



## Commentary

## Is the US failing women?

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In a paper published in *EClinicalMedicine*, Eran Bornstein and colleagues [1] report data on trends in maternal risk factors and pregnancy complications that increase maternal morbidity and mortality in over 120 million American women with livebirths from 1989–2018. They show significant increases over time of hypertensive disorders of pregnancy, chronic hypertension, diabetes mellitus (a composite of Type 1, Type 2 and gestational diabetes), very advanced maternal age ( $\geq 40$  years) and grand multiparity ( $\geq 5$  births), all of which increase risk for maternal morbidity and mortality. In a nutshell the health of young pregnant women has been deteriorating, not improving as we would expect given rising health expenditure.

The WHO uses maternal and infant mortality as measures of the strength of national health systems. Maternal mortality goes down with increasing GDP per capita and reducing maternal mortality and morbidity increases GDP in low income nations [2]. Investing in strategies to prevent maternal mortality has enormous economic benefits in terms of non-health GDP in developing countries.

Sadly, maternal mortality in the US has been increasing since 2000 with respect to both GDP per capita and health expenditure per capita [3]. The latest report for 2018 shows there were 17.4 maternal deaths per 100,000 live births in the US [4]. However, separating the data according to race reveals shocking disparity. For non-Hispanic black women there were 37.3 maternal deaths per 100,000 livebirths compared to 14.9 for non-Hispanic white women and 11.8 for Hispanic women [4]. In 2015, of the 46 developed nations in the Save the Children report on the state of the world's mothers in 179 countries, the US ranked 33rd [5], despite boasting the highest health expenditure per capita in the world.

In 2018, the American College of Obstetricians and Gynecologists (ACOG) renewed their call for modernisation and standardisation of the collection of maternal and infant perinatal data [6]. However, inconsistencies between states and the slow introduction of a

pregnancy checkbox in death certificates are only just being addressed [4].

Bornstein and colleagues [1] show that American women giving birth are substantially older, particularly in the last 10–15 years, than they were 30 years ago. The percentage of women giving birth aged 30 years and over has grown to 47%, those 35 years and over is approaching 20% and 3.35% are 40 years or older. Women in their late 30s and 40s have substantially higher rates of hypertensive disorders of pregnancy, chronic hypertension and diabetes mellitus than those younger than 30. These morbidities have all increased in prevalence, particularly in the last 15 years. Although the data have been available for just a few years, rising obesity, a known risk factor for pregnancy complications, in young American women most likely contributes to these increases. With 21% of Americans aged 5–19 years classified as with obesity [7], these trends in poor maternal health will continue to rise.

Maternal complications of pregnancy and age 40 years and over increase risk of fetal deaths after 20 weeks' gestation [8]. Non-Hispanic black women had 2–3 times the rate of infant deaths at all age groups in 2000 and 2017 of non-Hispanic white women and this disparity was highest for the oldest mothers [9].

Women cite not having a partner, wanting a career and financial security as reasons to delay child-bearing [10]. Given the well-known cost of healthcare in the US this is hardly surprising. We know that delaying pregnancy until late in reproductive life reduces fertility, increases need for assisted reproduction techniques and, importantly, increases risk for maternal complications of pregnancy and associated morbidity and mortality. But, evidently, we have failed to sufficiently impress this upon women in the community. Equally important, we have failed to tackle the fact that child-bearing stalls career progression with immediate and long-term financial penalties for women. Disadvantaged women who live week to week on low wages cannot afford to stop paid work to have a baby, also highlighting the absence of universal paid maternity leave in the US.

There is abundant evidence that health in pregnancy foreshadows future health for women and their children. Deteriorating health in women of reproductive age augers badly for future population health.

At the very least, investing in prevention of maternal morbidity and mortality in the US would reduce health system and family costs for the care of affected women and infants. At best, a focused national approach which: effectively collects perinatal statistics; addresses the tragic racial disparities in pregnancy and birth outcomes; and provides accessible, quality evidence for young women on pre-

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pregnancy planning with respect to nutrition, physical activity and consequences of delaying child-bearing, is required. Only then could we start to say that America is not failing women.

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#### Authors' Contributions

CTR conceived and wrote the original manuscript and TJK and ALA reviewed and provided intellectual input into the final manuscript.

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