

Addressing India's Noncommunicable Disease Burden

Fact Sheet: October 2018

Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally.¹ In India, NCDs are estimated to account for 63% of all deaths. The premature mortality from NCDs, in India, in the Yr. 2016 was close to 6 million.² Undoubtedly, there is a need to prioritize NCDs along with taking comprehensive and integrated action at the national, state and district levels to ensure success. Jhpiego is supporting the government of India (GoI) and providing technical assistance (TA) in three key non-communicable disease areas - **Gestational Diabetes Mellitus (GDM)**, supporting the key stakeholders and states in documentation to better understand the **Human Papillomavirus (HPV)** vaccine service delivery and community perspective for **HPV** program, and improving **breast health care**.

Defining an Operational Model for an Antenatal Care (ANC) based Gestational Diabetes Mellitus (GDM) Screening and Management in India

Partners: Government of India (GoI), Ministry of Health and Family Welfare (MoHFW), State Government of Madhya Pradesh (GoMP), the Federation of Obstetric & Gynaecological Societies of India (FOGSI)

Donors: Educational Grant from Novo Nordisk, World Diabetes Foundation (WDF) Grant

Program Period:

- Educational Grant from Novo Nordisk: November 2015 - October 2018
- WDF Grant: October 2018 - October 2020

Background and Problem Analysis

GDM is present when blood sugar levels are above normal but still below those indicative of diabetes.³ Hyperglycemia (high blood sugar) is now one of the most common medical conditions seen during pregnancy.⁴ Despite that, it is an under-recognized, under-prioritized health issue with significant implications for women, newborns, and children throughout their lives.⁵ The condition is diagnosed through prenatal screening during the second trimester.³ Women with GDM are at increased risk of several complications during pregnancy and delivery, as are their infants. Furthermore, approximately 50% of the women with GDM develop type II diabetes within five years of their pregnancy⁶ and children born to women with GDM are up to eight times more likely to develop type II diabetes in early adulthood.⁷

Indian women have 11-fold increased risk of developing glucose intolerance in pregnancy compared to the West.⁸ GoI, in December 2014, released the National Guidelines for Diagnosis & Management of GDM. Despite that, most pregnant women in India are still not being tested for GDM. Challenges in execution and countrywide roll-out exist. It was in order to understand ground realities and bring learnings to enable universal GDM testing and treatment that Jhpiego, in collaboration with the GoI, started working on this critical issue.

The Hoshangabad Program

Jhpiego, in collaboration with the GoI and GoMP, implemented a two-year demonstration project (November 2015 - October 2017) in Hoshangabad district of Madhya Pradesh to 'operationalize an ANC

¹ From the World Health Organization (WHO) website; <http://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases> (Accessed on 9th Oct 2018 at 4:30 PM)

² World Health Organization - NCD Country Profiles, 2018; http://www.who.int/nmh/countries/2018/ind_en.pdf?ua=1 (Accessed on 9th Oct 2018 at 4:00 PM)

³ World Health Organization. Global report on diabetes. World Health Organization; 2016

⁴ FIGO-IDF Joint Statement and Declaration on Hyperglycemia in Pregnancy. <https://www.figo.org/sites/default/files/uploads/News/FIGO%20IDF%20Joint%20Statement%20final%20with%20logo.pdf>

⁵ 'A Call to Action – Prioritize Diabetes in Pregnancy to Save Lives, Improve Maternal Health, and Curb Intergenerational Transmission of NCDs,' http://womendeliver.org/wp-content/uploads/2018/07/DIP.CalltoAction.FINAL_.pdf; by Women Deliver, NCD Alliance and the World Diabetes Foundation

⁶ Kapur A. Links between maternal health and NCDs. *Best Practice & Research Clinical Obstetrics & Gynaecology*. 2015;29(1): 32-42.

