Birth, death and contemporary media coverage in the U.S.

Gene Declercq, PhD
Boston University School of Public Health
Health Journalism 2017
Orlando, FL
April 21, 2017
Collaborators
Follow Birth by the Numbers on Social Media:

RSS (blog): www.birthbythenumbers.org

www.facebook.com/BirthByTheNumbers

Twitter: @BirthNumbers

Email: birthbynumbers@gmail.com

Slides that can be shared will be on this site:

www.birthbythenumbers.org
Want to know how much birth has changed in America?
Gestational Age, U.S. All Births, 2015

- <34: 3%
- 34-36: 7%
- 37-38: 25%
- 39: 37%
- 40: 21%
- 41: 7%
- 42+: 0%
Gestational Age, U.S. All Births, 1990, 2015
Gestational Age, U.S. All Births & Planned Home Births that Occur at Home, 2015
This change could be entirely worthwhile if it improved outcomes.

Much of the focus of the change was preventing stillbirths.
U.S. Perinatal Mortality Rates, 2000-2014

Perinatal Mortality Rates, 2000-2014, U.S., & Ave. for Industrialized Countries*

* Countries with 100,000+ births (2014): Australia, Belgium, Canada, Czech Republic, France, Germany, Greece, Israel, Italy, Japan, Netherlands, S. Korea, Spain, Sweden, United Kingdom

Perinatal Mortality Rates (per 1,000 births), 2014, Industrialized Countries 100,000+ Births

France* 10.6
Australia* 8.2
United Kingdom 6.7
Belgium* 6.3
United States* 6.2
Canada# 6.0
Greece 5.6
Germany 5.4
Sweden 5.1
Israel 4.9
Netherlands 4.6
Spain 4.5
Italy 4.0
Czech Republic 3.7
Korea 3.1
Japan 2.5

So we’ve changed the birthing process without much improvement in outcomes.

Source: OECD Health Data 2016
Five Other Quick Points on Birth in America
1. Birth is a big deal in the U.S. Health System
Total U.S. Births, 1990-2015

Net Decrease 2007-2015
338,488 or 7.8%

Source: Adapted from CDC VitalSTATS. http://www.cdc.gov/nchs/VitalStats.htm
BirthByTheNumbers.org
MEDIAN FACILITY LABOR & BIRTH CHARGES BY MODE OF BIRTH, U.S., 2014

<table>
<thead>
<tr>
<th>Mode of Birth</th>
<th>Vaginal No Complications</th>
<th>Cesarean No Complications</th>
<th>Vaginal Complications</th>
<th>Cesarean Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$10,580</td>
<td>$18,570</td>
<td>$13,010</td>
<td>$21,704</td>
</tr>
</tbody>
</table>

76% of births are vaginal with no complications.

Estimated Total Charges, Hospital Birth, U.S., 1993-2014 (000,000)

2. There’s a serious maldistribution of maternity care providers in the U.S.
CNMs per 100K, 2011

3,142 U.S. Counties

1,758 (56%) U.S. Counties with no CNM

SOURCE: Area Resource File

CNM per 100,000

- 0
- 0.1 - 4.9
- 5.0 +

Map Created By: Kate Crawford on 3/1/2014
Birth By The Numbers (www.birthbythenumbers.org)
CNMs & OBs per 100K, 2011

1,263 (40%) U.S. Counties with no OB or CNM

SOURCE: Area Resource File
3. We have wide black/white disparities in outcomes in the U.S.
Wide disparities in outcomes in the U.S.

U.S. Infant & Maternal Mortality
Black/White Ratios 1980-2014

But....
(3a) But the disparities cannot account for the U.S. poor performance compared to other countries
Neonatal Mortality Rates (per 1,000 births), 2014, Industrialized Countries with 100,000+ Births

United States: 3.9
Canada#: 3.6
United Kingdom: 2.7
Greece: 2.6
France*: 2.5
Australia: 2.4
Netherlands: 2.2
Germany: 2.2
Belgium*: 2.2
Spain: 2.1
Israel: 2.1
Italy*: 2.1
Korea: 1.7
Czech Republic: 1.6
Sweden: 1.4
Japan: 0.9

Source: OECD Health Data 2016 and NCHS, Deaths Final Data for 2014.
*2013; #2012;
Maternal Mortality Rates, (per 100,000 births), 2013, Industrialized Countries with 300,000+ births

