

Stillbirths: Investment in ending preventable stillbirths by 2030 will yield multiple returns and help achieve multiple Sustainable Development Goals

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1. Seeking to end preventable deaths by 2030

In the first year of the new development era, defined by the Sustainable Development Goals (SDGs), there were 2.7 million newborn deaths, 2.6 million babies stillborn and 303,000 maternal deaths. Many of these deaths were preventable, with known solutions. The Lancet's Ending preventable stillbirth Series, published in January 2016, exposed the **neglected issue of 2.6 million stillbirths each year** (Froen et al., 2016, Lawn et al., 2016, Heazell et al., 2016, Flenady et al., 2016, de Bernis et al., 2016). It provided updated estimates, assessed the impact of stillbirths on women and societies, and presented evidence for action to end preventable stillbirths by 2030, echoing the call of the Global Strategy for Women's, Children's and Adolescents' Health and the Every Woman Every Child movement.

This brief summarizes the case for strengthening action to end preventable stillbirths and improve bereavement care within the maternal and child health continuum, founded upon ensuring a woman's right to quality healthcare for herself and her baby during pregnancy and childbirth.

2. Global burden of stillbirths: Where? When? Why?

Worldwide in 2015, there were 18.4 stillbirths per 1000 total births. The average annual rate of reduction for stillbirths (2.0%) has been far slower than that for either maternal (3.0%) or post-neonatal mortality of children younger than 5 years (4.5%) (Lawn et al., 2016). **At present rates, more than 160 years will pass before a pregnant woman in Africa has the same chance of giving birth to a live baby as does a woman in a high-income country today.** In every region, there are countries making

more rapid progress, showing that further improvement in stillbirth rate reduction is possible.

Most of the world's 2.6 million stillbirths each year occur in low- and middle-income countries (98%), with three-quarters in sub-Saharan Africa and south Asia. About 60% occur in rural areas and more than half in conflict and emergency zones, affecting the families most underserved by healthcare systems. Half of all stillbirths occur during labour—1.3 million each year (Lawn et al., 2016). In all countries, the risk of stillbirth is highest for the most marginalised populations. Social disadvantage is associated with a doubling of the risk of stillbirth in high-income countries, an effect which is likely to be even greater in low- and middle-income countries (Flenady et al., 2016). This disparity reflects structural inequalities, including racism and inequity of opportunity.

3. Stillbirths: A heavy burden for society

Stillbirth remains hidden from society, and has wide-reaching consequences for parents, care providers, communities, and society that are frequently overlooked and underappreciated. **The estimated direct financial cost of a stillbirth is 10-70% greater than the cost of a live birth** (Heazell et al., 2016). Costs of healthcare provision associated with stillbirth are often an out-of-pocket expense for families, as are costs of funeral and burial or cremation of the baby. Parents may lose income due to time off work, reduced working hours, or reduced productivity. Survey data show parents may only be working at 26% of normal work productivity 30 days after the stillbirth of their

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baby, increasing to just 63% of normal productivity after 6 months.

Disenfranchised grief is common, whereby parents' grief after stillbirth is not legitimised or accepted by health professionals, family members, or society. A survey found that bereaved parents felt their community believed that "parents should try to forget their stillborn baby and have another child" (Flenady et al., 2016). Many parents suppress their grief in public. Women whose babies have been stillborn often feel stigmatised, socially isolated, and less valued by society and, in some cases, are subject to abuse and violence. Stigma and taboo exacerbate trauma for families, and fatalism impedes progress in stillbirth prevention. Negative psychological symptoms often persist for years after stillbirth.

An estimated 4.2 million women are living with depression associated with stillbirth (Heazell et al., 2016). Care providers are also deeply affected both personally and professionally, experiencing guilt, anger, blame, anxiety, and sadness, as well as fear of litigation and disciplinary action.

4. Preventing deaths with health system improvements and an integrated approach

Most stillbirths, as well as maternal and newborn deaths, are preventable through high quality antenatal and intrapartum care within the continuum of care for women and children. The belief that many stillbirths are unavoidable due to congenital abnormalities is widespread, yet these account for a median of only 7.4% of stillbirths (Lawn et al., 2016). Major stillbirth risk factors are well known and often overlap, including maternal age >35 years, maternal infections (notably syphilis and malaria), non-communicable diseases, obstetric complications, and nutrition and lifestyle factors (see Figure). In high-income countries, 90% of stillbirths occur in the antepartum period, often associated with preventable lifestyle factors (Lawn et al., 2016, Flenady et al., 2016).

