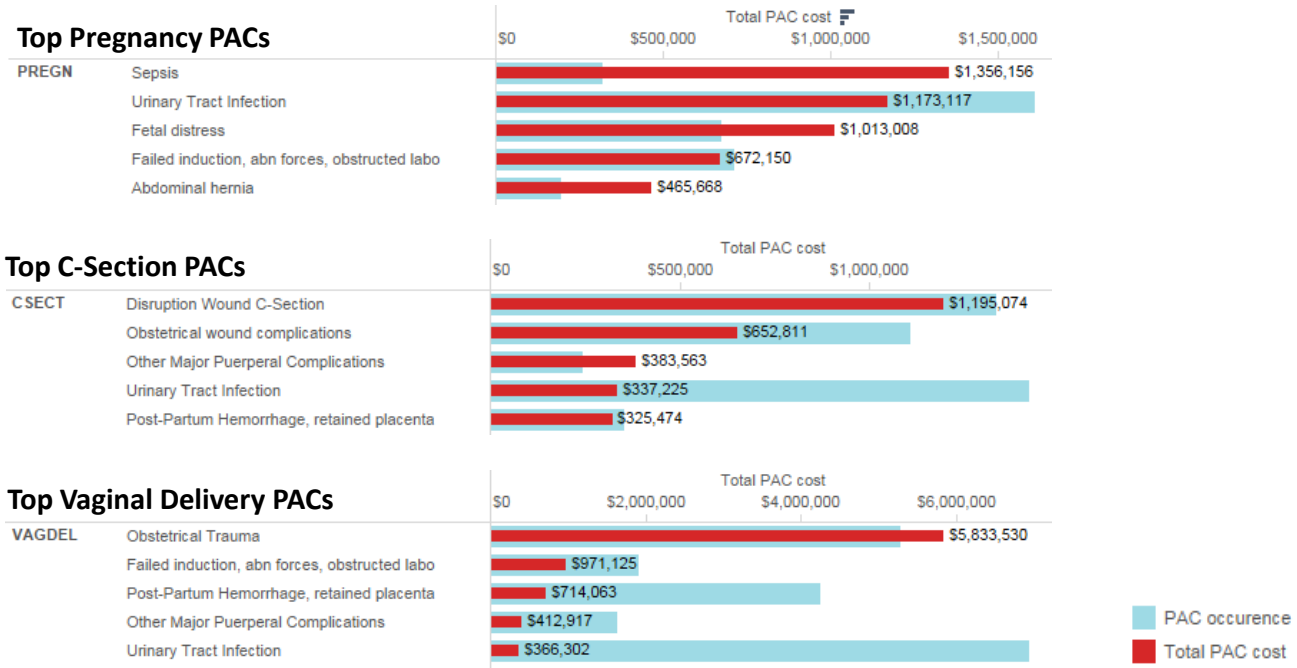
PACs

Potentially avoidable complications (e.g. C-section wound disruption).

