First estimates of newborns needing treatment for bacterial infection show seven million cases

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Nearly 7 million babies in the first month of life (neonates) required treatment for severe bacterial infection in South Asia, sub-Saharan Africa and Latin America in 2012, according to a new study published in *The Lancet Infectious Diseases*. The estimates, which are the first of their kind, indicate the high burden of neonatal bacterial infections, which include sepsis, meningitis and pneumonia. Researchers developed the estimates to help guide health-programme planning for clinical diagnosis and treatment.

The new research follows the recent Lancet Every Newborn Series, and was overseen by Professor Joy Lawn, from the London School of Hygiene & Tropical Medicine and Save the Children, and coordinated by Dr Anna Seale, at the KEMRI-Wellcome Trust Research Programme, Kenya, with the Centre for Tropical Medicine, University of Oxford, involving 65 investigators from 46 different institutions around the globe.

The researchers looked at data from 22 studies, for 259,944 neonates with 20,196 cases of possible severe bacterial infection. Of the estimated 6.9 million babies in the first month of life who required treatment for possible severe bacterial infection, 3.5 million were in south Asia, 2.6 million in sub-Saharan Africa and 0.8 million in Latin America. These estimates do not include preterm babies under 32 weeks gestation, who are particularly susceptible to infection as a consequence of their

prematurity.

Although the authors highlight the lack of data available for the study, they note that their estimate of 680,000 neonatal deaths associated with these infections is consistent with other estimates based on larger datasets, which supports the accuracy of their findings.

Based on their estimates, both the size of the need-to-treat population and the burden of severe bacterial infection on health-care systems is substantial in the regions they examined, and it reinforces the urgent need for more investment, innovation and action at all levels.

Prof Joy Lawn said: "Newborn deaths due to severe infection could be significantly reduced through highly cost-effective interventions such as prevention, including clean cord care and breastfeeding, innovations such as chlorhexidine cord cleansing as well as through treatment with antibiotics.

"The majority of babies with neonatal infections in sub Saharan Africa and south Asia do not even receive simple antibiotic therapy, although some countries are shifting to using community health workers to increase access to treatment. These measures are some of the crucial actions that countries will need to take in order to meet the target of ten or fewer neonatal deaths per 1000 live births in every country by 2035 as part of the United Nation's Secretary General's Every Newborn Action Plan"

The Action Plan will be launched on 30 June in Johannesburg by Graca Machel, Nelson Mandela's widow.

More information: Anna C Seale, Hannah Blencowe, Alexander A Manu, Harish Nair, Rajiv Bahl, Shamim A Qazi, Anita K Zaidi, James A Berkley, Simon N Cousens, Joy E Lawn, for the pSBI Investigator

Group. Estimates of possible severe bacterial infection in neonates in sub-Saharan Africa, south Asia, and Latin America for 2012: a systematic review and meta-analysis. *The Lancet Infectious Diseases*. DOI: 10.1016/S1473-3099(14)70804-7 . www.thelancet.com/journals/lan … (14)70804-7/abstract

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