Center for Medicare and Medicaid Innovation Strong Start for Mothers and Newborns: Call To Action, Policy, Power and Politics.

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Objectives

- Explain core findings related to the birth center model of care specifically impact on population health, patient experience of care and value.
- Appraise the political, professional, academic and cross-organizational partnerships used during the dissemination phase of the CMMI Strong Start for Mothers and Babies grant.
- Consider the concrete health policy "asks" and the impact for advanced practice nurses and the doctorate of nursing practice leaders serving Medicaid beneficiaries nationwide.

Results from the Center for Medicare and Medicaid Innovation Strong Start for Mothers and Newborns Project

Strong Start for Mothers and Newborns

Enhanced prenatal care initiative to improve outcomes for low-income women and infants

- **Preterm birth rates**
- **Low birthweight**
- **Cost of care**

27 awardees with 211 sites in 32 states, D.C. and Puerto Rico

Three evidence-based enhanced prenatal care models

- **Birth Centers**
- **Group Prenatal Care**
- **Maternity Care Homes**

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Typical Care vs. Strong Start Care

Perceived Weaknesses in Typical Prenatal Care:

- Overly medical in focus
- Overly interventionist
- Insufficiently focused on education
- Lacking in continuity

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Strong Start Enhanced Prenatal Care intended to provide:

- Intensive education
- Psychosocial support
- Referrals to non-medical services in community
- Improved continuity
- Patient-centered care and cultural competence

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Strong Start Models of Care

Birth Centers

Midwifery model of care enhanced with peer counseling

Group Prenatal Care

Clinical care provided in a group supplemented by education and facilitated discussion

Maternity Care Homes

Standard clinical care enhanced with care coordination and sometimes with additional services (e.g. nutrition counseling)

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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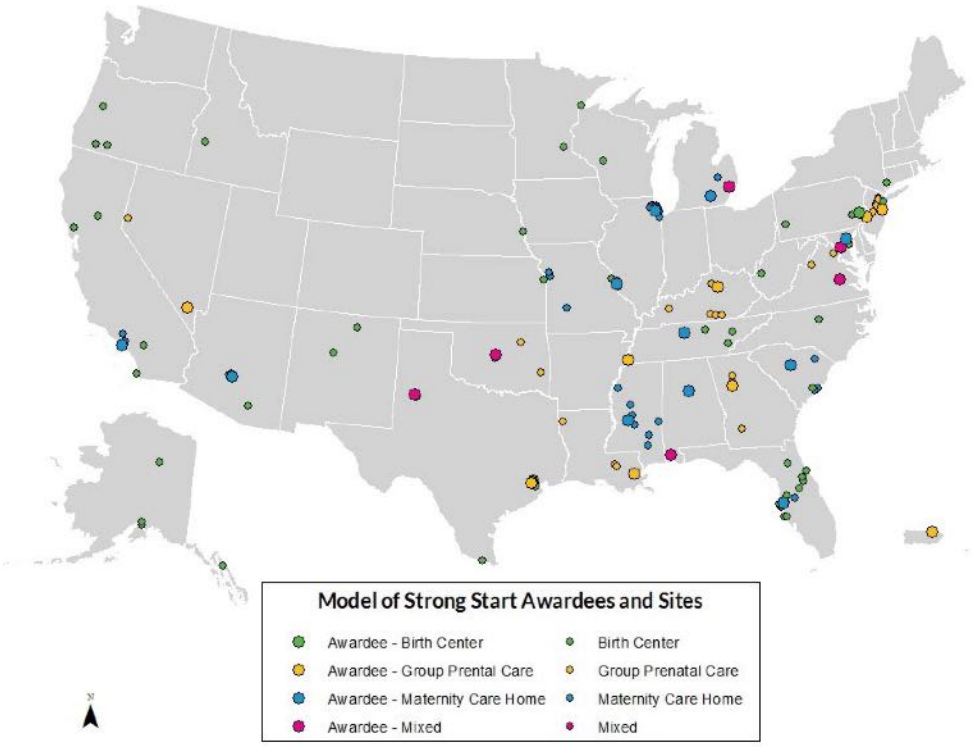
Distribution of Strong Start Awardees and Sites Across the United States



Cross-Barnet, Hill, Marcele, McCarthy (2019)