<table>
<thead>
<tr>
<th>Country</th>
<th>Maternal Mortality Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>12.7</td>
</tr>
<tr>
<td>Korea</td>
<td>11.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.4</td>
</tr>
<tr>
<td>France*</td>
<td>6.1</td>
</tr>
<tr>
<td>Australia^</td>
<td>5.2</td>
</tr>
<tr>
<td>Canada*</td>
<td>4.8</td>
</tr>
<tr>
<td>Germany</td>
<td>4.3</td>
</tr>
<tr>
<td>Spain</td>
<td>4.2</td>
</tr>
<tr>
<td>Japan</td>
<td>4.0</td>
</tr>
<tr>
<td>Italy^</td>
<td>2.1</td>
</tr>
</tbody>
</table>

U.S. 2007:
- Black non-Hispanic: 28.4
- White non-Hispanic: 10.5
- Hispanic: 8.9

Maternal Mortality Rates, (per 100,000 births), 2013, Industrialized Countries with 300,000+ births

<table>
<thead>
<tr>
<th>Country</th>
<th>Maternal Mortality Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>11.5</td>
</tr>
<tr>
<td>U.S. NHWhite^</td>
<td>10.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.4</td>
</tr>
<tr>
<td>France*</td>
<td>6.1</td>
</tr>
<tr>
<td>Australia^</td>
<td>5.2</td>
</tr>
<tr>
<td>Canada*</td>
<td>4.8</td>
</tr>
<tr>
<td>Germany</td>
<td>4.3</td>
</tr>
<tr>
<td>Spain</td>
<td>4.2</td>
</tr>
<tr>
<td>Japan</td>
<td>4.0</td>
</tr>
<tr>
<td>Italy^</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Infant Mortality Rates (per 1,000 births), 2014, Industrialized Countries with 100,000+ Births

- United States: 5.8
- Canada: 4.9
- United Kingdom: 3.9
- Greece: 3.8
- Netherlands: 3.6
- France: 3.5
- Belgium: 3.4
- Australia: 3.4
- Germany: 3.2
- Israel: 3.1
- Korea: 3.0
- Spain: 2.9
- Italy: 2.8
- Czech Republic: 2.4
- Sweden: 2.2
- Japan: 2.1

Source: OECD Health Data 2016 and NCHS, Deaths Final Data for 2014.
Infant Mortality Rates (per 1,000 births), 2014, Industrialized Countries with 100,000+ Births

- Canada: 4.9
- United States: 4.2
- United Kingdom: 3.9
- Greece: 3.8
- Netherlands: 3.6
- France: 3.5
- Belgium: 3.4
- Australia: 3.4
- Germany: 3.2
- Israel: 3.1
- Korea: 3.0
- Spain: 2.9
- Italy: 2.8
- Czech Republic: 2.4
- Sweden: 2.2
- Japan: 2.1

Source: OECD Health Data 2016 and NCHS, Deaths Final Data for 2014.
4. Cesarean Rates have leveled in the US

Source: National Center for Health Statistics Annual Birth Reports
Most all country rates have plateaued, but at widely different levels.

Source: OECD Health Data 2016; WHO Health for All Database; Country reports
Cesarean Rates (%) in Industrialized Countries* with 100,000+ Births, 2014

- Korea*: 36.7
- Italy: 35.7
- Australia*: 32.7
- United States^: 32.0
- Germany: 30.8
- Canada*: 26.2
- Czech Republic: 25.4
- United Kingdom: 25.2
- Spain: 25.0
- France*: 20.8
- Belgium*: 20.7
- Sweden: 16.9
- Israel*: 15.8
- Netherlands#: 15.6

* No data on cesarean rates in Greece and Japan

#2010; *2011; ^2015
5. A subset of women are voting with their feet against the current system.
Percent of all births at home, or in a birthing center, United States, 1990-2015

- **Total home & birth center**
  - 1990: 46,956 (1.13%)
  - 2015: 57,434 (1.44%)
  - 66% Increase 2004-2015

- **Home**
  - 1990: 18,892 (0.47%)
  - 2015: 38,542 (0.97%)

- **Birthing center**
  - 1990: 18,892 (0.47%)
  - 2015: 18,892 (0.47%)

For any future births, how open would you be to giving birth at home?