Stillbirth prevention and response requires an integrated approach within the framework of quality care across the continuum (de Bernis et

al., 2016). Neglect of stillbirths reduces and hides the full potential of programmes for women's and children's health. **The stillbirth rate is the most sensitive marker of quality and equity of health care and health systems.**

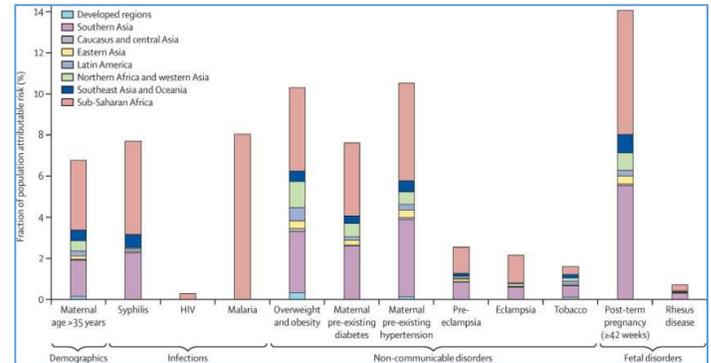


Figure 1 Regional variation in population attributable risk of stillbirth for factors with adequate risk data and appropriate prevalence data, from Lawn et al, Stillbirths: rates, risk factors, and acceleration towards 2030. Lancet. 2016.

5. No one left behind: The case for investing in stillbirth prevention

Investing in stillbirth prevention is a smart investment for economies and societies. The cost of averting stillbirth in low- and middle-income countries would be returned almost 25-fold through the economic and social value these live children would provide their families, communities and nations (ten Hoop-Bender et al.). **Action to prevent stillbirths – especially to increase access to quality healthcare in pregnancy and childbirth – will yield multiple returns on investment by reducing maternal and neonatal deaths and morbidities as well as improving child development outcomes** (de Bernis et al., 2016). Scaling up proven antenatal and intrapartum interventions in the 75 highest burden countries could prevent 823,000 stillbirths, 1,145,000 neonatal deaths and 166,000 maternal deaths annually with universal coverage by 2030 at an additional annual cost of US \$2,150 for each life saved (Heazell et al., 2016). Deliberate integration of action to prevent stillbirths within the continuum of maternal and child healthcare is a necessary step to achieving the SDGs by 2030 and supporting the UN's commitment to "leaving no one behind".

6. Greater progress is needed

The high global burden of stillbirths along with slow progress in reduction, limited attention and persistent stigma led the independent Expert Review Group for the accountability of the Global Strategy for Women's and Children's Health (2010-2015) to call for the integration of stillbirths within the post-2015 agenda, stating that "[a] further issue that has been even more neglected than adolescent health is stillbirths" (World Health Organization, 2015). In the past five years, progress in systematic integration of stillbirth prevention within global and national initiatives has been uneven. A target to end preventable stillbirths was included in the [Every Newborn Action Plan](#) and endorsed by 194 countries at the World Health Assembly in 2014. Data for tracking stillbirth has increased and WHO's "[100 Core Health Indicators](#)" now include the stillbirth rate. Yet mentions of stillbirth remain limited in most relevant policies, research, and funding. Only 15 of 67 national health plans in a recent assessment mentioned stillbirths and fewer incorporated a stillbirth rate target (Froen et al., 2016).

Limited progress reflects stillbirths' exclusion from the Millennium Development Goals. The sheer burden of 2.6 million deaths, together with the interlinkages between stillbirth prevention and the prevention of maternal and newborn deaths, point to the urgency of ensuring this situation is not repeated in the post-2015 agenda, despite the fact that stillbirths are also missing from SDG targets and indicators.

7. Realizing the Sustainable Development Goals requires that we not leave those affected by stillbirth behind

The stillbirth rate is an important indicator of quality of care in pregnancy and childbirth, as well as a sensitive marker of health systems' strength, measuring not only progress in achieving SDG targets for reduction of neonatal, maternal, and under 5 mortality, but also progress on other targets aimed at reducing poverty and increasing equity and access to healthcare. **Effective implementation of the SDGs and the Global Strategy will be**

maximised by acknowledging, incorporating, and counting stillbirths.

The *Lancet's* Ending preventable stillbirths Series set out a renewed call to action to end preventable deaths—stillbirths, newborn and maternal deaths—and improve bereavement support by 2030, including targets and milestones from the United Nations-endorsed [Every Newborn Action Plan](#) (World Health Organization & UNICEF, 2014) (see Box).

Box: Targets for ending preventable stillbirths and improving bereavement support by 2030

MORTALITY TARGETS:

- *Country burden*: 12 stillbirths or fewer per 1000 total births in every country
- *Equity*: All countries set and meet targets to close equity gaps and use data to track stillbirths

UNIVERSAL HEALTH CARE COVERAGE TARGETS:

- *Family planning* (by 2020): 120 million more women and girls with access to contraceptives
- *Sexual and reproductive healthcare*: Universal access to services and integration into national strategies and programmes
- *Antenatal care*: Universal comprehensive quality antenatal care
- *Care during labour and birth*: Universal effective and respectful intrapartum care

MILESTONES:

- *Every Newborn global and national milestones* met
- *Respectful care, including bereavement support after a death*: Global consensus on a package of care after a death in pregnancy or childbirth for the affected family, community, and caregivers in all settings
- *Stigma*: All countries to identify mechanisms to reduce stigma associated with stillbirth among all stakeholders

Meeting these targets will require that the global health community, country leaders, and individual women and men collaborate more effectively in support of the following actions: (1) deliberate leadership at global and country levels, especially from policy makers; (2) increased voice, especially of women, to break

the silence and reduce stigma and taboo surrounding stillbirths; (3) implementation of integrated interventions across the maternal and child health continuum, with investment that is commensurate with the scale of the global burden of stillbirth; (4) definition and use of indicators to measure progress and quality of care; and (5) investigation of gaps in knowledge on stillbirth prevention and bereavement support (de Bernis et al., 2016).