AABC Strong Start Enrollment

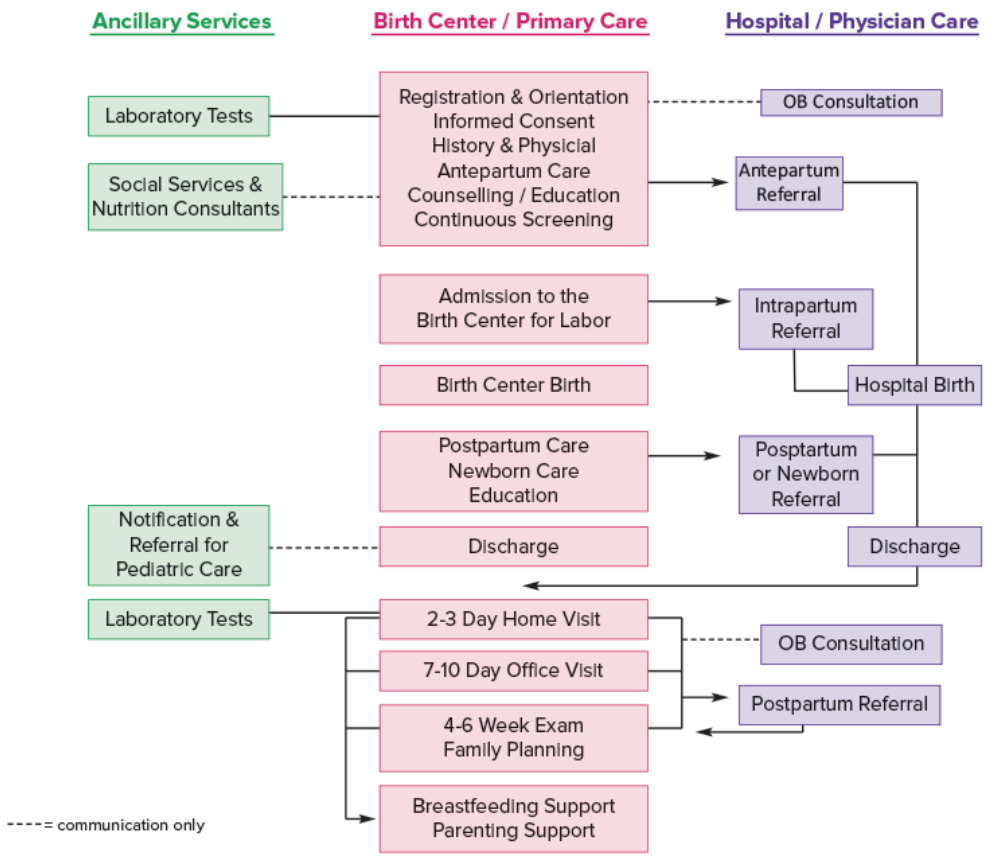
45 birth centers in 19 states

All women with Medicaid/CHIP

- 8389 women enrolled
- 6007 Other Medicaid mothers
- **Total 14,396 Med recipients in BC care**
- 6007 Strong Start newborns
- 3611 Other Medicaid newborns
- **Total 9818 infants with Medicaid/CHIP coverage**

The Birth Center

Primary Care in an Integrated Health Care System



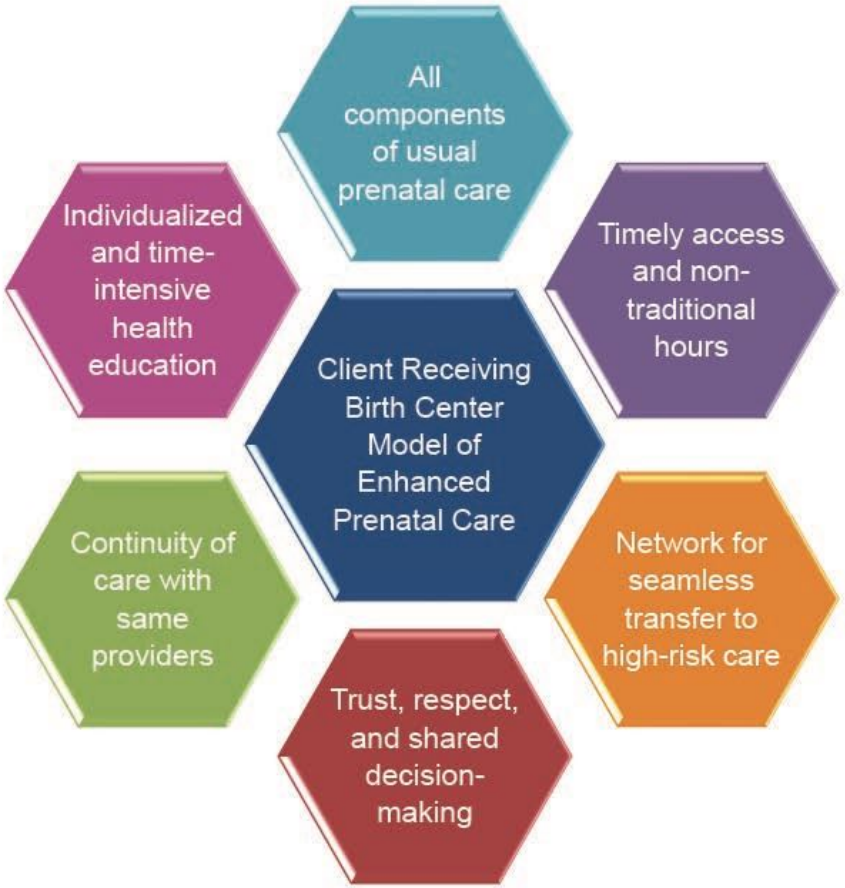


Figure 2. Birth Center Model of Enhanced Prenatal Care

Strong Start Births by Location

BIRTH LOCATION (N=6424)	Number	Percent
Hospital	3374	52.52%
Birth Center	2797	43.54%
Planned Home	176	2.74%
Enroute or Unplanned Home	77	1.20%

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Birth Attendant: Midwife

BIRTH ATTENDANT – MIDWIFE (N=6424)	Number	Percent
CNM/CM	3493	54.37%
CPM/LM/DEM	652	10.15%
Total Midwife Attended Births	4145	64.52%

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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Outcomes AABC Strong Start Sample

MATERNAL / INFANT HEALTH INDICATOR	AABC Strong Start	United States
Preterm Birth	4.42%	9.85%[i]
Low Birth Weight	3.28%	8.17%[i]
Very Low Birth Weight	0.67%	1.40%[i]
Primary Cesarean	8.56%	21.8%[ii]
Total Cesarean (includes repeat)	12.11%	31.9%[i]

[i] Martin, J., Hamilton, B. Osterman, M. (2018)
[ii] Osterman, M., Martin, J. (2014)

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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Preterm and Birthweight Racial Disparities in Strong Start and the U.S.

	AABC Strong Start All Races N=6424	U.S. All Races	AABC Strong Start African-American n=764	U.S. African-American
Preterm Birth[a]	4.42%	9.85%	4.97%	13.77%
Very Preterm Birth[b]	0.67%	1.59 %	1.04%	3.18%
Low Birth Weight[c]	3.54%[e]	8.17%	5.89%[f]	13.68%
Very Low Birth Weight[d]	0.55%[e]	1.40%	1.17%[f]	2.95%

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Cesarean: Racial Disparities

	AABC Strong Start All Races [1]	U.S. All Races[2]	AABC Strong Start African-American	U.S. African-American
Cesarean Section	12.3%	31.9%	15.1%	35.5%

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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Birth Center Care is High Value Care

- BC Prenatal care is time intensive and relationship-based
- Enhanced prenatal care includes referrals to needed resources, health education and emotional support
- Midwives see fewer women per day to achieve these outcomes
- Incentivizing birth center prenatal care results in savings to Medicaid
- Cost savings occur in better prepared mothers, healthier breastfed babies, lower rates of cesareans and interventions

