

Key to improved public health in Georgia, the data showed, was to target mothers and children, particularly in low-income areas. Fitzgerald put maternal and child health at the forefront of many of her policies. And this is what makes her a curious choice to head the CDC during the administration of a president whose policies promise to cut health care for mothers and children around the world.

Once in office, President Donald Trump moved quickly to reinstate and expand the 'global gag rule', a policy that prevents organizations that receive money from certain US programmes from providing information about or access to abortions, regardless of whether they use their US funding to do so. Formally called the Mexico City Policy, the gag rule has been put in effect by several Republican presidents. But Trump expanded it to include organizations that receive funding from the US National Institutes of Health and the President's Emergency Plan for AIDS Relief.

This decision was not rooted in analysis of the data. The desired effect, presumably, is to reduce the number of abortions around the world. But the data suggest that the gag rule does the opposite: by limiting access to contraception, a past iteration of the rule may have increased the number of abortions in sub-Saharan Africa (E. Bendavid *et al. Bull. World Health Organ.* **89**, 873–880C; 2011). Trump has also attacked contraception in other ways, including a proposed US\$523-million decrease in funds for services providing contraceptives to women in developing nations (*Nature* **546**, 185; 2017).

Meanwhile, Trump's immigration policies have left undocumented pregnant mothers unwilling to seek medical attention for fear of being deported. And US-born children of undocumented immigrants — frightened that immigration officials will take their parents away — are

experiencing mental health damage (*Nature* **544**, 148–149; 2017).

Another of Trump's favourite rallying cries — to repeal Obamacare, the health-care plan put in place by former president Barack Obama — could mean that millions lose their health insurance. The repeal bills backed by Trump and under consideration by US lawmakers could also dramatically raise the cost of health insurance for pregnant women. The bills may also roll back provisions for Medicaid, a health-care programme for those on lower incomes that has been used to bolster health-care options for pregnant women, children from poorer backgrounds and children with special needs. Collectively, these policies could have lasting consequences: poor health of pregnant mothers and children during the first few years of life is associated with poorer health trajectories for the rest of those children's lives.

When Fitzgerald arrives at the CDC, she will lead an agency with an uncertain future. Trump has proposed to reduce the agency's funding by \$1.2 billion (about 17%) in 2018. The proposal may never come into being — it is US lawmakers, not Trump, who will develop the country's budget — but it clearly conveys his lack of interest in the agency.

In her time at the Georgia Department of Health, Fitzgerald lobbied conservative Georgia state politicians to support her efforts. She opens many of her speeches with reference to the data that drives her decision making. It has been an effective strategy: under her tenure, funding grew, even as the state tightened budgets in other arenas. Scientists should support her if she employs the same determination to promote maternal and child health on the national stage — even in the face of strong headwinds. ■

# AI love you

*We cannot pretend that humans won't have sex with robots.*

Enabling robots to read human behaviour and to respond in appropriate ways is a burgeoning area of research. As is the study of how humans will react to these potentially clever, personalized and ever-available companions. But there is another aspect of human-robot relationships that is rarely mentioned, and it's one on which robots could have just as great an impact as any other. Sex.

That reticence changed, at least in the United Kingdom, last week. A flurry of press reports followed the publication of a consultation report (see [go.nature.com/2u4578x](http://go.nature.com/2u4578x)) by the Foundation for Responsible Robotics that aims to encourage public debate about sex robots. Technological developments in soft robotics and artificial intelligence put these machines on the horizon, at least in basic form, the authors of the report suggest. And the impact of sex robots could differ markedly from that of conventional sex aids. The fact that such bots are most likely to be anthropomorphic, female and inspired by pornography prompts legitimate fears. Even if few people are talking about this topic, the report points out that doll brothels already exist in Asia, and tentative evidence from surveys suggests that there could be a market for both sex robots and robot brothels.

On reading these news reports, it's tempting for scientists to question the priorities of the news cycle. But there is a serious point to make.

The sex industry is not often written about in these pages, but no one can claim that it is irrelevant to people's lives. Worldwide, the sex-technology market is worth a reported US\$30 billion, and although accurate figures for the pornography industry do not exist, revenue is thought to reach tens of billions of dollars a year. (Meanwhile, the annual revenue of the academic publishing market in 2013 was around \$25 billion.)

Just four companies, all located in the United States, currently

produce sex robots. No one knows how many people own one. They are still more doll than robot, but Matt McMullan, chief executive of one of the bot manufacturers, Abyss Creations, is focusing his company's efforts on interactivity. As artificial intelligence and robotics improve, advances will filter into robots designed for sex. And bonds will form, even though unrequited. (Soldiers have been shown to develop emotional attachments to bomb-disposal robots.)

Although a handful of researchers have looked seriously at the issues surrounding relationships with robots, research into the social, legal and moral implications is scarce. Academic research on sex-related technology is even scarcer, and the work that has been done so far — including a study by Stanford University in California that revealed that people get physiologically aroused when touching a robot in places that they would find sensitive themselves — is plagued by caveats and differing interpretations. The academic world has largely looked on the topic as both trivial and sensational. A fledgling academic conference — the International Congress on Love and Sex with Robots — had to be moved from City, University of London, to neighbouring Goldsmiths after the original host deemed its topic to be "uncomfortable".

But the difficulty of the work, and the existence of the taboo, does not mean there is a lack of legitimate scientific questions to ask. As well as the impact of human-robot interactions, academics could examine pressing issues that surround the privacy of sex technology imbued with artificial intelligence. Some smart sex toys can be hacked, and others that collect data with the aim of personalization have failed to guarantee anonymity.

Right now the world of sex robots, and technology more widely, is driven by white, middle-aged men. Improving the gender diversity of those involved in the research and development of sex technology could dampen possible harm such as objectification. And the potential benefits could be boosted by making products that might appeal to more people.

The foundation's report is correct to argue that society needs to decide how best to deal with this growing industry. Academics must be part of this conversation. And they should carry out the research to make such discussions evidence based. ■