<https://www.readbyqxmd.com/read/25199858/links-between-maternal-health-and-ncds>

⁷ Hod M, Kapur A, Sacks DA, et al. The International Federation of Gynecology and Obstetrics (FIGO) Initiative on gestational diabetes mellitus: A pragmatic guide for diagnosis, management and care. *International Journal of Gynecology and Obstetrics*. 2015; 131 Suppl 3:S173-211. www.ncbi.nlm.nih.gov/pubmed/26433807

⁸ Kayal, A., Mohan, V., Malanda, B., Anjana, R. M., Bhavadharini, B., Mahalakshmi, M. M., ... Belton, A. (2016). Women in India with Gestational Diabetes Mellitus Strategy (WINGS): Methodology and development of model of care for gestational diabetes mellitus (WINGS 4). *Indian Journal of Endocrinology and Metabolism*, 20(5), 707–715. <http://doi.org/10.4103/2230-8210.189230>

based service delivery model for GDM screening and management, as envisioned in the national GDM guidelines'. The program worked hand-in-hand with health workers at the facility level as well as field based health service providers to integrate GDM services at all ANC service delivery platforms. The two-year program demonstrated the feasibility of ANC based GDM diagnosis and management approach, and provided an operational model for service delivery.

Program Objectives and Approach



To introduce, universal GDM testing in accordance with the 2014 national guidelines



To ensure that women who test positive for GDM receive appropriate treatment, follow-up support and referral



To ensure appropriate documentation and dissemination of evidence and implementation tools



To advocate for subsequent scale-up at state and national levels



To increase community awareness of GDM in the catchment population of 7 community health centers (CHCs) and 25 primary health centers (PHCs)

Program Results and Impact

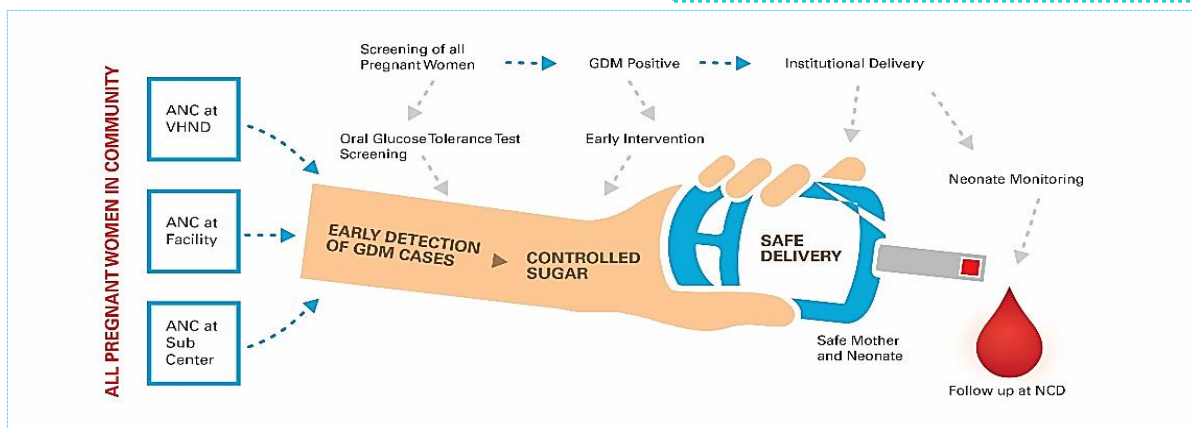
The implementation of the program took place in 176 health facilities and 975 villages in Hoshangabad district, Madhya Pradesh. 84% of the 29,950 pregnant women were tested for GDM, and **9% were diagnosed with GDM**. Of these, 53% were given a blood sugar test after two weeks of medical nutrition therapy (MNT). **99% of the women diagnosed with GDM were managed with MNT and physical exercise**. The remaining women were prescribed insulin alongside MNT and exercise.

There have been a few critical changes at the policy level. Influenced by the program, the national guidelines were revised in 2018. The new guidelines include the use of Metformin for management of GDM, and training of counselors, program managers and storekeepers. Additionally, given the success of the program in two years, the state government has scaled it up to five districts of Madhya Pradesh. Also, as part of the work in Madhya Pradesh, the private sector providers in the 5 districts, are receiving orientation on 2018 national guidelines.