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Summary

- Birth center care is high value care for Medicaid beneficiaries — even if they receive only prenatal care in the birth center
- Medicaid beneficiaries are satisfied with birth center care
- Care of Medicaid beneficiaries may require more support resources and may lead to slightly higher rates of transfers and complications than for other birth center clients
- More research and analysis is needed for adequate comparison to lower risk Medicaid beneficiaries in hospital care
- Legislation needed for better access to birth center care for Medicaid beneficiaries

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Data Sources

- Three main sources of data
  - **Birth certificates for 12 states and District of Columbia (2014-2016)**
  - **Medicaid eligibility files for 12 states and DC (2014-2016)**
  - **Medicaid claims and encounter data for 8 states and DC (2014-2015)**
- Analytic file included Medicaid-covered births for women enrolled in Strong Start and women in comparison groups

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Analytic Approach

- Used propensity score reweighting*
- Created propensity score-based weights for comparison groups of Medicaid-covered women receiving typical care in same counties
- Estimated impacts as difference in outcomes between Strong Start participants and propensity score reweighted comparison groups
- Produced impact estimates at model level and awardee level
    - Estimates also at site level when sample size was sufficient

*Propensity score reweighting yields statistically efficient estimates (Hirano, Imbens, and Ridder, 2003) and performs very well among alternative propensity-score-based methods (Busso, DiNardo, and McCrary, 2014).

Comparison Group

- Women with Medicaid-covered births in same counties as Strong Start participants who received typical care
- Vast majority of typical care practiced in private solo and/or group practices, Federally Qualified Health Centers, and hospital outpatient department clinics
- Sensitivity analysis conducted in similar counties where awardees suggested they treated most eligible women in county

Typical Care

- **Medical in nature**
- **Overly interventionist**
- **Insufficient health education**
- **Often lacks provider continuity**

Cross-Barnet, Hill, Marcele, McCarthy (2019)

Findings by Model

- Maternity Care Home model
  - few significant effects on birth processes, outcomes, costs, or utilization

- Group Prenatal Care model
  - few significant effects on birth processes and outcomes
  - reduction in costs during the prenatal period and some reductions in utilization

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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Findings: Birth Center Outcomes

Outcomes	Main Model: 2014 - 2016, Strong Start (N=3,432)	Main Model: 2014 - 2016, Comparison Group Reweighted (N=325,647)	Main Model: 2014 - 2016, Difference	Significance of Difference
Birth Outcomes				
Clinical gestational age (weeks)	39.0	38.6	**0.4**	**p <0 .01**
Preterm birth rate	6.3%	8.5%	**-2.2**	**p < 0.01**
Very preterm birth rate	1.7%	2.2%	-0.4	n.s.
Birthweight (grams)	3,342.8	3,263.8	**79.0**	**p < 0.01**
Low birthweight rate	5.9%	7.4%	**-1.5**	**p < 0.05**
Very low birthweight rate	1.0%	1.1%	-0.1	n.s.
Rate of Apgar score greater than or equal to 7	98.2%	98.2%	0.0	n.s.
Process Outcomes				
C-section rate	17.5%	29.0%	**-11.5**	**p < 0.01**
VBAC rate	24.2%	12.5%	**11.6**	**p < 0.01**
Weekend delivery rate	23.7%	19.8%	**4.0**	**p < 0.01**

Cross-Barnet, Hill, Marcele, McCarthy (2019)

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Findings:
Birth Center Expenditures and Utilization

Outcomes	Main Model: 2014 - 2015 Births, Strong Start (N=1,853)	Main Model: 2014 - 2015 Births, Comparison Group Reweighted (N=114,409)	Main Model: 2014 - 2015 Difference	Significance of Difference
Expenditure Outcomes (Means)				
Prenatal care expenditures	$2,203	$2,192	$10	n.s.
Total expenditures during delivery period	$6,527	$8,286	**-$1,759**	**p < 0.01**
Total delivery and post-delivery expenditures	$10,562	$12,572	**-$2,010**	**p < 0.01**
Utilization Outcomes (Means)				
Number of ED visits 8 months before delivery month	1.19	1.16	0.03	n.s.
Number of hospitalizations 8 months before delivery month	0.03	0.03	0.0	n.s.
Number of days in NICU	0.71	0.95	-0.24	n.s.
Number of ED visits for mother 11 months after delivery month	0.63	0.67	-0.04	n.s.
Number of hospitalizations for mother 11 months after delivery month	0.04	0.04	0.01	n.s.
Number of ED visits for infant in the first year of life	0.86	0.99	**-0.13**	**p < 0.01**
Number of hospitalizations for infant in the first year of life	0.07	0.08	**-0.01**	**p < 0.05**

Cross-Barnet, Hill, Marcele, McCarthy (2019)

High value care

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Estimated Cost Savings Analysis

Lower caesarean rates and fewer medical interventions, reductions in preterm, low birthweight births when care provided in the freestanding birth center

Estimated Medicaid savings cesareans prevented **per 10,000 births $4.35 million (facility savings only)**