If attention to stillbirth is not increased, 2.6 million families each year will continue to be left behind, and global initiatives—including the SDGs—will not be fully realized.

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References

DE BERNIS, L., KINNEY, M. V., STONES, W., TEN HOOPE-BENDER, P., VIVIO, D., LEISHER, S. H., BHUTTA, Z. A., GULMEZOGLU, M., MATHAI, M., BELIZAN, J. M., FRANCO, L., MCDUGALL, L., ZEITLIN, J., MALATA, A., DICKSON, K. E., LAWN, J. E., LANCET ENDING PREVENTABLE STILLBIRTHS SERIES STUDY, G. & LANCET ENDING PREVENTABLE STILLBIRTHS SERIES ADVISORY, G. 2016. Stillbirths: ending preventable deaths by 2030. *Lancet*.

- FLENADY, V., WOJCIESZEK, A. M., MIDDLETON, P., ELLWOOD, D., ERWICH, J. J., COORY, M., KHONG, T. Y., SILVER, R. M., SMITH, G. C., BOYLE, F. M., LAWN, J. E., BLENCOWE, H., LEISHER, S. H., GROSS, M. M., HOREY, D., FARRALES, L., BLOOMFIELD, F., MCCOWAN, L., BROWN, S. J., JOSEPH, K. S., ZEITLIN, J., REINEBRANT, H. E., RAVALDI, C., VANNACCI, A., CASSIDY, J., CASSIDY, P., FARQUHAR, C., WALLACE, E., SIASSAKOS, D., HEAZELL, A. E., STOREY, C., SADLER, L., PETERSEN, S., FROEN, J. F., GOLDENBERG, R. L., LANCET ENDING PREVENTABLE STILLBIRTHS STUDY, G. & LANCET STILLBIRTHS IN HIGH-INCOME COUNTRIES INVESTIGATOR, G. 2016. Stillbirths: recall to action in high-income countries. *Lancet*.
- FROEN, J. F., FRIBERG, I. K., LAWN, J. E., BHUTTA, Z. A., PATTINSON, R. C., ALLANSON, E. R., FLENADY, V., MCCLURE, E. M., FRANCO, L., GOLDENBERG, R. L., KINNEY, M. V., LEISHER, S. H., PITT, C., ISLAM, M., KHERA, A., DHALIWAL, L., AGGARWAL, N., RAINA, N., TEMMERMAN, M. & LANCET ENDING PREVENTABLE STILLBIRTHS SERIES STUDY, G. 2016. Stillbirths: progress and unfinished business. *Lancet*.
- HEAZELL, A. E., SIASSAKOS, D., BLENCOWE, H., BURDEN, C., BHUTTA, Z. A., CACCIATORE, J., DANG, N., DAS, J., FLENADY, V., GOLD, K. J., MENSAH, O. K., MILLUM, J., NUZUM, D., O'DONOGHUE, K., REDSHAW, M., RIZVI, A., ROBERTS, T., TOYIN SARAHI, H. E., STOREY, C., WOJCIESZEK, A. M., DOWNE, S., LANCET ENDING PREVENTABLE STILLBIRTHS SERIES STUDY, G. & LANCET ENDING PREVENTABLE STILLBIRTHS INVESTIGATOR, G. 2016. Stillbirths: economic and psychosocial consequences. *Lancet*.
- LAWN, J. E., BLENCOWE, H., WAISWA, P., AMOUZOU, A., MATHERS, C., HOGAN, D., FLENADY, V., FROEN, J. F., QURESHI, Z. U., CALDERWOOD, C., SHIEKH, S., JASSIR, F. B., YOU, D., MCCLURE, E. M., MATHAI, M., COUSENS, S., LANCET ENDING PREVENTABLE STILLBIRTHS SERIES STUDY, G. & LANCET STILLBIRTH EPIDEMIOLOGY INVESTIGATOR, G. 2016. Stillbirths: rates, risk factors, and acceleration towards 2030. *Lancet*.
- TEN HOOPE-BENDER, P., STENBERG, K. & SWEENEY, K. Reductions in stillbirths—more than a triple return on investment. *The Lancet*, 387, e14-e16.
- WORLD HEALTH ORGANIZATION 2015. 2015: Every Woman, Every Child, Every Adolescent: Achievements and Prospects: The Final Report of the independent Expert Review Group on Information and Accountability for Women's and Children's Health.
- WORLD HEALTH ORGANIZATION & UNICEF 2014. Every Newborn: An Action Plan to End Preventable Deaths. Geneva: World Health Organization.