Service Mix

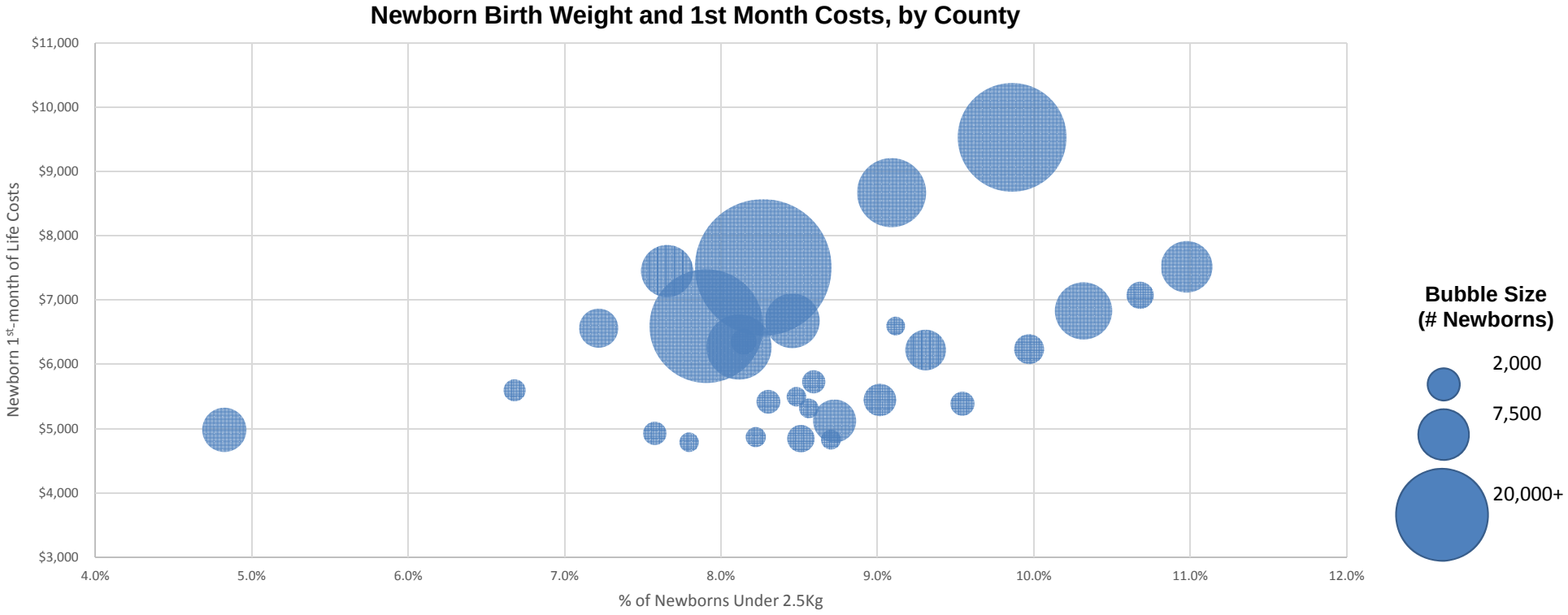
The mix of services and intensity of care received during the episode (e.g. C-section percentage).

Cost Driver PAC: Identifying PACs Can Help Find Opportunities for Quality Improvement and Savings



Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: HCI3 *Not risk-adjusted or cost standardized.*