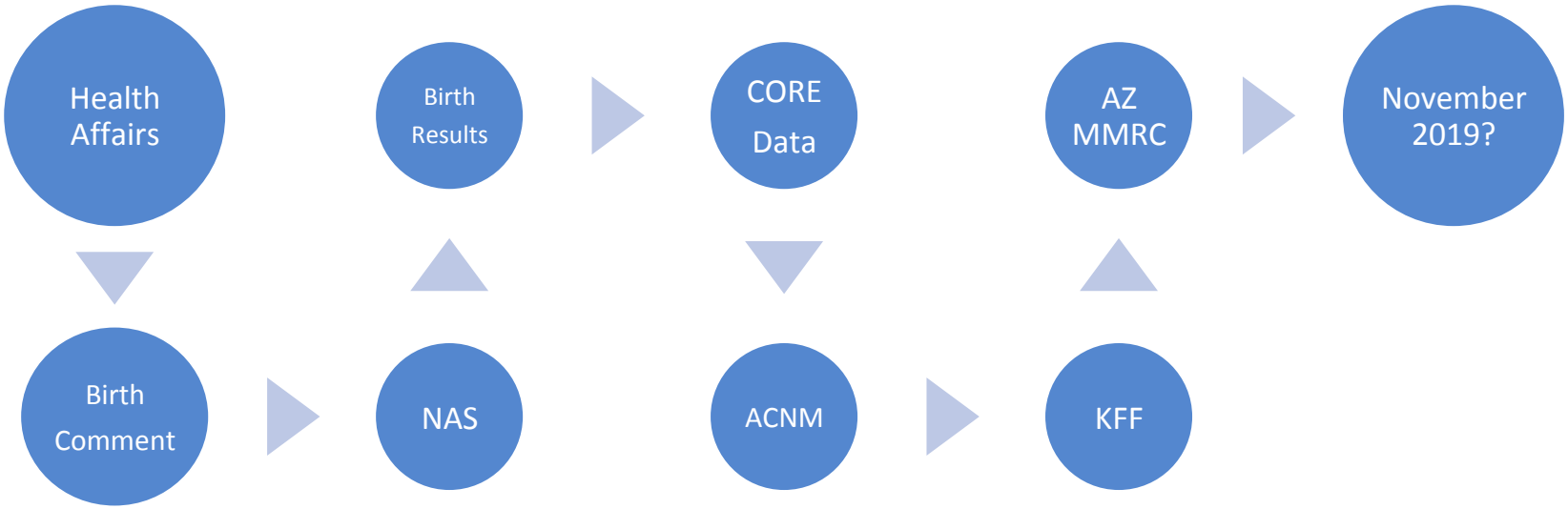
Estimated savings reduction in preterm births and NICU admissions **per 10,000 births $24.25 million**

Estimated cost increase to enhanced prenatal care would be offset by savings

Client Satisfaction

- Birth centers showed highest rates of client satisfaction with both **prenatal care** and **delivery experience, and satisfaction dropped significantly for birth experience***
  - Prenatal care at birth centers
    - 96% very satisfied or extremely satisfied
  - Delivery experience at birth centers
    - 84% very satisfied or extremely satisfied

Appraise Cross-sectional Partnerships

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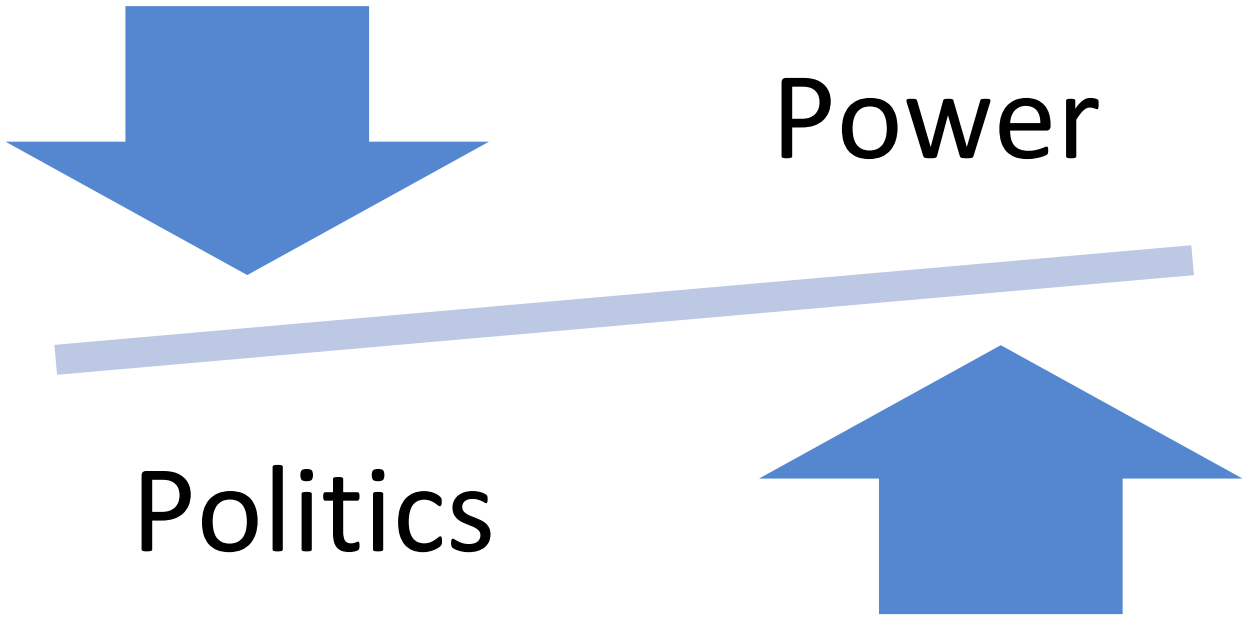
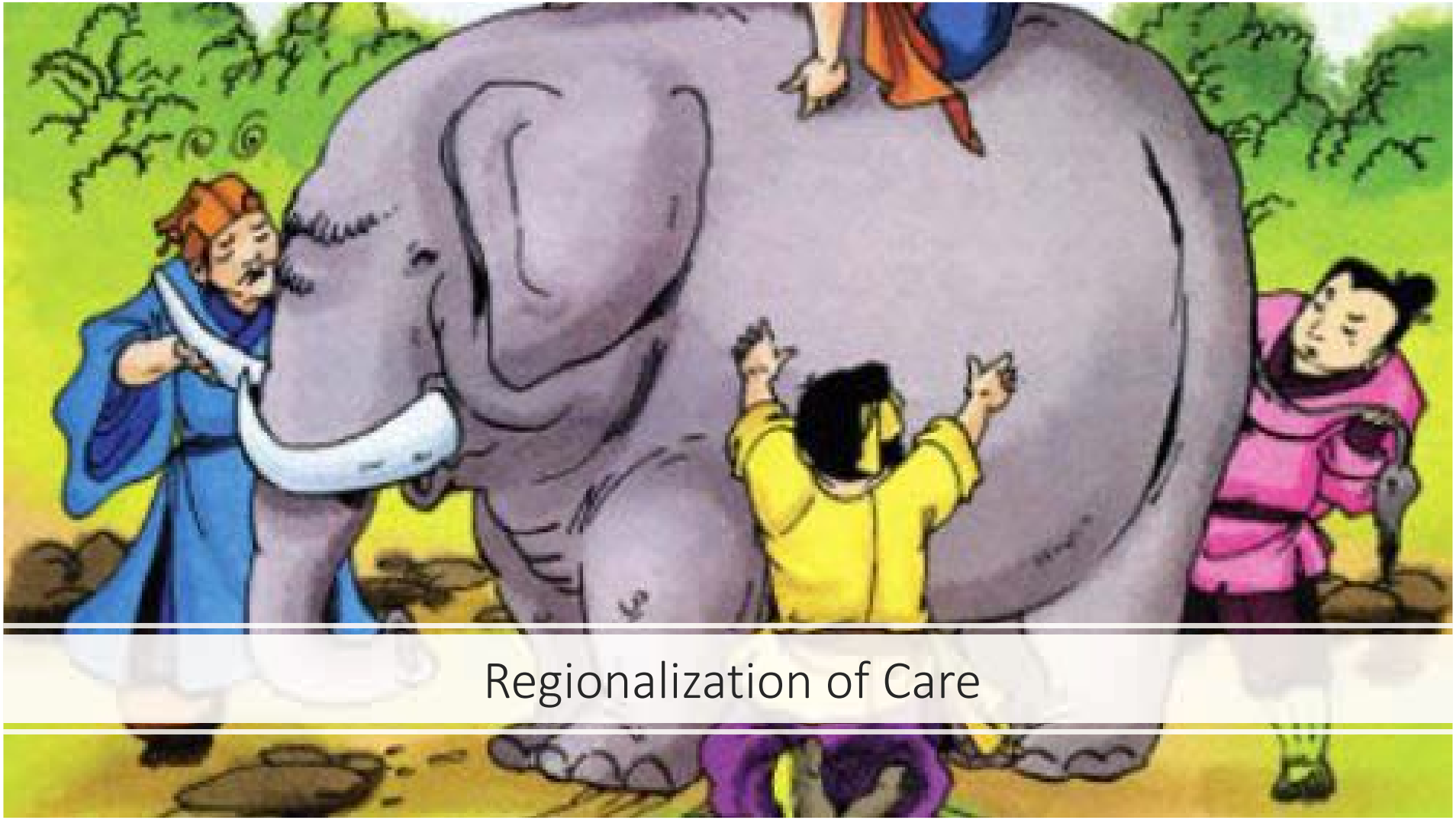
Impact Evaluation

