Saving Lives of Women and Newborns through Gestational Diabetes Screening: A Call to Action

Although detecting and treating diabetes in pregnancy is a simple, low-cost way to improve maternal and child health and reduce maternal death, it has received scant attention as a public health priority.

Gestational diabetes increases the risk of maternal and newborn death.

Globally, 10 times more people are living with diabetes than with HIV.

Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth.

Undetected and untreated gestational diabetes may be an underlying reason for the failure to achieve Millennium Development Goals related to maternal and child health.
Detecting and treating diabetes in pregnancy offers a simple, low-cost opportunity to improve maternal and child health and reduce maternal deaths. Yet, it has received scant attention as a public health priority, especially in low- and middle-income countries.

To put gestational diabetes on the global development agenda and call for action, Management Sciences for Health (MSH) and Novo Nordisk [9] sponsored a technical advocacy event on the sidelines of the 68th World Health Assembly (WHA) in Geneva that closely examined gestational diabetes mellitus (GDM) and featured case studies and lessons learned from Ethiopia and Colombia.
Panelists and audience discuss gestational diabetes screening at the 68th World Health Assembly side event. Photo credit: Barbara Ayotte/MSH

The event brought together advocates, donors, and other stakeholders to discuss why GDM needs increased attention and why putting GDM on the global health agenda will improve maternal and child health. (Read more about GDM below.)

We spoke with two of the featured speakers after the event: Dr. Gebremariam Mahlet Yigeremu (Ethiopia) and Dr. Humberto R. Mendoza Charris (Colombia).
Dr. Gebremariam Mahlet Yigeremu, Ethiopia

Dr. Gebremariam Mahlet Yigeremu is a public health champion in her native Ethiopia. She serves as a consultant obstetrician and gynecologist as well as the Dean of School of Medicine at Addis Ababa University.

Dr. Mahlet described her experiences working on gestational diabetes and its impact on public health in Ethiopia.

MSH: Thank you for talking with us after your moving participation in the ‘Saving the Lives of Women & Newborns through Gestational Diabetes Screening: A Call to Action’ panel. For those who weren’t able to attend the event, can you share with us how you first got involved with GDM?

Dr. Gebremariam Mahlet Yigeremu (GMY): I first got involved as a technical advisor through the Ethiopian Diabetic Association, MSH, and the Black Lion Hospital. I was part of the technical team brought in to look at the costs of maternal and neonatal morbidity. As we began to analyze the trends, we were surprised to see that diabetes was contributing to both
morbidities at a significantly high level.

We wanted to examine the data available on the national level. When we started to research it, we realized that the only study available was from 1999, and it was focused only on GDM at the community level in the Tigray region, not the entire country.

MSH: How did you address this challenge?

GMY: We created a data collection tool and prepared a standard training protocol for diagnosis and management of GDM in low resource settings for health professionals. We engaged the Tigray Regional Health Bureau and Diabetic Care Center, supported by the Ethiopian Diabetic Association, in the development of this tool and training. MSH was a key ally in this project, providing the resources for diagnoses and management of GDM.

MSH: Where did this project take place?

GMY: We started the project within the federal state of Tigray in the northern part of Ethiopia where the total population is approximately 5 million people.

MSH: In addition to the support you received from MSH, who else was involved and why was their involvement important?

GMY: We engaged with the Tigray Regional Health Bureau and the Diabetic Care Center, supported by the Ethiopian Diabetic Association, as I mentioned. To have a comprehensive look at the trends for GDM, we involved three health centers (one rural center, two urban) and the Hayder Regional Hospital to screen all mothers who come for antenatal care.

Between these four locations, the health professionals screened approximately 2,500 women over the course of 6 months. They found that 11 percent of the women had GDM that was undiagnosed – which was two to three times more than the rate reported by any other African country.

This rate is almost double the rate of those with HIV & AIDS, which currently reflects approximately 3.4 percent.

These results were especially shocking to our team, as well as the stakeholders involved in the project. The data confirmed that this was an important public health issue that we must continue to invest in to gain a better understanding.

MSH: These are incredibly high numbers. Upon learning of this information, what interventions did you and your team use?

GMY: We introduced screening for GDM as a mandatory part of standard antenatal care to be able to identify the warning signs of GDM as early as possible.

In addition to being a learning opportunity for health professionals on why this screening was important, it greatly improved the quality of antenatal care that the mothers were receiving by helping them to avoid preventable causes of GDM through low cost interventions such as diet and exercise.
MSH: We know that GDM has not been a public health issue that has received much attention from policy makers. Why do you think it is an important area for people to focus on?

GMY: Among other symptoms, GDM causes bleeding, infection and hypertension for pregnant women and yet all three of these conditions are preventable with the proper screening and treatment. After our project put into place mandatory screening for GDM and educated the health professionals in the three health centers and one hospital where we were working, we saw the rates of these three conditions decrease and the quality of obstetric care improved dramatically. Screening for and treating GDM prevents a non-communicable disease from being passed from one generation to another. This in turn takes care of both the mother and child which has a positive ripple effect not only for their immediate family, but their community as a whole.

MSH: We very much agree and thank you and your team for the great work you have and continue to do in Ethiopia.

GMY: Thank you!

(From left) Andrea Welsh (MSH), Dr. Charris, Dr. Yigeremu, and Dr. Quick (MSH) discuss lessons learned. Photo credit: Barbara Ayotte/MSH

Dr. Humberto R. Mendoza Charris, Colombia

As a trained medical doctor and public health professional, Dr. Humberto R. Mendoza Charris


Dr. Humberto R. Mendoza Charris sat down with MSH to share the impressive results from this three-year project.