Cost Driver PAC: Low Birth Weight is Directly Correlated with Newborn Costs



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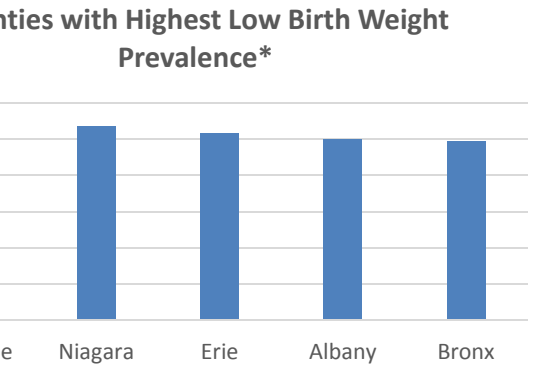
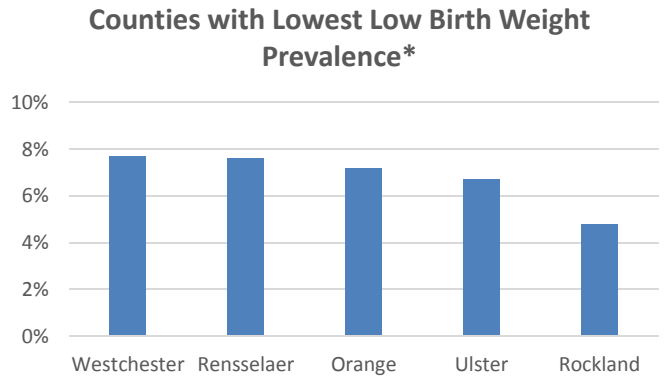
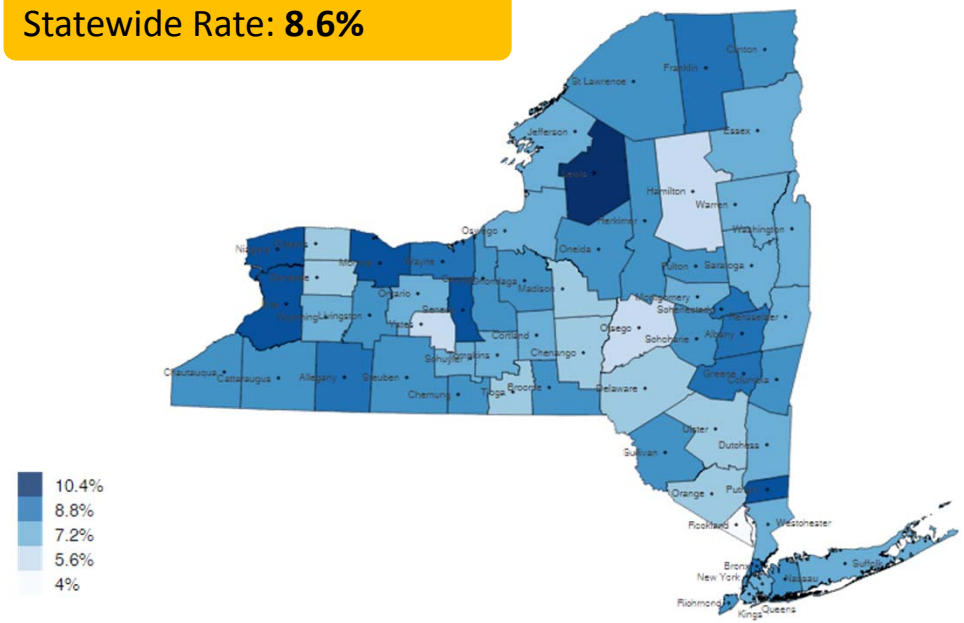
Cost Driver PAC: Low Birth Weight Prevalence Varies between 4.8% and 11.1%





Percentage of Newborns with low Birth Weight

Statewide Rate: **8.6%**



* Newborns < 2.5kg, Over 1,000 Births

Source: Fee-for-Service and Managed Care encounter records for mothers with deliveries and Newborns born in CY2012-2013. Source: SIM *Not risk-adjusted or cost standardized.*