Scale

Policy



Marginalized Majority

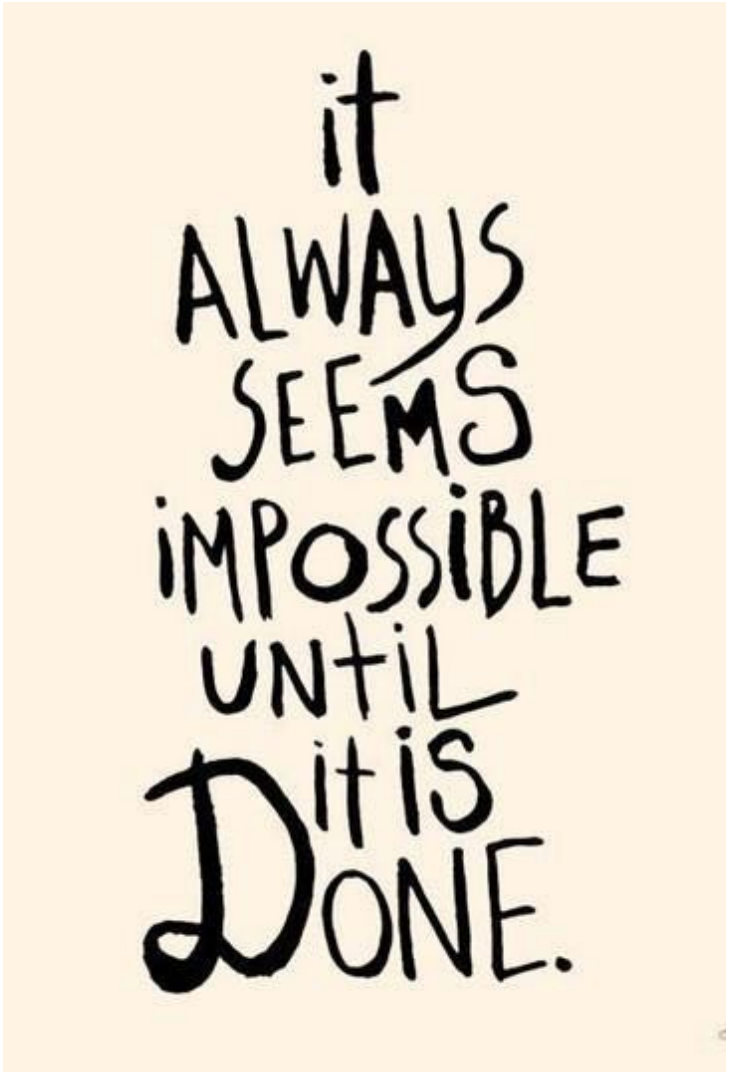


Regionalization of Care

Concrete Policy Asks

Joint Commission Perinatal Core Measures

- **PC-01 Elective Delivery**
- **PC-02 Cesarean Section**
- PC-03 Antenatal Steroids
- PC-04 Health Care-Associated Bloodstream Infections in Newborns
- **PC-05 Exclusive Breast Milk Feeding**



National Quality Forum (NQF)

- Over 900 member organizations
- 5 stakeholder groups
- Consensus development on national priorities and goals for performance improvement
- Endorsing performance measures
- Promoting attainment of national goals through outreach