With respect to capacity building, 1,079 ASHAs, 89 ASHA supervisors, 216 ANMs and supervisors, 98 staff nurses, 52 doctors, 30 laboratory technicians and 10 facility level counselors were trained in GDM awareness, screening, diagnosis and management.

Through additional support from WDF, Jhpiego will provide support to Gol to scale-up the intervention at national level and continue its work in Madhya Pradesh. Additional assistance in Hoshangabad district will also expand to Betul district, essentially to make these districts as model sites for GDM implementation for the state and for the nation. The work in these sites will continue to help Jhpiego understand the ground realities and challenges as well as provide pathways to address these challenges.

Program Approach



⁹ MNT for GDM primarily involves a carbohydrate controlled balanced meal plan which promotes optimal nutrition for maternal and fetal health,

adequate energy for appropriate gestational weight gain and achievement and maintenance of normoglycemia.

HPV Vaccine Program in India

Partners: World Health Organization (WHO), UNICEF, JSI, Self Employed Women's Association (SEWA), International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health, State Governments of Sikkim and Punjab

Donor: Gavi, the Vaccine Alliance

Program Period: December 2017 to November 2018

Background and Problem Analysis

Cervical cancer is the second most common cancer in women with an estimated 122,844 new cases and 67,477 deaths annually in India.¹⁰ Persistent and chronic sexually transmitted Human Papillomavirus (Oncogenic strains) infection is behind the transformation of cervical cells that cause cervical cancer. Estimates suggest that more than 80% of the sexually active women acquire genital HPV by 50 years of age.¹¹

In India, HPV vaccines are available in the private sector and routinely prescribed by pediatricians, but they are not available within the government program. Given the need for preventing cervical cancer in women, some of the progressive states such as Delhi, Punjab, Uttar Pradesh and Sikkim are actively pursuing an HPV vaccine program among adolescents.

Jhpiego's HPV Program in India

Jhpiego is providing support to progressive states who have taken their own initiatives to introduce HPV vaccine, thereby contributing to the primary prevention of cervical cancer in the country.

The primary areas of work are:

1. **Develop a program-learning toolkit**, including an investment case for HPV introduction, based upon global and national best practices.
2. **Coordinate with all the relevant stakeholders** including the Universal Immunization Program (UIP) partners at the national level for prevention of cervical cancer.

3. **Engage with community stakeholders** to understand and document their perspective on HPV vaccines and prevention of cervical cancer.

Specific Activities

The program is focusing on conducting an extensive literature review, documenting HPV vaccination efforts and learnings from states in India who are rolling out the HPV vaccinations, preparing a program-learning toolkit of global and sub-national (state) best practices for HPV vaccine implementation, and facilitating the use of these best practice documents. The team is also engaging with community stakeholders to understand and document their perspective on HPV vaccines and have a dialogue with adolescent girls groups, women's groups and communities on reproductive and sexual health and on cervical cancer and its prevention. The program is also working on investment case for HPV introduction. An important area of work is to create a map of critical stakeholders for HPV vaccination to share the learnings with these stakeholders, including with the UIP partners.

Improving Breast Health Care in India

Partners: State Governments of Uttar Pradesh and Jharkhand, Sanjay Gandhi Post Graduate Institute of Medical Sciences (Lucknow, Uttar Pradesh), Rajendra Institute of Medical Sciences (Ranchi, Jharkhand), Tata Trust, Cipla Foundation, AIIMS (Delhi).