- **64%** Definitely Do Not Want
- **18%** Would Consider
- **11%** Definitely Want
- **5%** No More Kids
- **3%** Not Sure

Source: Declercq et al. *Listening to Mothers 3*
For any future births, how open would you be to giving birth at a birth center that is separate from a hospital?

- Definitely Do Not Want: 4%
- Would Consider: 5%
- Definitely Want: 39%
- No More Kids: 25%
- Not Sure: 27%

Source: Declercq et al. *Listening to Mothers 3*
This is a time of notable transition in childbirth in the U.S. and internationally.....
...and too many women are dying in childbirth
Definitions

• **Maternal Mortality Ratio** – the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Typically reported as a ratio per 100,000 births.

• **Pregnancy Related Death** – the death of a woman during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

• **Pregnancy Associated Death** – The death of a women while pregnant or within one year of termination of pregnancy, irrespective of cause.
U.S. Maternal Mortality (per 100,000 live births), 1951-2007
RESULTS: The estimated maternal mortality rate (per 100,000 live births) for 48 states and Washington, DC (excluding California and Texas, analyzed separately) increased by 26.6%, from 18.8 in 2000 to 23.8 in 2014. California showed a declining trend, whereas Texas had a sudden increase in 2011–2012. Analysis of the measurement change suggests that U.S. rates in the early 2000s were higher than previously reported.
Estimated MMRs, 48 states* and DC, 2000-2014

How do these trends compare by race/ethnicity?

*Excludes California and Texas.
Maternal mortality rates by race and ethnicity, **27 states** and Washington D.C., 2008-9 and 2013-14

<table>
<thead>
<tr>
<th></th>
<th>2008-9</th>
<th>2013-14</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>20.4</td>
<td>25.3</td>
<td>+24%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.1</td>
<td>15.8</td>
<td></td>
</tr>
<tr>
<td>NH white</td>
<td>15.6</td>
<td>20.2</td>
<td>+21%</td>
</tr>
<tr>
<td>NH black</td>
<td>56.3</td>
<td>46.6</td>
<td></td>
</tr>
</tbody>
</table>

NH = non-Hispanic. n.s. = no significant change.

Interracial Differences

Where would estimated rates leave the U.S. in international comparisons?

Hispanic 15.8 (Lebanon 15/Turkey 16)

Interracial Differences

Where would estimated rates leave the U.S. in international comparisons?

Hispanic 15.8 (Lebanon 15/Turkey 16)

NH White 20.2 (Thailand 20/Chile 22)

Interracial Differences

Where would estimated rates leave the U.S. in international comparisons?

Hispanic 15.8 (Lebanon 15/Turkey 16)

NH White 20.2 (Thailand 20/Chile 22)

NH Black 56.3 (Vietnam 56/Jordan 58)

U.S. MMR* Compared to Countries with 300,000+ births, 2014, using WHO Estimates

If we limited the US ratio to white mothers only, the U.S. would still rank behind all other countries except perhaps South Korea

* Maternal Mortality per 100,000 births

Is this of interest to journalists?
Texas Maternal Mortality Rate Soars
Local health department examining deaths: Is the Legislature to blame?

Two recent studies have highlighted the increasing rate of maternal deaths in Texas, but researchers say they can't explain why it's happening.

More New Mothers in Texas are Dying; Experts Can't Say Why

State report narrows down causes

The State of Texas: Data on skyrocketing maternal mortality rate remains secret

Texas must learn more about maternal deaths
CONCLUSIONS

The exclusion of Planned Parenthood affiliates from a state-funded replacement for a Medicaid fee-for-service program in Texas was associated with adverse changes in the provision of contraception.
Texas was a possible story, but the study couldn’t determine that.

What’s lost is the ongoing problems with maternal mortality both in terms of disparities and the overall poor outcomes in the U.S.
Possible Stories

• Maternal mortality
  – Positive efforts in California
  – The Hispanic paradox and maternal mortality
  – Possible impacts of cuts to women’s health services

• Success of efforts to limit growth in cesareans
  – what’s next?

• Maldistribution of OBs and midwives in the U.S.

• Rise of home and birth center births and efforts to curtail them
Questions and Comments?

Gene Declercq
declercq@bu.edu