

Is contraception the solution to the Zika virus crisis?

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On the 1st February 2016 the World Health Organisation declared the suspected link between Zika virus and microcephaly to be a Public Health Emergency of International Concern.¹ In May 2015, the first confirmed case of Zika virus occurring in Brazil was issued by the Pan American Health Organisation, and since this the incidence of disease has spread at an alarming rate through Central and South America and the Caribbean. Zika virus is transmitted through the bite of an infected Aedes mosquito, although there have also been a very small number of sexually transmitted cases. Infection generally causes a mild self-limiting flu-like illness in the host, however it is thought that maternal infection with Zika virus in the first trimester of pregnancy puts babies at a high risk of developing microcephaly. As of the 30th January this year, 4,783 cases of microcephaly have been reported across 21 states in Brazil. This vastly surpasses the expected annual incidence of microcephaly in Brazil, reported to be 150-200 cases per year.² This essay focuses on contraception as a solution to controlling the rate of microcephaly. It explores the context-dependent barriers to contraception in Latin American countries and how these change its viability as an option. Termination of pregnancy and virus prophylaxis are also discussed to assess how they compare with contraception in terms of cultural barriers, efficacy and practicality.

Microcephaly results from abnormal development of the brain, and the effects can range from mild learning difficulties to severe intellectual and motor impairment and death. A causal link with Zika infection is yet to be proven but there is an ongoing accumulation of evidence, including a large retrospective study published in *The Lancet* on March 15th this year.³ The latest guidance from Public Health England recommends that pregnant women avoid non-essential travel to areas with Zika transmission until after pregnancy.¹ The situation is more complicated for women living across the Americas. Columbia, Ecuador, El Salvador and Jamaica have all recommended delaying pregnancy until more is known about Zika virus, whilst public health officials in El Salvador have advised to delay pregnancy until 2018. Given that the countries affected by Zika virus transmission are amongst those with the lowest rates of contraceptive use and strictest abortion laws, this is not straightforward advice to follow.

In the UK, various forms of effective contraception are available for free on the NHS, and highly accessible to everyone regardless of socio-economic or cultural background, if they so choose to seek it. Compare this to the situation in Central and South America, where there is a huge unmet need for contraception and sexual education. One way we can measure access to reproductive health services is to look at the contraception prevalence rate (CPR).¹ Of the 18 countries with active Zika transmission, the estimated CPR for 2015 was as low as 37.8% (Haiti) or 44.8% (Guyana). Rates are lower still for modern, more

¹ The percent of women of reproductive age who are using (or whose partner is using) a contraceptive method at a particular point in time, almost always reported for women married or in sexual union
(# of women 15-49 using a contraceptive method / total # of women 15-49) x 100

effective methods; five of the countries in the region had an estimated CPR of less than 50% for modern methods. ⁴ Furthermore, we must consider that these estimates are national averages, and do not reveal the significant inequalities within countries. Generally, women in rural areas and those living in poverty have less access to contraception as a result of these respective geographical and financial barriers. They may not physically be able to access contraception, for example there may be few outlets selling condoms in very rural or Catholic areas. Awareness of different types of contraception may also be very limited, especially given that the curriculum in many schools has a strong Catholic influence. Even if these women are able to find places where contraception is available, cost may disincline or prevent people from purchasing it. These poorer women and those in rural areas may be at the greatest risk for Zika infection, as there may be less awareness of and access to prophylactic measures, such as DEET spray. Additionally, if these women were to have a child with microcephaly, they may be less able to access the healthcare and social services necessary to help care for a child with complex needs.

Financial cost and availability are not the only barriers preventing women from seeking contraception. Catholicism is widely practiced in these regions, a religion which strongly condemns artificial contraception for the reason that it disregards the sanctity of life and violates 'natural law'. For many women, to use contraception acts against profoundly deep-rooted beliefs. Not only may it be a decision that causes personal anguish, but one that may alienate them from family and the wider community. Earlier this year, the Pope indicated that women who are at risk from exposure to the virus might be permitted to use

contraception. Bearing in mind the powerful opposition the Catholic religion has traditionally held against artificial birth control highlights the gravity of the situation in these countries. Even in the midst of the HIV epidemic, in 2009 the Pope refused to allow condoms for the prevention of HIV transmission. However, in the context of the current Zika outbreak he suggested that contraception may be the “lesser evil” in certain, extreme circumstances. It might be that this will enable women who would not have previously sought out contraception to now do so, however it may still be that this is an option some women are not willing to take. Regardless of the Pope permitting contraception from a religious point of view, the financial and geographical barriers may also remain the same, even for women willing to access effective birth control.