Donor: Johns Hopkins University

Program Period: April 2018 – June 2019

Background and Problem Analysis

Breast cancer is the leading cancer among women in India. Globocan¹² estimates that the age standardized incidence rate of breast cancer in India is 24.7 per 100,000 women, while cervical cancer comes a close second with 14.7 per 100,000 women. In India, in the last decade, breast cancer has moved from being just an urban centric problem to a more widespread epidemic. It has jumped from being the second leading cause of cancer in India to

¹⁰ Bruni L, Barrionuevo-Rosas L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, Bosch FX, de Sanjosé S. ICO Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in India. Summary Report. 27 July 2017. [Date Accessed]

¹¹ Singh N. HPV and Cervical cancer - prospects for prevention through vaccination. Indian J Med Paediatr Oncol. 2005;26:20-3.

¹² Globocan 2018, a project by the World Health Organization's International Agency for Research on Cancer (IARC), has put together various publically available data to estimate the incidence, mortality and prevalence of major types of cancer at national level in 184 countries of the world.

becoming the leading cause. From 2008 to 2012, India has seen an increase of 11.54% in incidence and 13.82% increase in mortality due to breast cancer¹³. Moreover, clients come to seek health care at a relatively advanced stage¹⁴. This contributes to a much lower five-year survival for breast cancer for Indian women, which stands at 66.1% (89.5% in Australia and 90.2% in the USA).¹⁵

The access to quality breast health care for women in India is plagued with multiple challenges, which result in late detection, delayed diagnosis and treatment. This leads to poor outcomes. Lack of strong, well-defined and efficient referral pathways, and limited capacity to treat patients with various stages of breast cancer, utilizing the limited resources available for multimodality treatment, together compound the issue even further. An additional contributor is lack of policy prioritization.

Jhpiego's Breast Health Program in India

Jhpiego is providing technical assistance to the Government of Uttar Pradesh and Jharkhand in its efforts to improve access to quality breast health care for women in India. Based on evidence-based interventions, the cornerstones of Jhpiego's strategy include a strong learning agenda among providers and communities, and demonstration of a well-functioning early detection system at the primary health care level that links to timely referral to a designated tertiary care hospital. While, the upstream work related to learning and advocacy is being undertaken at the national level, the demonstration of a well-functioning early detection system along with awareness generation activities is being piloted in a district each of Uttar Pradesh and Jharkhand.

Specific Activities

Landscape Analysis: Assessment and Recommendation

Jhpiego has already undertaken a rapid assessment to understand the landscape of the current public health system's capacity for breast health care in India. The findings reflect that there is a lack of awareness for cancers in general, breast health in particular, and a lack of access for screening and

early diagnosis. There are also challenges to treatment, such as too few specialists and health facilities for treatment, non-uniform diagnostic and treatment protocols, and lack of resources in the public health system.

Creation of a Platform of Stakeholders and Experts at the State Level to advise on a Technically Sound Program Design

Jhpiego is providing technical assistance (TA) to state governments of Jharkhand and Uttar Pradesh to identify existing groups and platforms that are working on breast health and to convene a group of experts and stakeholders at the state level.

Demonstrate a Comprehensive Breast Health Care Program in India, within the Public Health System

Jhpiego has started working in the pilot districts to demonstrate a well-functioning, resource stratified, scalable service delivery framework for early detection, using clinical breast examination services and creation of a referral pathway from detection to treatment.

Innovations for Improving Access to Breast Care

These demonstration sites at Uttar Pradesh and Jharkhand would later on test promising process and technological innovations to improve access to care, diagnostics and treatment.

Jhpiego will also be extending its breast health work to Maharashtra, working with the Government of Maharashtra and Tata Memorial Hospital, to support and learn more about task sharing for increasing access to cancer care, including chemotherapy, in a selected district of the state.

Updates till August, 2018

¹³ S. Malvia, S.A. Bagadi, U.S. Dubey, S. Saxena. Epidemiology of breast cancer in Indian women. *Asia Pac. J. Clin. Oncol.*, 13 (4) (2017), pp. 289-295

¹⁴ Agarwal G *Breast Care* 2008;3:21-27, SEER survival monograph(NCI),2007

¹⁵ 'Global surveillance of trends in cancer survival 2000-14 (CONCORD-3)', published in *Lancet*, January 2018