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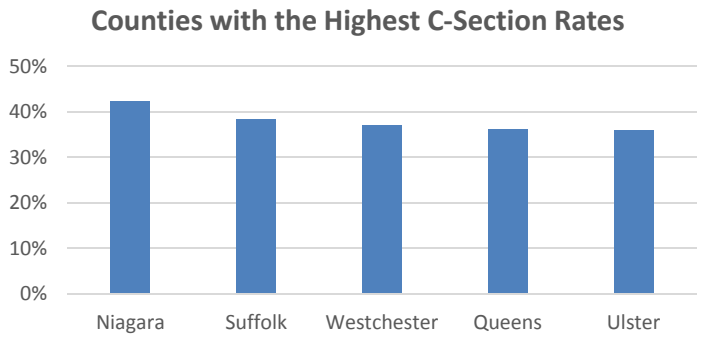
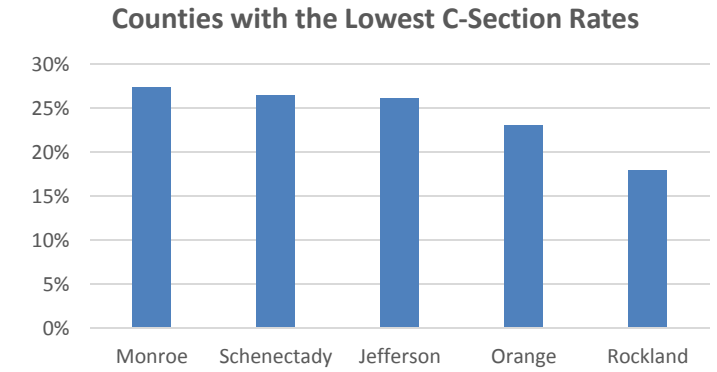
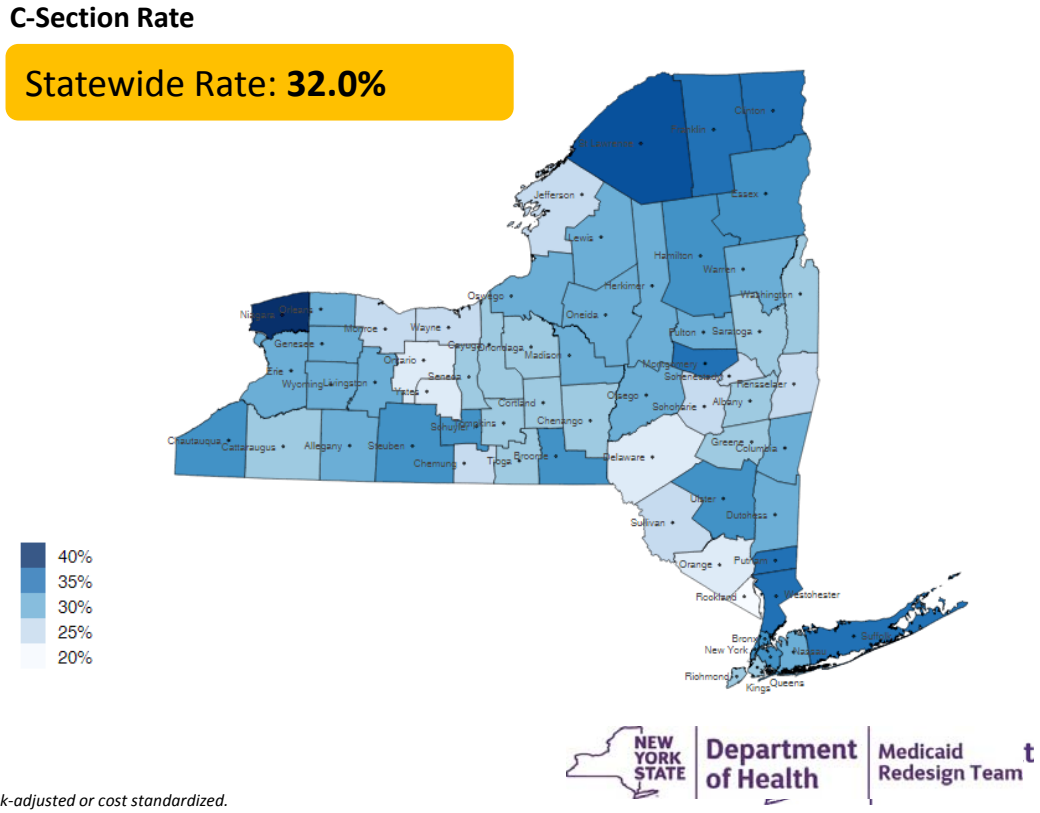
Cost Driver Service Mix: The prevalence of C-sections varies between 15% and 42%







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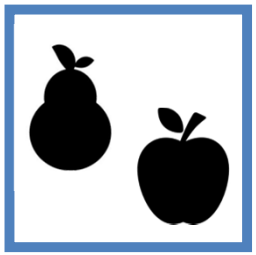
3. Risk Adjustment for Maternity Care

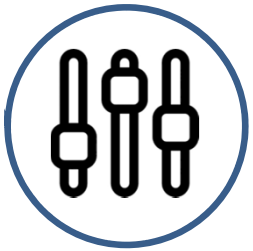
Risk Adjustment for Maternity Care



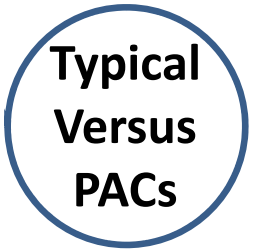
Make “apples-to-apples” comparisons between providers by accounting for differences in their patient populations.

Takes the patients factors (co-morbidity, age of mother, other risk factors) out of the equation.