Another way mothers can avoid having a baby born with microcephaly is a termination of pregnancy (TOP). In the UK, TOP is a legal procedure under fairly unrestrictive criteria, and services providing it are both free and run by professional healthcare workers. Although controversial, it is accepted by many as an alternative better than unwanted pregnancy. In contrast, it is unacceptable from both a legal and cultural point of view in many of the countries most affected by Zika virus. Most of these countries have either the most restrictive or highly restrictive TOP laws in the world. Guatemala, Haiti, Honduras, Paraguay, Suriname, and Venezuela only allow it to save a mothers life, whilst the Dominican republic, El Salvador and Nicaragua provide no legal access to TOP under any circumstances.⁵ Furthermore, the Catholic church is adamant in its opposition to TOP. Despite the stance on contraception being amended under these exceptional circumstances, this tolerance does not extend to rules on TOP,

which the Pope reiterated is an “absolute evil” and a crime. Despite the fact that it is illegal and often unacceptable from a religious point of view in Latin America, many women still terminate pregnancies. Researchers have found that more restrictive laws are not associated with lower TOP rates. There were 32 reported terminations of pregnancy per 1000 women in Latin America in 2008, compared with 12 per 1000 in Western Europe, where terminations are usually permitted on broad grounds.⁶ This means that women are seeking terminations from sources that are not regulated by an official body. As a result, it is very possible that the people carrying out these procedures or administering these medications are untrained, using poor quality resources and working in unsanitary operating conditions.

Termination of pregnancy is certainly not a safe or desirable option for women who do not want to risk pregnancy in areas affected by Zika. Compared with contraception, it transgresses more legal, cultural and arguably moral barriers. If it were targeted to known cases of microcephaly, this would reduce the number of births being prevented compared to contraception. However, whilst this is conceivable in a country such as the UK where pre-natal screening is commonplace, the same services are not available across the Americas. Even if they were, it would be of little significance if the TOP laws remain the same. Given all this, I would argue that the use of contraceptives to prevent possible cases of microcephaly is a better solution than TOP.

Reducing the impact of Zika through birth control is clearly problematic given the socio-cultural background of the countries most affected. The other solution

would be to reduce the transmission of Zika virus itself. Official guidance relating to Zika virus has a strong focus on the prevention of mosquito bites, with advice to use DEET containing repellents, protective clothing, and for health authorities to carry out large scale insecticide spraying.⁷ Unlike contraception and TOP, mosquito bite prophylaxis does not conflict with either the law or religious principles, and for this reason may be the easiest intervention to promote and implement. It is tackling the 'root' of the problem rather than minimizing the impact, thus will ameliorate the suffering of the individuals who contract the virus, not just of the unborn babies. In this sense, it may have the potential to benefit a greater number of people in a way that is more directly noticeable. However, the course of the illness itself is mild and self limiting, and we should question whether the good from helping a large number of people with mild illness is as good, or preferable to helping a smaller population of individuals with severe neurological developments. Of course, by proxy the cases of microcephaly will be reduced if cases of viral transmission are reduced, but it is not an intervention that is directly targeting pregnant women, and the use of insecticides and repellent sprays can only go so far to prevent being bitten. It is not as reliable as the protection that modern contraception offers.

In addition, a significant number of pregnancies in the most affected countries are unplanned, sometimes a result of sexual abuse. A study in family planning conducted in 2014 found that fifty per cent of pregnancies in Latin America are not planned.⁸ As these women are not planning on pregnancy, they may take fewer precautions to protect themselves from mosquitos. The women who fall pregnant as a result of sexual abuse are likely to suffer greatly if they were to

have a baby born with neurological disability. They are most likely to be the more vulnerable and disadvantaged members of society, with less healthcare and social support available to them. Mosquito bite prevention therefore does not effectively address unplanned pregnancies, including the women that have fallen pregnant from rape or assault. It also fails to address the small number of Zika cases that have been sexually transmitted. Although it is controversial than contraception in many ways, it may not be a solution that is effective enough to solve the crisis.

The three solutions discussed here all have significant problems. Deciding which is best cannot be done using the same framework that we might apply to the UK and we must be mindful of the huge differences in society between here and Latin America. I would argue that contraception is the most effective means of controlling the impact from Zika virus until the virus itself can be controlled. However this is speaking as a non-Catholic westerner, and therefore many of the barriers to contraception do not challenge my own belief system or social circumstances. Unfortunately, many women face the decision of whether to take the risk of having a child with severe learning difficulties, or choose to avoid pregnancy for an unknown time period. The means to do so may involve breaking not only personal moral or religious principles, but the law. This is a problem that needs addressing by the governments of Central and South America and the Caribbean as a matter of urgency.

Word count: 1978

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