Saving the lives of vulnerable babies around the world

Research conducted by Professor Mats Målqvist of Uppsala University has the potential to save the lives of millions of vulnerable babies from low-income areas using simple, low-cost interventions. By gaining a thorough contextual understanding of the needs of local people and hospital staff, Professor Målqvist and his team have implemented appropriate techniques and helped to ensure their retention. The impact of their work so far not only saves lives but also changes clinical best practice in many hospitals ensuring their good work continues.

The fragility of a newborn baby means they require care and attention in the moments following their birth to ensure they survive infancy. In many countries around the world, health systems remain insufficiently developed to ensure best practice reaches each of these vulnerable patients. Tragically, the consequence of this uneven distribution of information is over five million potentially avoidable deaths each year of children under the age of five.

A team of researchers led by Professor Mats Målqvist of Uppsala University has set out to tackle this global issue using a series of relatively simple and low-cost healthcare interventions. Professor Målqvist is trained as both a doctor and public health professional. This unique combination of skills which he uses to gain a thorough understanding of society. The diversity of participants allows researchers to draw conclusions about the impact of the socioeconomic status of mothers on the likelihood of their children surviving. The team found that the importance of the focus groups was particularly prominent amongst poorer families. In the last year of the study, the risk of neonatal death was reduced by 69% for poor families, an effect not seen amongst wealthier families. Consequently, one of the conclusions of this research was that the NeoKIP groups improved equity in neonatal survival dependent on wealth.

COMMUNITY GROUP INTERVENTION – VIETNAM

In Northern Vietnam, researchers utilised community-based groups to facilitate better knowledge sharing. The Vietnamese team was headed by Principal Investigator Dr Nguyen Thu Nga. This approach acknowledged that the healthcare challenges in this area were not caused by a lack of knowledge but rather limited means of knowledge distribution and getting knowledge into practice.

The team reasoned that better-shared understanding would allow for a change of behaviour which could save lives.

The community group trial was termed Neonatal health – Knowledge Into Practice (NeoKIP) and the groups allowed participants to share and discuss their personal experience of problems with newborn health and survival. Each group contained local stakeholders and a local facilitator. The role of this facilitator was to encourage participants to find and use knowledge readily available to them. Without the provision of resources, the risk of an infant not surviving their first month of life reduced by a staggering 46%.

The community groups were available to mothers from a broad cross-section of society. The diversity of participants allowed researchers to draw conclusions about the risk of an infant not surviving their first month of life. Facilitating a first breath within this so-called “Golden Minute” is critical. Without intervention within the first minute of life, 69% of infants do not survive. Newborn deaths during the first hour of life account for 33% of all deaths in this age group. Facilitating a first breath was critical. Each group contained local stakeholders and a local facilitator. The role of this facilitator was to encourage participants to find and use knowledge readily available to them. Without the provision of resources, the risk of an infant not surviving their first month of life reduced by a staggering 46%.

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Staff were able to reduce stillbirths and deaths during the first day of life by approximately 50%.
Plan-Do-Study-Act methodology was used during the HBB intervention in Nepal. A premature baby cared for skin-to-skin at Uong Bi General hospital, Vietnam.

Professor Målqvist has shown the critical importance of understanding the context of a healthcare system before attempting to apply a ‘one size fits all’ method to reducing the devastating rate of neonatal deaths worldwide.

To develop the reinforcement strategies, a workshop was conducted with hospital leadership and a Quality Improvement Team was formed. Their goal was to improve adherence to neonatal resuscitation techniques and develop a Quality Improvement Cycle to ensure reminders were frequent and adequate support was always available. The reinforcement techniques included weekly review meetings, daily skills checks, self-evaluation, peer reviews.

By using and reinforcing, the Helping Babies Breathe programme staff were able to reduce stillbirths and deaths during the first day of life by 28% during the intervention. By using and reinforcing, the Helping Babies Breathe programme staff were able to reduce stillbirths and deaths during the first day of life by 28% during the intervention.

The success in helping babies survive in Nepal during the trial period in Nepal showed that despite the success in helping babies survive, their first day, overall mortality rates in the hospital were unchanged. This evidence strongly suggests improved postnatal care in low and middle-income countries needs to be targeted.

References


Do you find your research is able to overcome potential sources of tension which may arise from areas protected by strong religious and cultural beliefs?

Most people want the best for themselves and the ones close to them, but sometimes culture, habits and traditions stand in the way. These barriers can be well-known or invisible, also to the ones upholding them. Our research aims to overcome barriers to achieve good health by facilitating the implementation of good practices among families and health staff. For this to happen, knowledge has to be distributed and understood, and the possibility for people to be motivated and encouraged must be realised. There is great power in knowledge and empowerment!