Zika virus outbreak: reproductive health and rights in Latin America

In mid-January, 2016, health ministers from different Latin American countries made public recommendations to women and couples to postpone pregnancy for 6 months to 2 years in the face of the Zika virus outbreak.[1] These recommendations seemed out of place in view of the fact that 56% of pregnancies in the region are unintended.[2] Poor quality of sex education, poor access to contraception, high prevalence of rape, and cultural barriers that make it difficult for women to negotiate the use of contraception with their partners, result in large groups of women who do not have control over their sexual and reproductive lives.

No reliable information is currently being offered to women who are already pregnant and their families about the confirmed or potential risks of Zika virus infection, the different types of microcephaly that the virus might cause and the consequences of each type depending on its severity, and how to safely carry the pregnancy to term or access an abortion when allowed by law. The countries most affected by Zika virus have widely varying laws on women's sexual and reproductive rights. In El Salvador, for example, abortion is completely outlawed, and many women who have had miscarriages are serving prison sentences of up to 40 years on abortion charges.[3]

Even in countries with more progressive laws that allow termination of pregnancy when there is a risk to the woman's health, such as Colombia, many women are unaware of this right because of a scarcity of information. The Colombian Ministry of Health has been clear that women do have the right to have an abortion, and that although the physician is the person who determines whether a risk to the physical, mental, or social wellbeing of the woman is present, the decision remains in the woman's hands. However, local health authorities at municipal levels, who are closer to women at risk, are not providing enough information to these women about the risks and the choices available according to the law.

The Zika virus outbreak is exposing the tragic failures of reproductive health and rights policies in Latin America. Too many women, particularly those living with social inequality and vulnerability, face two risk factors in relation to Zika virus infection during pregnancy. These women and girls often have poor access to reproductive health and rights information and services, and their housing and local environments disproportionately expose them to areas that are breeding grounds for mosquitoes.

The Zika virus crisis offers a belated opportunity for governments to begin to close gaps in sex education and access to contraceptives, safe motherhood, safe abortion, and programmes to prevent discrimination and exclusion of people living with disabilities. If governments do not take this opportunity, the Zika virus will not only be a public health issue, but also exacerbate existing gender inequalities and social injustice.

I declare no competing interests.

Mónica Roa
m.roa@womenslinkworldwide.org

Women's Link Worldwide, Madrid, Spain

1 BBC. Zika virus triggers pregnancy delay calls. http://www.bbc.co.uk/news/world-latin-america-35388842/ (accessed Feb 8, 2016).
2 Sedgh G, Singh S, Hussain R. Intended and unintended pregnancies worldwide in 2012 and recent trends. *Stud Fam Plann* 2014; **45:** 301–14.
3 Amnesty International. El Salvador's total abortion ban sentences children and families to trauma and poverty. https://www.amnesty.org/en/latest/news/2015/11/el-salvador-s-total-abortion-ban-sentences-children-and-families-to-trauma-and-poverty/ (accessed Feb 8, 2016).

CDC guidelines for pregnant women during the Zika virus outbreak

Zika virus is attracting worldwide attention and everyone fears its potential dramatic effects on the fetal brain. The US Centers for Disease Control and Prevention (CDC) have recently published interim guidelines on management of pregnant women exposed to Zika virus.[1] We do, however, have some comments on these recommendations.

The guideline proposes to offer amniocentesis, as early as 15 weeks' gestation, to pregnant women with a history of recent travelling to or living in a country with ongoing Zika virus circulation and presenting positive or inconclusive Zika virus testing or ultrasound findings compatible with a Zika virus infection. In endemic areas, Zika virus co-circulates with other flaviviruses and serological cross-reactions responsible for false-positive IgM detections are frequent. Since confirmation neutralising antibody testing is restricted to highly specialised laboratories, a high number of positive or inconclusive Zika virus IgM results are expected, leading to unnecessary amniocenteses and related risk of miscarriages.[2] The sensitivity of molecular detection of Zika virus in the amniotic fluid is not known. It is highly likely that, by analogy with cytomegalovirus or toxoplasmosis infections, the virus is only shed in the amniotic fluid once the fetal kidneys produce sufficient urine (ie, after 18–21 weeks' gestation) and once sufficient time has elapsed for the virus to breach the placental barrier (at the earliest 6–8 weeks after infection).[3,4]

To prevent false-negative results and false reassurance of the parents, we would therefore suggest offering amniocentesis only in the presence of fetal signs or 6–8 weeks after suspected maternal exposure, and not earlier than 21 weeks' gestation with further close ultrasound follow-up of

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pregnancy. Furthermore, the incidence of microcephaly and brain lesions in fetuses developing in the presence of Zika virus in the amniotic fluid is not known.

