Access to healthcare services during pregnancy

And maternal health outcomes in developing countries

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November 3rd, 2015

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Background

- In 2005, nearly half a million women died on account of pregnancy related complications.

- Almost 80% of deaths occur due to sepsis, hemorrhage, hypertensive disorder, induced abortion, and obstructed labor.

- The high fatality rate is observed primarily due to poor access to medical facilities, lack of obstetric professionals and poverty.

Ref: Pathak, P.K., Singh, A., & Subramanian, S.V. (2010). Economic inequalities in maternal health care: Prenatal care and skilled birth attendance in India, 1992-2006. *PLOS ONE*. Doi 10.1371/journal.pone.0013593.

Milliez, J. (2012). Women's health and development. *'Académie nationale de médecine*, 196(8), 1509-1520. DOI: 24313009.

- Globally, around 536,000 maternal deaths were recorded in the year 2005 and the maternal mortality ratio was as high as 400 per 100,000 live births.

- Maternal deaths and maternal mortality ratio were highest in Southeast Asia, Sub-Saharan Africa, East Asia and Latin America.

Ref: Shah, I.H. & L.S. (2007, Nov 15). Maternal mortality care from 1990 to 2005: uneven but important gains. *Reproductive Health Matters*, 15(30), 17-27.

- Sub-Saharan Africa and Asia account for almost 90% of maternal deaths.
- India faces a huge burden of 25% of the maternal mortality in the world.
- Bangladesh, Ethiopia, Nepal, Indonesia, Nigeria and Pakistan account for 30% of maternal mortality.

Ref: Donnay, F. (2000, July). Maternal survival in developing countries: What has been done, what can be achieved in the next decade. International Journal of Gynecology & Obstetrics, 70(1), 89-97. http://dx.doi.org/10.1016/S0020-7292(00)00236-8

- Around 1 in 12 women die in Sub-Saharan Africa due to maternal complications as opposed to 1 in 4000 deaths in Northern Europe.

- Around 1 in 4 women suffer from acute or chronic disabilities associated with pregnancy in developing countries

Ref: Donnay, F. (2000, July). Maternal survival in developing countries: What has been done, what can be achieved in the next decade. International Journal of Gynecology & Obstetrics, 70(1), 89-97. http://dx.doi.org/10.1016/S0020-7292(00)00236-8

Factors

- Socioeconomic status
- Education
- Age
- Ethnicity
- Religion
- Culture

Ref: Say, L., & Rine, R (2007, October). A systematic review of inequalities in the use of maternal healthcare in developing countries: examining the scale of the problem and the importance of the context. *Bulletin of the World Health Organization, 85(10).* http://dx.doi.org/10.1590/S0042-96862007001000019

- Decision making power
- Location
- Clinical need for care and quality of available health care services influence the access to primary care during pregnancy.

Ref: Say, L., & Rine, R (2007, October). A systematic review of inequalities in the use of maternal healthcare in developing countries: examining the scale of the problem and the importance of the context. *Bulletin of the World Health Organization, 85(10).*

The Fifth Millennium Developmental Goal seeks to reduce maternal mortality by 75% by 2015.

Ref: Wado, Y.D., Afework, M.F., & Hindin, M.J. (2013). Unintended pregnancies and the use of maternal health services in Southwestern Ethiopia. *BMC International Health and Human Rights, 13(36)*. doi:10.1186/1472-698X-13-36

Definition of prenatal care

- "The detection, treatment, or prevention of adverse maternal, fetal, and infant outcomes as well as interventions to address psychosocial stress, detrimental health behaviors such as substance abuse, and adverse socioeconomic conditions."

Ref: Sword, W., Heaman, M.I., Brooks, S., Tough, S……..& Hutton, E. (2012). Women's and care providers' perspectives of quality prenatal care: a qualitative descriptive study. BMC Pregnancy and Childbirth, 12(29). doi:10.1186/1471-2393-12-29

Advantages of prenatal care

- Better fetal outcomes in terms of normal delivery, optimum birth weight and timely development.
- Conducting timely screenings and educating mothers will help in making timely decision and avoiding serious medical complications.

