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The Use of Interpreters to Improve the Quality and Safety of Healthcare Through Better Communication in Obstetric Patients: Effect on Primary Cesarean Delivery Rate

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CAPSTONE PROJECT – MSHQS
JEFFERSON SCHOOL OF POPULATION HEALTH
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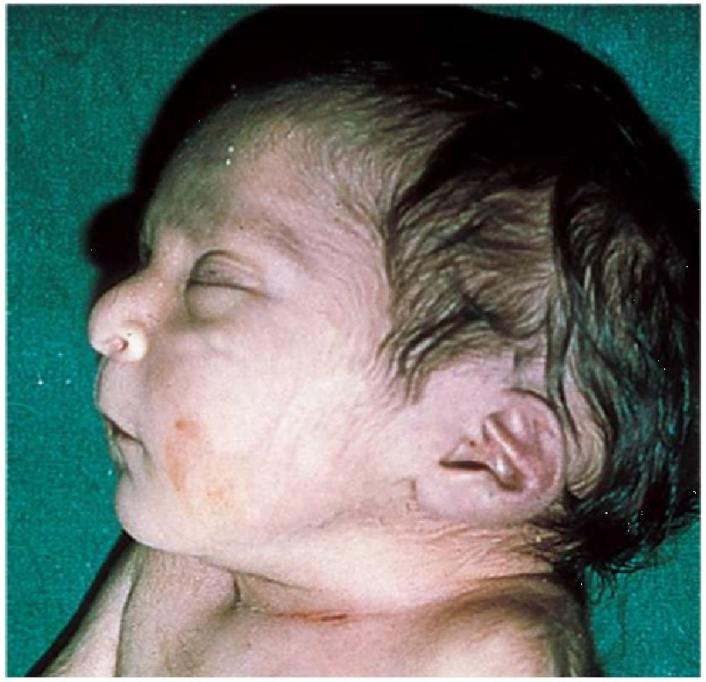
- My Family

Personal Experience

Twas the night before Christmas……..



PURPOSE

- Language barriers contribute to poor healthcare outcomes and increase medical costs.
- This quality improvement effort addressed these issues
  - interpreter services
  - staff training in cultural competency
- Labor and Delivery targeted due to the high volume of patients with Limited English Proficiency (LEP)
- Focus is on healthcare outcomes

PRINCIPAL CAUSES OF DISPARITIES

- Values, behaviors and preferences impact thresholds of care
- Inability to communicate
  - Unable to explain symptoms
  - Cannot comprehend plan of care
  - Poor compliance

CULTURAL COMPETENCY

- "A set of congruent behaviors, attitudes and policies that come together in a system, agency or among professionals that enables effective work in cross-cultural situations." (Minority Health.hhs.gov, 2011)
- United States – A nation of immigrants
- Cultural competency is essential in healthcare

REGULATORY ISSUES

- Culturally and Linguistically Appropriate Services (CLAS) 14 standards for HC organizations
  - Provision of free language assistance services
  - Verbal and written notification that language services are available
  - Assuring the competence of translators
  - Provision of easily understood patient related materials and signage in the languages commonly used in the community
- ACGME – rubric for professionalism "demonstrate sensitivity and responsiveness to patient's culture
- Joint Commission 2010 Standards of Patient Centered Communication

CHRISTIANA CARE HEALTH SYSTEMS

- Largest tertiary care teaching hospital in Delaware and a clinical campus for JMC
- Serving a community with increasing diversity
- Hired CulturaLink to perform a needs assessment
- Also used AMA Communication Climate Assessment Tool
- Census findings
  - 12% of Delawareans speak language other than English
  - 52% of which speak Spanish
  - 38% of those who speak another language are LEP

NEEDS IDENTIFIED

- Improvement of language services delivery
- Comprehensive training on interacting with a diverse patient population
- Collection of data on race, ethnicity and primary language
- Our data
  - Hispanic babies misassigned

JP3

PROJECT DESIGN

- Team – SVP for Systems Learning and Chief Diversity Officer, VP Patient Care Services, Chief Nursing Officer, Chairs of Pediatrics and Obstetrics, Neonatal Fellowship Director
- Target – Labor and Delivery because increasing Hispanic patients and data suggesting lower quality of care
- Speculated that suboptimal communication leads to unnecessary cesarean deliveries and negatively impacts other medical outcomes
- Intervention
  - Full time Spanish and augmented multilingual telephonic interpreters
  - TeamSTEPPS – AHRQ program to build highly effective HC teams