In view of this uncertainty, it is highly questionable whether amniocentesis, which carries a 0·1–1% risk of miscarriage,[2] is at all useful in the asymptomatic fetus. A normal result might not bring reassurance, and the presence of Zika virus in the amniotic fluid might not necessarily be associated with fetal brain damage. Miscarriages related to amniocentesis and pregnancies' termination of asymptomatic fetuses might be much greater than the number of truly affected children. If counselled appropriately, many couples might decline the procedure, or at least wait until 21 weeks' gestation. Additionally, since asymptomatic blood donors can still be viraemic for Zika virus,[5] we also recommend transfusing pregnant women only with products tested negative for Zika virus when those are collected locally.

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*Manon Vouga, Didier Musso, Tim Van Mieghem, *David Baud*
david.baud@chuv.ch

Materno-fetal and Obstetrics Research Unit, Department Femme-Mère-Enfant, Centre Hospitalier Universitaire Vaudois, 1011 Lausanne, Switzerland (MV, DB); Institute of Microbiology, Faculty of Biology and Medicine, University of Lausanne and University Hospital, Lausanne, Switzerland (MV, DB); Unit of Emerging Infectious Diseases, Institut Louis Malardé, Tahiti, French Polynesia (DM); and Department of Obstetrics and Gynecology, Division of Woman and Child, University Hospitals Leuven, Leuven, Belgium (TVM)

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2 Tabor A, Madsen M, Obel EB, Philip J, Bang J, Nørgaard-Pedersen B. Randomised controlled trial of genetic amniocentesis in 4606 low-risk women. *Lancet* 1986; **327:** 1287–93.

3 American College of Obstetricians and Gynecologists. Practice bulletin no. 151: cytomegalovirus, parvovirus B19, varicella zoster, and toxoplasmosis in pregnancy. *Obstet Gynecol* 2015; **125:** 1510–25.

4 Benoist G, Leruez-Ville M, Magny JF, Jacquemard F, Salomon LJ, Ville Y. Management of pregnancies with confirmed cytomegalovirus fetal infection. *Fetal Diagn Ther* 2013; **33:** 203–14.

5 Musso D, Nhan T, Robin E, et al. Potential for Zika virus transmission through blood transfusion demonstrated during an outbreak in French Polynesia, November 2013 to February 2014. *Euro Surveill* 2014; **19:** 20761.

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See **Online** for appendix

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INTERGROWTH-21st very preterm size at birth reference charts

In 2014, the INTERGROWTH-21st Consortium published international standards for newborn baby size, based on neonates with no major complications or ultrasound evidence of fetal growth restriction (FGR), who were born to healthy mothers without FGR risk factors.[1] Despite our large sample size, very few neonates born at 33 weeks' gestation or earlier met these prescriptive inclusion criteria. While implementing these standards, we have received many requests for very preterm, size at birth charts for clinical practice and research.

Unsurprisingly, at these low gestational ages, most pregnancies have some risk factors, and prescriptive standards are difficult to construct. Therefore, we opted to generate very preterm reference charts to avoid previous methodological shortcomings.[2] We supplemented the original sample by including neonates from the same INTERGROWTH-21st population who, despite being born to mothers with some FGR risk factors (except smoking and severe obesity), did not have congenital malformations or ultrasound evidence of FGR before birth. We used the same statistical methods as for the Newborn Size Standards.[1] All other methods and ethics approvals have been described previously.[3,4]

408 neonates (214 boys, 194 girls) were included in the reference study population, after excluding 216 newborn babies because of maternal smoking, severe maternal obesity or morbidity, congenital malformations, or ultrasound evidence of FGR, and 37 because of implausible anthropometric measurements or gestational age estimates. As expected, perinatal events (eg, higher pre-eclampsia, caesarean section, and neonatal mortality rates) for these very preterm babies differed from the Newborn Size Standards (appendix).[1]

The third, 10th, 50th, 90th, and 97th smoothed centile curves for weight, length, and head circumference at birth according to gestational age and sex, superimposed on the individual data, are shown in the appendix (actual centile values and corresponding equations are provided in the appendix and at the INTERGROWTH-21st website). Values for birthweight and head circumference at 33 weeks' gestation overlapped perfectly with the original Newborn Size Standards;[1] values for length were complementary at the median level, but less so at the extreme centiles because of the differently shaped curves in early and late pregnancy (figure).

We present very preterm reference charts for newborn baby size at birth using the same underlying population, methods, instruments, standardisation protocols, and statistical analyses as for the Newborn Size Standards,[1] which they complement well. They provide neonatologists with a single way to assess and screen newborn babies from 24 to 42 weeks' gestation. The head circumference charts are particularly important in view of the urgent need, in the midst of the Zika virus outbreak, to assess the head size of newborn babies with a set of standardised, gestational-age specific charts, to avoid over-reporting of cases of microcephaly across all affected regions.[5]

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*José Villar, Francesca Giuliani, Tanis R Fenton, Eric O Ohuma, Leila Cheikh Ismail, *Stephen H Kennedy, for the INTERGROWTH-21st Consortium*
stephen.kennedy@obs-gyn.ox.ac.uk