Surge Capacity

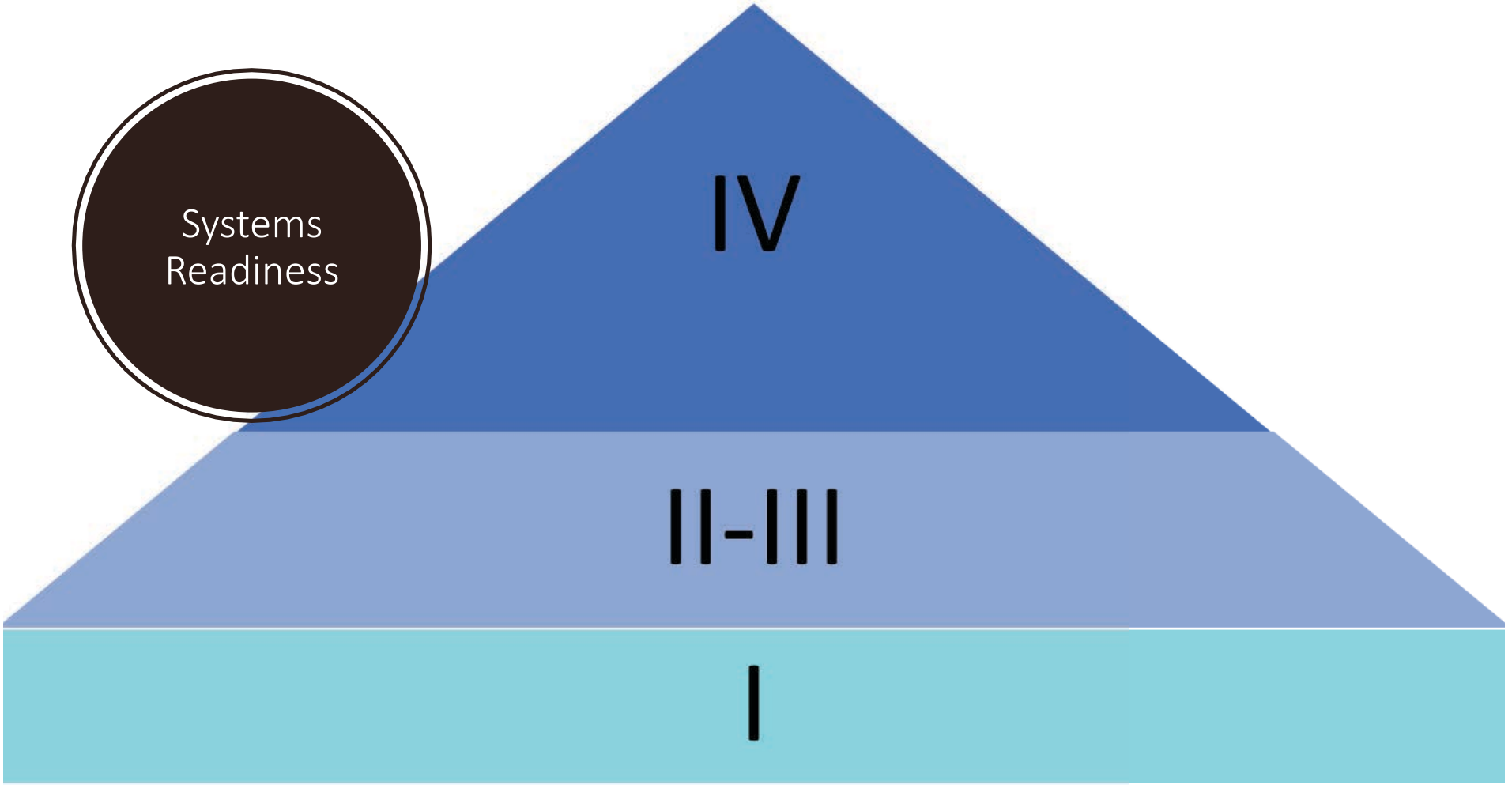
Olga Ryan, MS-NL, RN 2015

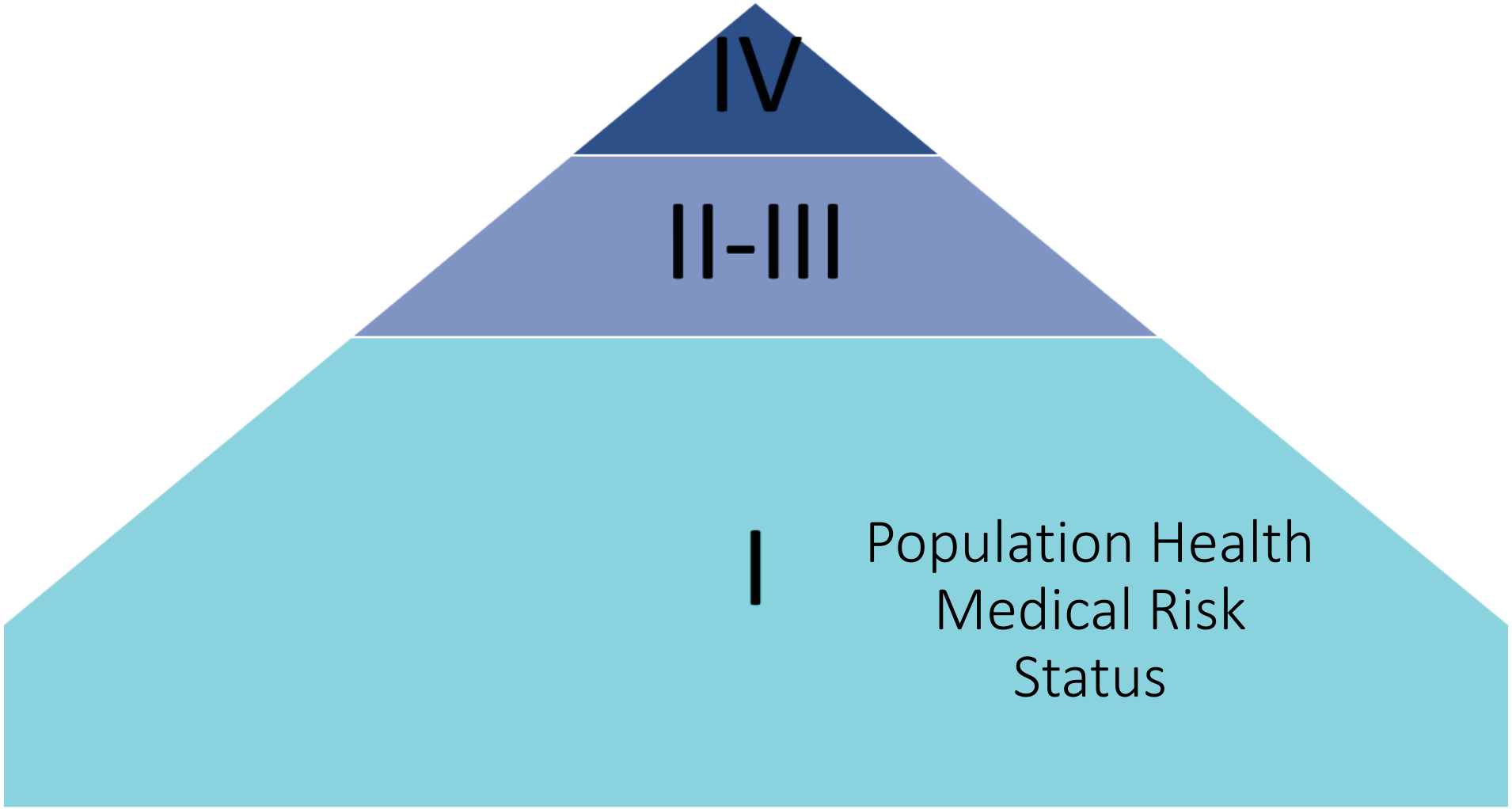
Advanced Practice, Nurse-Led Disruptive Innovation