Slide 10

JP3 Your second bullet is CRITICAL.
James Pelegano, 8/4/2012

STUDY DESIGN – Timeline

March-August 2011

- Pre-intervention data collection

September-October 2011

- TeamSTEPPS training 115 L&D staff
- Live Spanish and augmented multilingual interpreters

October 2011 – March 2012

- Post-intervention data collection

BARRIER ANALYSIS

- Availability of competent interpreters
- Proper identification of patients who need services
- Cost
- Lack of understanding of providers

STAKEHOLDER ANALYSIS

- LEP patients
- Obstetric providers
- Hospital administration
- Community at large

RESULTS – Overall Population

	Pre- Intervention	Post-Intervention
Total Deliveries	**3510**	**3176**
Total C-Sections	**1145**	**1015**
Primary C-Section Rate	**21.94%**	**21.54%**

RESULTS – Maternal Outcomes

	Pre-Intervention	Post-Intervention	P-value
Elopements	**67**	**68**	**.56**
Left Against Medical Advice	**21**	**35**	**.03**
Antepartum Steroids	**100%**	**100%**	**1.0**
Postpartum Hemorrhage	**96**	**114**	**.05**
Readmissions	**65**	**65**	**.62**
Length of Stay(d)	**2.95±2.99**	**2.97±3.18**	**.73**