Ref: Walford, H.H., Trinh, S., Wiencrot, A. & Lu, M.C. (2011). What is the role of prenatal care in reducing racial and ethnic disparities in pregnancy outcomes? Reducing *Racial/Ethnic Disparities in Reproductive and Perinatal Outcomes*, 151-179. Retrieved form http://link.springer.com/chapter/10.1007/978-1-4419-1499-6_8

Simkhada B., Van Teijlingen, E.R., Porter, M. & Simkhada P. (2008). Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature. Journal of Advanced Nursing, 61 (3), 244-260. doi: 10.1111/j.1365- 2648.2007.04532.x

- Complications during pregnancy can be significantly reduced by making at least four visits to antenatal care clinics.

- Educated to opt for a skilled birth attendant during delivery, which proves to be beneficial.

Ref: Simkhada B., Van Teijlingen, E.R., Porter, M. & Simkhada P. (2008). Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature. Journal of Advanced Nursing, 61 (3), 244-260. doi: 10.1111/j.1365- 2648.2007.04532.x

- Along with improved physical outcomes, improves mental health outcomes of the mothers.

- Increased self-esteem, decreased stress, decreased social conflict in the third trimester and decreased rates of depression.

Ref: Ickovics, J.R., Reed, E., Magriples, U., Westdahl, C., Schindler Rising, S., & Kershaw,T.S. (2011). Effects of group prenatal care on psychosocial risk in pregnancy: Results from a randomized controlled trial. Psychology & Health, 26(2), 235-250. Doi 10.1080/08870446.2011.531577

Barriers to Prenatal Care

Five important factors associated with access to health care

- Affordability
- Availability
- Accessibility
- Accommodation
- Acceptability

Ref: Moyer, C.A., McLaren, Z.M., Adanu, R.M. & Lantz, P.M. (2013, September). Understanding the relationship between access to care and facility-based delivery though analysis of the 2008 Ghana demographic health survey. *International Journal of Gynecology & Obstetrics, 122(3)*, 224-229.http://dx.doi.org/10.1016/j.ijgo.2013.04.005

	Example of barrier
Demand side	
1) Information on health care choices/providers	Lack of knowledge of providers
2) Education	Low ability to assimilate health choices and negotiate access to appropriate providers
3) Indirect consumer costs	
• distance cost	Long and slow travel to facilities
• opportunity cost	Need for patient and carer to stop working for long periods in order to seek care
4) Household preferences	Asymmetric control over household resources
5) Community and cultural preferences, attitudes and norms	Reluctance to seek health care for women outside home; community resistance to using modern medical care to assist with pregnancy
6) Price and availability of substitute products and services	Patients seek treatment through providers that are inappropriate for their condition such as drug sellers
Demand and supply interaction	
Direct price of service of a given level of quality (including informal payment)	High cost of services Large unofficial payments to staff
Quantity rationing	Long waits to see medical staff
Supply side	
1) Input prices and input availability	
• Wages and quality of staff	Absenteeism, staff not attracted to the area
• Price and quality of drugs and other consumables	Scarcity of supplies, weak cold chain
2) Technology	Inability to treat disease with given technology
3) Management/staff efficiency	Poor quality of management training, lack of management systems

Ref: Ensor, T. & Cooper, S. (2004). Overcoming barriers to health service access: influencing the demand side. Health Policy and Planning, 19(2), 69-79. doi: 10.1093/heapol/czh009)

Cultural and social barriers

- Lack of empowerment of women
- Early marriages
- Lack of decision making ability and power
- Poorly spaced pregnancies and pressure of bearing a male child
- Traditions such as 'evil eye' lead to concealment of pregnancy until second trimester

Ref: Kumar, V., Kumar, A., Das, V., Srivastava, N.M.…& Darmstadt, G.L. (2012). Community-driven impact of a newborn-focused behavioral intervention on maternal health in Shivgarh, India. *International Journal of Gynecology & Obstetrics*, 117 (1), 4-55. http://dx.doi.org/10.1016/j.ijgo.2011.10.031

- Belief that pregnancy is a natural phenomenon and that they do not need additional support in terms of screenings, medications, nutrition and education.