Current Methodology: 3 Components, based on claims data



Patient level factors included in the models to adjust for patient severity



Types of costs modeled for each episode

Modeling to get expected costs

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Inclusion and Identification of Risk Factors

Risk Factors

- Patient demographics – Age
- Risk factors - Co-morbidities
- Subtypes - Markers of clinical severity within an episode

Patient related risk factors

Episode related risk factors

Identification Risk Factors

- Risk factors come from historic claims (prior to start of an episode) and same list is applied across all episode types
- Subtypes identified from claims at start of the episode and specific to episode type

Given the often short enrollment history of pregnant women in Medicaid, risk adjustment factors may be insufficiently included in the claims data

Inclusion

Example - SubType Pregnancy Episode

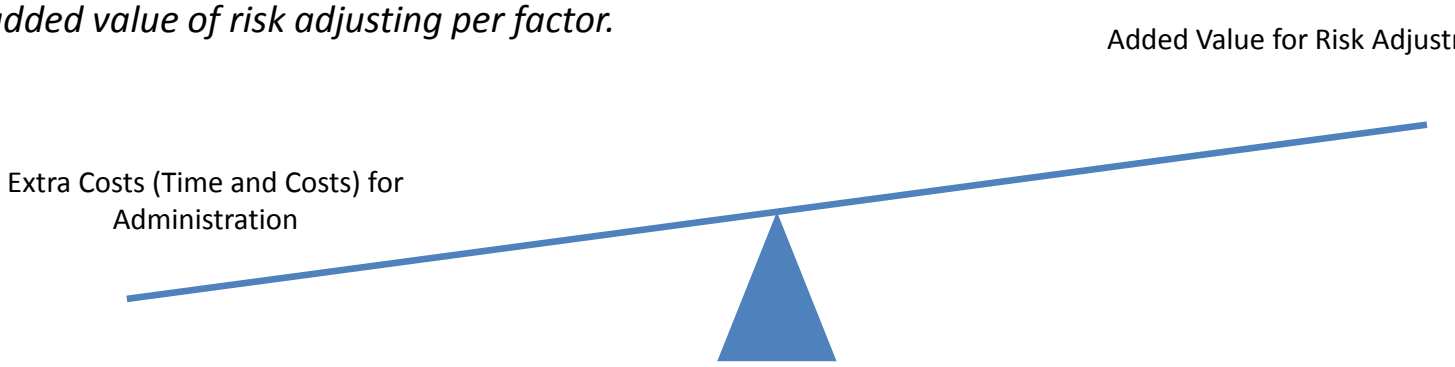
Abnormalities of uterus, female genital tract, Amnionitis, abn uterine environment, Antepartum Hemorrhage, placenta previa, Cardiovascular disease in Mother, Coagulation Defects in Mother, Elderly Primi, other , Epilepsy in Mother, Fetal abnormalities, Fetal damage / decreased movements, Hypertension, pre-eclampsia in Pregnancy, Infections of genitourinary tract, venereal disease in pregnancy, Infectious Diseases in Mother, Kidney Disease in Mother, Liver and biliary tract disorders in mother, Maternal Obesity, Edema, Maternal, gestational diabetes, large for date, Mental Disorders in Mother, Multiparity, multigravida, Multiple gestation, Peripartum Cardiomyopathy, Pregnancy w poor obstetric history, Previous C-section, Prolonged / post-term pregnancy, Sepsis, Pyrexia during Labor, Severe pre-eclampsia w HTN, Eclampsia, Threatened abortion, premature labor, Tobacco Use in Mother

Identification Risk Factors

- Risk factors come from historic claims (prio tart of an episode) and same list is applied across all episode types
- Subtypes identified from claims at start of the episode and specific to episode type (e.g., CAD, knee replacement, etc.)