Healthcare in a social context

DNPs as Change Agents

- "Every system is perfectly designed to get the results it gets." Now, the question isn't *why* we need change, or *what* change is needed—it's *how*.


Systems Readiness
IV
II-III
I


IV
II-III
I
Population Health
Medical Risk
Status

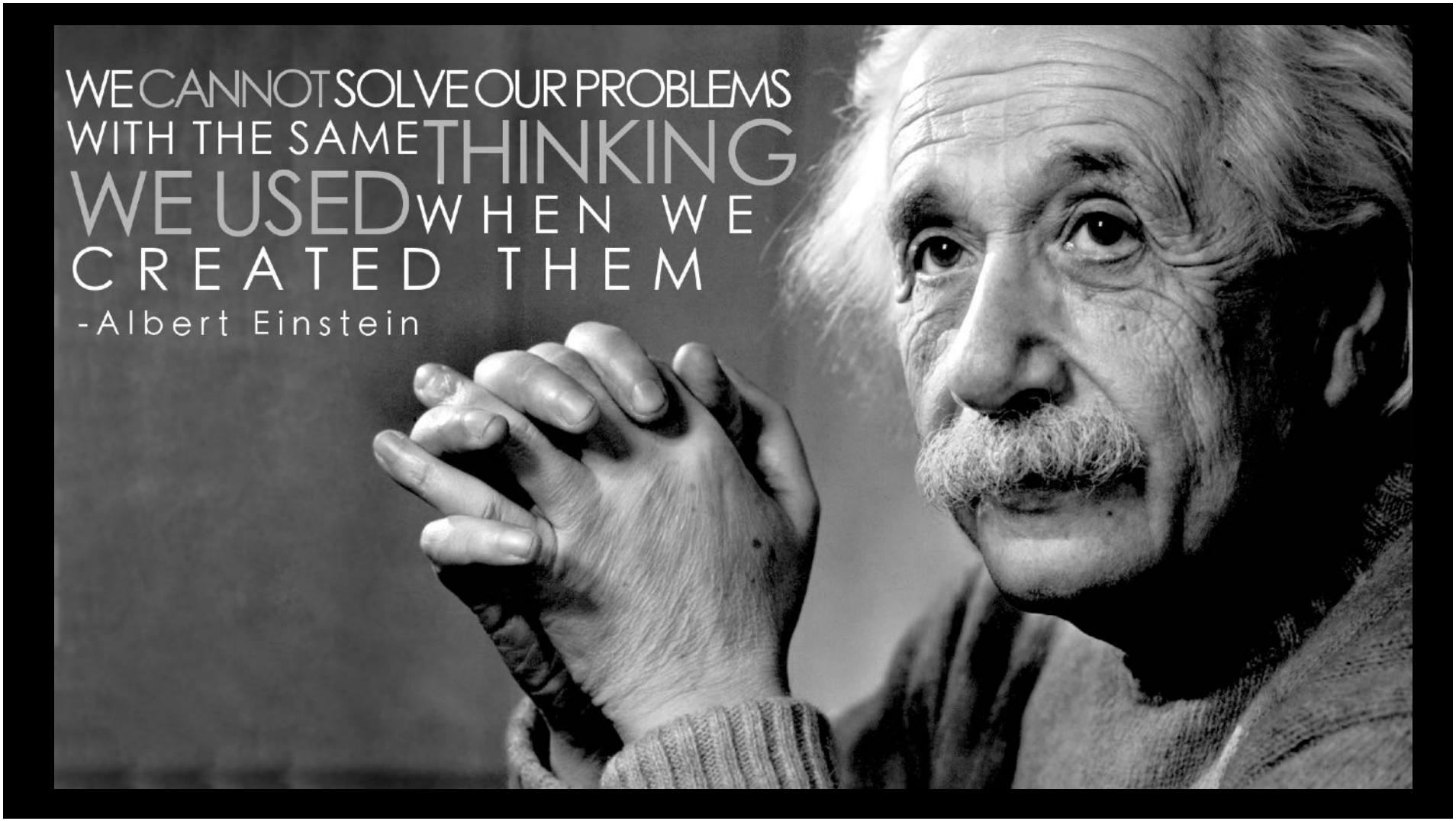
Innovation and Diffusion

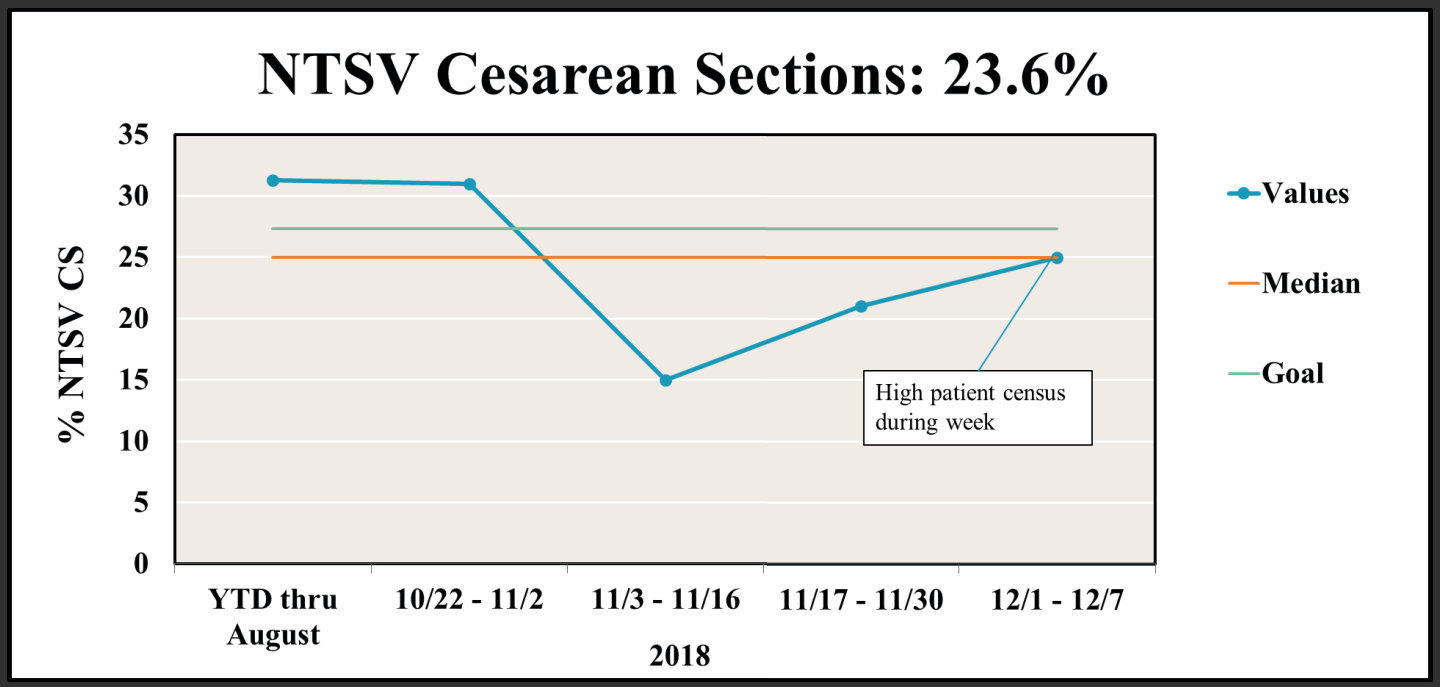
The National Quality Strategy unites efforts to improve health and health care for all Americans. The above graphic provides a high-level view of how the National Quality Strategy works to provide better, more affordable care for the person and the community.