- Belief that prenatal visits will take up a lot of time from their household chores, thereby making it their second priority.

Ref: Kumar, V., Kumar, A., Das, V., Srivastava, N.M.…& Darmstadt, G.L. (2012). Community-driven impact of a newborn-focused behavioral intervention on maternal health in Shivgarh, India. *International Journal of Gynecology & Obstetrics*, 117 (1), 4- 55. http://dx.doi.org/10.1016/j.ijgo.2011.10.031

- Reluctance to visit male health professionals.

- Unmarried women with unintended pregnancies are less likely to utilize prenatal care services due to the social stigma associated with it.

Ref: Kronfol, N.M. (2012) Access and barriers to health care delivery in Arab countries: a review. *Eastern Mediterranean Health Journal, 18(12)*, 1239-1246. Retrieved from http://applications.emro.who.int/emhj/v18/12/EMHJ_2012_18_12_1239_1246.pdf?origin=publication_detail

Guliani, H., Sepehri, A., & Serieux, J. (2013, July). Determinants of prenatal care use: Evidence from 32 low-income countries across Asia, Sub-Saharan Africa and Latin America. *Health Policy Plan*. doi: 10.1093/heapol/czt045

Overcoming the Burden

- Countries like Malaysia and Sri Lanka among other developing countries have successfully reduced their maternal mortality rates to levels much comparable to developed countries.

- They shifted their strategies from focusing on expanding their services in underserved areas to increasing utilization and improving quality of services provided.

Ref: Pathmanathan, I. (2003). *Investing in maternal health learning from Malaysia and Sri Lanka*. Washington, D.C.: World Bank.

- Both countries focused on reducing the financial barrier by making prenatal care services affordable to women.

- Thailand has successfully reduced their maternal mortality ratios from 400 deaths per 100,000 live births in 1960 to 50 per 100,000 live births in 1984.

Ref: Pathmanathan, I. (2003). *Investing in maternal health learning from Malaysia and Sri Lanka*. Washington, D.C.: World Bank.

Ronsmans, C, & Graham. W.J. (2006). Maternal mortality: who, when, where, and why.*The Lancet, 368(9542)*, 1189-1200. http://dx.doi.org/10.1016/S0140-6736(06)69380-X

- These successes are mainly attributed to improvements in midwifery training, increased hospital referrals, and providing free care services.

- Egypt and Honduras have also halved their maternal mortality ratios in less than 7 years to around 200 deaths per 100,000 live births.

Ref: Ronsmans, C, & Graham. W.J. (2006). Maternal mortality: who, when, where, and why. *The Lancet, 368(9542)*, 1189-1200. http://dx.doi.org/10.1016/S0140-6736(06)69380-X

- Substantial decline in maternal mortality rates have been observed in a rural area called Matlab in Bangladesh from 600 deaths per 100,000 live births in 1976 to 200 per 100,000 in 2001.

- Increased access to emergency obstetric care, reduced abortion related deaths, and overall improvement in the health of women.

Ref: Ronsmans, C, & Graham. W.J. (2006). Maternal mortality: who, when, where, and why.*The Lancet, 368(9542)*, 1189-1200. http://dx.doi.org/10.1016/S0140-6736(06)69380-X

Successful Interventions

- India
- Brazil
- Rural Ethiopia

Conclusion

- Maternal mortality is a huge burden in many countries especially in the developing world and the biggest challenge is the availability of adequate healthcare services.
- The best way to overcome this burden is to integrate health care services and public health interventions.