The Effort of Collecting Additional Data for Risk Adjustments Must Be Weighed Against the Added Value

- For maternity care, risk adjustment factors are only partially available in 'standard' Medicaid claim data, yet subtype data are available
- A second source of information: Vital Statistics
  - Previous pre-term birth, interconception period
  - Weeks of pregnancy
  - Race
- Third option: adding clinical data (standardized reporting required)
  - *The extra costs (in time and money) of collecting the additional data has to be weighed against the added value of risk adjusting per factor.*



Suggested Process for Finetuning Risk Adjustment Methodology

Pilot 2016 & Data Analyses

Pilot 2016. In 2016 pilot project will be started on the maternity bundle with use of the existing risk adjustment methodologies based on existing Medicaid claim data.
Feasible because a provider's historical costs are used to set target budget

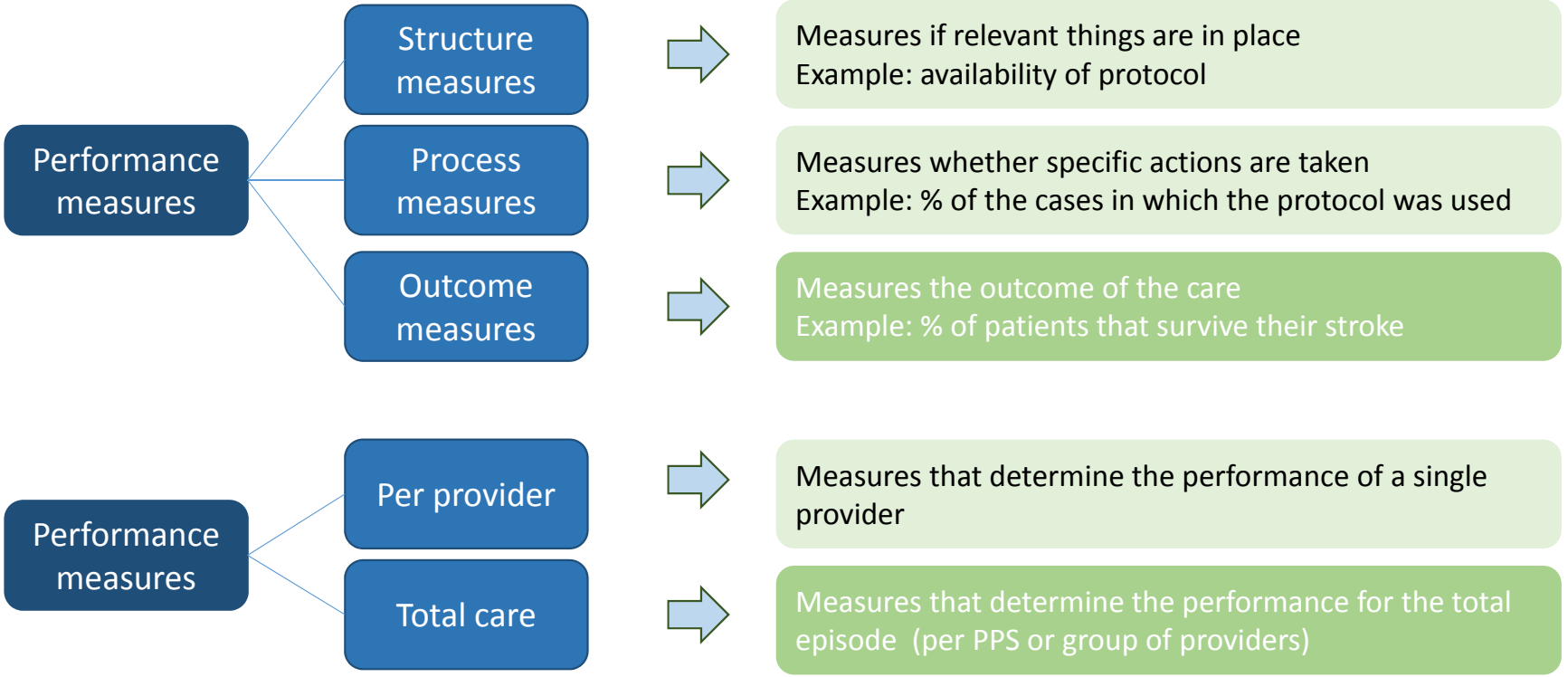
Data Analyses. 2016 will be used to do additional data analyses within pilot sites:
- Investigate addition vital statistics data elements
- Explore addition of clinical data elements (CAG can task subgroup to create feasible data-items list)

Evaluation Risk Adjustment Factors

Evaluation Risk Adjustment Factors. At the end of the pilot period the projects will be evaluated and the risk adjustment methodology will be refined.