MSH: Dr. Charris, it is a pleasure to have you here with us, and thank you for participating in the ‘Saving the Lives of Women & Newborns through Gestational Diabetes Screening: A Call to Action’ panel. Can you please share with us about your project Vida Nueva and how it successfully reduced GDM in pregnant women in your community of Barranquilla?

Dr. Humberto R. Mendoza Charris (HRMC): Thank you for having me! As we know, GDM refers to the mostly temporary form of diabetes that occurs during pregnancy and is an untreated condition that impacts almost 18 million women worldwide every year. In Colombia, one of the priorities for the Ministry of Health is to reduce maternal and child morbidity and mortality. In order to work towards this goal, our community of Barranquilla, Colombia launched the Vida Nueva project in collaboration with the Mayor’s office of Barranquilla, World Diabetes Foundation, Novo Nordisk and Accenture to examine how we could address the high rates of GDM in our community.

By working in these four areas, we have achieved many exciting results during the three years of the project. First, the screening for GDM increased from 5 percent to 97 percent. We saw that 9 out of 10 women that were diagnosed with GDM received nutrition counseling and were able to improve their diet and exercise plans. Also, more than 1,250 local health workers were trained on the new GDM guidelines.

MSH: Can you tell us more about the guidelines?

HRMC: With the input of medical professionals and public health experts, our Vida Nueva team developed the GDM guidelines as a user friendly, easy to read and approachable tool with the intention that it could be used by everyone from health care center workers to doctor’s in the city hospitals. The guidelines were so well received that they were not only adopted by the Mayor’s Office of Barranquilla, but also by the national Ministry of Health. The guidelines for GDM that we developed have been adopted and mandated as national standard antenatal care for women.

This is a huge accomplishment to have standardized care across the country.

MSH: It certainly is, congratulations! What do you think were some factors to the success of this program?

HRMC: Two strategies that we used stand out to me as reasons why this project was so successful. First, throughout the entire process, we ensured that thenational level health experts and policy makers were involved in the development and finalization of the
guidelines. This made it much easier at the time to scale it up from a few health facilities in Barranquilla to the national level through the Ministry of Public Health.

Second, our community health workers conducted frequent house visits to the women in their communities. They made sure that pregnant women were educated on the risks of GDM, prevention methods and how to access services. The women were educated and empowered in an environment where they felt comfortable. These are two strategies I would encourage other communities and/or countries that are looking to adopt this same type of project.

MSH: These results are certainly moving and we hope that other communities will learn from what you and your team have been able to accomplish. If our readers wanted to learn more about Vida Nueva’s approach, where can they go?

HRMC: Everyone is welcome to learn more about our methodology, processes, obstacles and success factors by visiting the World Diabetes Foundation [10].

(From left:) Rikke Fabienke, Novo Nordisk; Mia Bulow-Olsen, Novo Nordisk; Jonathan Quick, MSH; Humberto R Mendoza Charris, Mayor's Office, Barranquilla, Colombia; Dr. Gebremariam Mahlet Yigeremu, Black Lion Hospital and University of Addis Ababa, Ethiopia; Catharine Taylor, MSH; Petra Wilson, IDF, Soraya Ramoul, Novo Nordisk, Sir Michael Hirst, IDF. Photo credit: Barbara Ayotte/MSH

Gestational diabetes: Get the facts
Gestational diabetes mellitus (GDM) affects an estimated 15 percent of pregnant women worldwide, yet remains a neglected area of health, especially in low-and middle-income countries. GDM is any degree of glucose intolerance occurring or first recognized during pregnancy. It can occur during any stage of pregnancy, but is more common in the second half. Gestational diabetes goes away after giving birth, but increases the risk for mother and child to develop type 2 diabetes later in life, and escalates the danger of eclampsia, hypertension, obstructed labor, and hemorrhaging—major causes of maternal mortality. GDM affects more women and children than HIV and tuberculosis combined.

Detecting and treating diabetes in pregnancy is a simple, low-cost way to improve maternal and child health and reduce maternal death. Undetected and unmanaged GDM may be a major underlying reason for the failure of many countries to achieve Millennium Development Goal 5—to improve maternal health.

Take Action: Screen for Gestational Diabetes Now

We have the tools to take action. Screening for gestational diabetes saves the lives of mothers and their babies and helps prevent them from developing diabetes and other non-communicable diseases later in life. Yet these tools and technologies remain inaccessible for far too many women around the world.

1. All nations should include low-cost gestational diabetes screening in their routine antenatal care packages.
2. The high cost of inaction far outweighs the cost of action against non-communicable diseases in any country in the world.
3. Screening for gestational diabetes should be a component of universal health coverage. If not, mothers will bear not only the out-of-pocket costs of treatment, but potentially the ultimate cost with their lives and those of their babies.

The world has the resources, the tools, and the opportunity to act now.
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We call on you to join us in making gestational diabetes screening a priority now. For more information on how you can support us, please contact: Gloria Sangiwa, gsangiwa@msh.org.

Save Lives of Women & Newborns through Gestational Diabetes Screening: A Call to Action

MSH and Novo Nordisk

For more information on how you can join us in making gestational diabetes screening a priority now, sign up now [11].

Editor's note, June 9, 2015: This post was updated with additional photos.

Related

- The New York Times: Global Diabetes Rates are Rising as Obesity Spreads [12]
- World Diabetes Foundation: Pregnancy and Diabetes Resources [10]

World Health Assembly [14], #WHA68 [19], Ethiopia [16], Colombia [17], gestational diabetes [18], GDM [19], diabetes [20], chronic NCDs [21], Humberto Mendoza Charris [22], Gebremariam Mahlet Yigeremu [23], Catharine Taylor [24], Jono Quick [25]

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[1] https://www.msh.org/blog/2015/06/08/saving-lives-of-women-and-newborns-through-gestational-