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

- JSPH Faculty and Dean Nash
- Drs. Pelegano, Colon-Kolacko and Berghella
- CCHS Staff – Olabisi Adedeji, Donna Mahoney, Deborah Caputo-Rosen, Jacqueline Ortiz, Claudia Acero
- My Family
Personal Experience

Twas the night before Christmas.......

[Image of a baby]
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
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
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
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

<table>
<thead>
<tr>
<th></th>
<th>Pre- Intervention</th>
<th>Post-Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deliveries</td>
<td>3510</td>
<td>3176</td>
</tr>
<tr>
<td>Total C-Sections</td>
<td>1145</td>
<td>1015</td>
</tr>
<tr>
<td>Primary C-Section Rate</td>
<td>21.94%</td>
<td>21.54%</td>
</tr>
</tbody>
</table>
### RESULTS – Maternal Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elopements</td>
<td>67</td>
<td>68</td>
<td>.56</td>
</tr>
<tr>
<td>Left Against Medical Advice</td>
<td>21</td>
<td>35</td>
<td>.03</td>
</tr>
<tr>
<td>Antepartum Steroids</td>
<td>100%</td>
<td>100%</td>
<td>1.0</td>
</tr>
<tr>
<td>Postpartum Hemorrhage</td>
<td>96</td>
<td>114</td>
<td>.05</td>
</tr>
<tr>
<td>Readmissions</td>
<td>65</td>
<td>65</td>
<td>.62</td>
</tr>
<tr>
<td>Length of Stay (d)</td>
<td>2.95±2.99</td>
<td>2.97±3.18</td>
<td>.73</td>
</tr>
</tbody>
</table>
## RESULTS – Neonatal Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stillborn</td>
<td>28</td>
<td>27</td>
<td>.92</td>
</tr>
<tr>
<td>Inborn Mortality</td>
<td>28</td>
<td>28</td>
<td>.81</td>
</tr>
<tr>
<td>Admission to NICU</td>
<td>555</td>
<td>469</td>
<td>.25</td>
</tr>
<tr>
<td>Immunizations</td>
<td>90.64%</td>
<td>90.81%</td>
<td>.86</td>
</tr>
<tr>
<td>BF at discharge</td>
<td>29.3%</td>
<td>30.1%</td>
<td>.54</td>
</tr>
<tr>
<td>&lt; 2500g</td>
<td>330</td>
<td>236</td>
<td>.004</td>
</tr>
<tr>
<td>Hospital charges</td>
<td>$8960±6054</td>
<td>$9299±6151</td>
<td>.03</td>
</tr>
<tr>
<td>Lab charges</td>
<td>$434±844</td>
<td>$471±817</td>
<td>.07</td>
</tr>
</tbody>
</table>
## RESULTS – Cesarean Delivery by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Deliveries</td>
<td>Primary Cesarean Rate</td>
<td>Total Deliveries</td>
</tr>
<tr>
<td>American Indian</td>
<td>24</td>
<td>25.0%</td>
<td>21</td>
</tr>
<tr>
<td>Asian</td>
<td>188</td>
<td>21.2%</td>
<td>185</td>
</tr>
<tr>
<td>Black</td>
<td>857</td>
<td>23.7%</td>
<td>833</td>
</tr>
<tr>
<td>Hispanic</td>
<td>428</td>
<td>17.8%</td>
<td>382</td>
</tr>
<tr>
<td>Unknown</td>
<td>42</td>
<td>38.7%</td>
<td>28</td>
</tr>
<tr>
<td>White</td>
<td>1897</td>
<td>21.7%</td>
<td>1664</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3436</td>
<td>21.94%</td>
<td>3113</td>
</tr>
</tbody>
</table>
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 from 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 delivery $4223
  - 50 fewer cesarean deliveries $175,000
  - 100 fewer babies < 2500g $200,000
  - 20 fewer NICU admissions $300,000
  - Decreased Malpractice risk average settlement $6 million
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

Better Communication ➔ Increased Patient Satisfaction ➔ Improved Adherence to Medical Plans

Better Healthcare Outcomes ➔
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
“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