4. Quality Measures

To Assess Value, a Small Key Set of Quality Measures is Needed. Focus Should Be on the *Outcomes* of the Overall Bundle.



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2014 Core Set of Maternity Measures for Medicaid and CHIP

Measures for Pregnancy and Delivery

- Elective Delivery
- Antenatal Steroids
- Prenatal and Postpartum Care: Postpartum Care Rate

Measures for Newborn Care

- Cesarean Section for Nulliparous Singleton Term Vertex (NSTV)
- Live Births Weighing Less than 2,500 Grams
- Frequency of Ongoing Prenatal Care
- (Well-Child Visits in the First 15 Months of Life)
- Prenatal and Postpartum Care: Timeliness of Prenatal care
- Maternity Care – Behavioral Health Risk Assessment

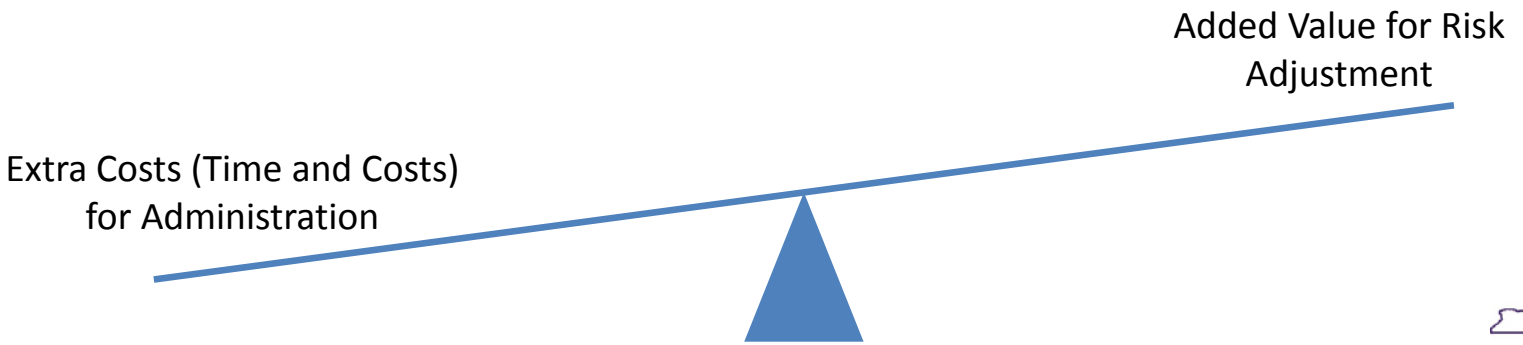
2015 QARR NYC Specific Performance Measures

QARR NYC Specific Prenatal Care Measures

- Risk-adjusted low birth weight rate
- Prenatal care in the first trimester
- Risk-adjusted primary C-sections
- Vaginal birth after C-section

The Effort of Collecting Additional Data for Outcome Measurement Must Be Weighed Against the Added Value

- For maternity care, outcome measures – like risk adjustment factors – can be derived from claims, but only partially so.
- A second source of information: Vital Statistics (is source for several of the NYS measures in use)
- Third option: adding clinical data (standardized reporting required)
  - *The extra costs (in time and money) of collecting the additional data has to be weighed against the added value of risk adjusting per factor.*



Suggested Process for Finetuning Outcome Measures

Pilot 2016 & Data Analyses	Evaluation Outcome Measures
Pilot 2016. In 2016 pilot project will be started on the maternity bundle with use of the NYS Maternity Quality Measures *Discussion on the most relevant subset needs to occur* **Data Analyses**. 2016 will be used to do additional data analyses within pilot sites: - Explore addition of clinical data elements (CAG can task subgroup to create feasible data-items list)	**Evaluation Outcome Measures**. At the end of the pilot period the projects will be evaluated and outcome measures for the Maternity Bundle can be refined.