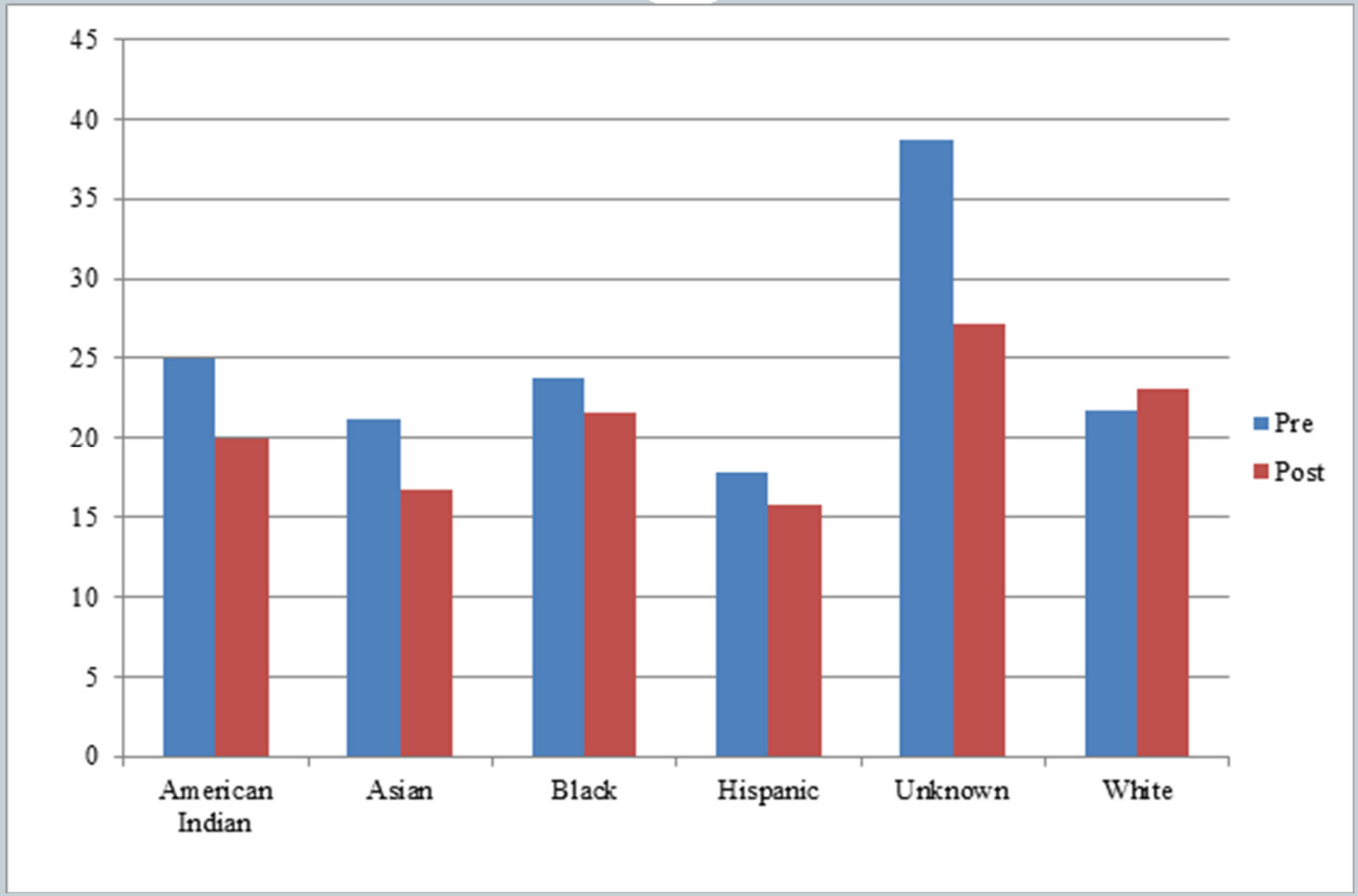
RESULTS – Neonatal Outcomes

	Pre-Intervention	Post-Intervention	P-value
Stillborn	**28**	**27**	**.92**
Inborn Mortality	**28**	**28**	**.81**
Admission to NICU	**555**	**469**	**.25**
Immunizations	**90.64%**	**90.81%**	**.86**
BF at discharge	**29.3%**	**30.1%**	**.54**
< 2500g	**330**	**236**	**.004**
Hospital charges	**$8960±6054**	**$9299±6151**	**.03**
Lab charges	**$434±844**	**$471±817**	**.07**

RESULTS – Cesarean Delivery by Ethnicity

	Pre-Intervention		Post-Intervention		
	Total Deliveries	Primary Cesarean Rate	Total Deliveries	Primary Cesarean Rate	P-value
American Indian	24	25.0%	21	20.0%	1.0
Asian	188	21.2%	185	16.7%	0.39
Black	857	23.7%	833	21.6%	0.48
Hispanic	428	17.8%	382	15.7%	0.53
Unknown	42	38.7%	28	27.3%	0.57
White	1897	21.7%	1664	23.1%	0.41
TOTAL	3436	21.94%	3113	21.54%	0.69

Primary Cesarean Delivery by Ethnicity



Use of Interpreters

- Live Spanish interpreter
  - Averaged 100 encounters per month
  - Average encounter lasted 50 minutes
- Telephonic interpreters
  - All languages 15,010 minutes pre-intervention and 12,456 minutes post-intervention
  - Spanish only 12,414 minutes pre-intervention and 10,030 post-intervention
  - Mandarin, most common Asian language increased fro 281 minutes to 478 minutes
  - New languages Japanese, Hebrew, Cantonese, Kurdish, Farsi

FINANCIAL ANALYSIS

- Annual Costs
  - $60,000 interpreter and manager
  - $60,000 telephonic interpreters
  - $30,000 implementation of TeamSTEPPS
- Annual Savings
  - 5088 minutes less telephonic $4223
  - 50 fewer cesarean deliveries $175,000
  - 100 fewer babies < 2500g $200,000
  - 20 fewer NICU admissions $300,000
  - Decreased Malpractice risk average settlement $6million

Summary of Findings

- Decreased primary cesarean deliveries
  - Asian population – 20.9% from baseline
  - Hispanic population – 12.4% from baseline
- Decreased number of babies < 2500 grams
- Increased postpartum hemorrhage, mothers who signed out AMA and hospital charges
- Limitations –
  - Focused on language
  - Don't know exact number of LEP patients
  - Small numbers when patients stratified by ethnicity

Discussion

- Previous studies show that use of interpreters improves patient satisfaction amongst LEP patients (Flores 2005)
- Language services alone do not address cultural differences
- Systematic review showed that educational programs do improve cultural competence of providers (Beach 2005)

Proposed Mechanism – Betancourt 2003

Future Directions

- Increased needs to cope with diversity as minority population continues to increase in the US from 28% currently to 40% by 2030
- Recording patients' race, ethnicity and preferred language
- Expansion of live interpreter services to other areas of the hospital
- Expanded use of TeamSTEPPS to promote cultural competency of staff
- Improved compliance with other CLAS directives

Future Directions

- *"Cultural Competence is not a panacea that will single handedly improve health outcomes and eliminate disparities, but a necessary set of skills for physicians who wish to deliver high-quality care to all patients. If we accept this premise, we will see cultural competence as a movement that is not marginal but mainstream."*

J. G. Betancourt, 2004