Determining the underlying causes of increasing maternal mortality

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OVERVIEW
Using WHO data, I determined which countries saw a significant increase in their maternal mortality ratio (maternal deaths per 100,000 live births) between 2010 and 2013 and investigated the potential causes of those increases through literature review.

BACKGROUND
• The Millennium Development Goal 5A aimed to reduce the global maternal mortality ratio (MMR) by three quarters between 1990 and 2015.
• While great progress was achieved (a 45% decline from 1990-2013), certain countries saw increases in women’s risk of dying from childbirth. These increases defy concerted global health efforts.
• In order to best understand the broad picture of maternal mortality, it is necessary to look at these backslides, where national MMR increased rather than decreased.

RESULTS
Six countries saw significant increases in their maternal mortality ratios between 2010 and 2013. Analysis of these case studies, which include the United States, Brazil, Mexico, South Korea, Romania, and Costa Rica, shows that low quality obstetric care and higher rates of cesarean sections are the two most commonly cited factors for increases in MMR. These increases can be characterized as gradual rather than sudden. These results give insight into national MMR trends that should be closely monitored: populous, high- and upper-middle income countries with high levels of social inequity were found to have significant increases in MMR between 2010 and 2013.

METHODS
Maternal mortality data for 180 countries from 2010 to 2013 from the WHO Global Health Observatory was analyzed. National-level MMR data was compared for each of the 180 countries. Eighteen countries’ MMRs increased between 2010 and 2013, and six of those countries had a significant increase (representing over 95% of excess deaths in 2013). These six countries were assessed as case studies through literature review to determine causes of each country’s increase. The causes were then tabulated to determine frequencies of causes of increasing maternal mortality.

CONCLUSIONS
• Maternal mortality is on the decline globally, but certain countries have seen increases in women’s risk of dying from childbirth.
• Low-income countries are consistently improving in maternal survival while a few upper-middle and high-income countries are experiencing backslides.
• In order to conduct a more accurate systematic global analysis of MMR increases by country, data from shorter than three-year intervals are needed.
• More research needs to be done in this area to monitor countries that are steadily increasing in maternal mortality, and to ensure that rapid, significant increases do not go unnoticed, especially in countries with few maternal deaths.
• Greater political will, more effective allocation of public health resources, and empowerment of women and their communities will help prevent these gratuitous deaths.