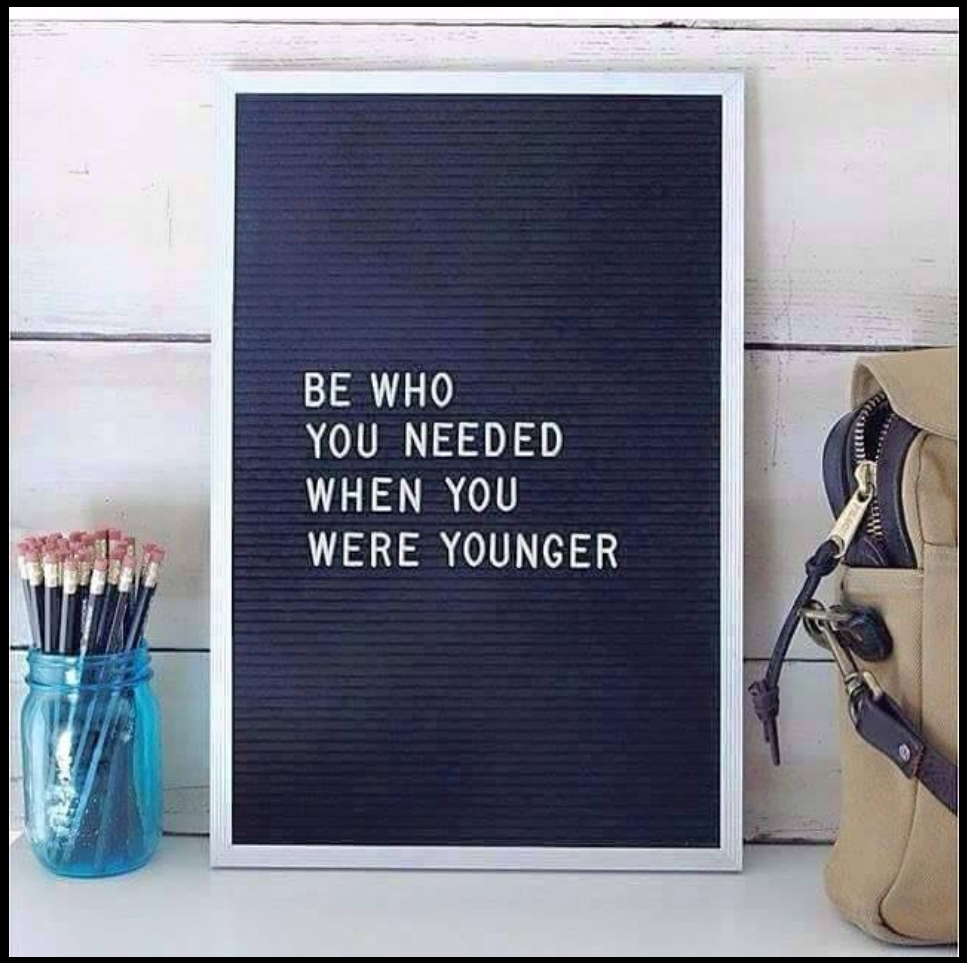
Resilience and Systems Redesign

National Quality Levers

- Innovation and diffusion
- Public Reporting, Measurement and Feedback
- Certification, accreditation, regulation
- Payment


WE CANNOT SOLVE OUR PROBLEMS
WITH THE SAME THINKING
WE USED WHEN WE
CREATED THEM
-Albert Einstein


NTSV Cesarean Sections: 23.6%
% NTSV CS
35
30
25
20
15
10
5
0
YTD thru August
10/22 - 11/2
11/3 - 11/16
11/17 - 11/30
12/1 - 12/7
2018
High patient census during week
Values
Median
Goal


BE WHO
YOU NEEDED
WHEN YOU
WERE YOUNGER

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