

Under ₹10 polythene wrap keeps premature babies warm while being rushed to NICU

TIMES NEWS NETWORK

Mumbai: The humble polythene bag may just save the life of a premature baby.

This is the finding of a study conducted by a Santa Cruz hospital after looking at 101 prematurely born babies who, on an average, weighed 1.5 kilos and needed to be urgently transported to a neonatal intensive care unit immediately after birth.

"The polythene wrap keeps the baby warmer in comparison to a cloth that people usually wrap such babies in while transporting," said Dr Bhupinder Avasthi of Surya Hospital, which conducted the study. Neonates are children who are less than one month old; neonates born prematurely are extremely fragile and vulnerable at temperatures lower than the body temperature of 37 degree centigrade.

Transporting them effectively from the maternity home where they were born to a neonatal intensive care unit is therefore a big challenge—particularly in India where such infrastructure is mainly located in cities. India has a neonatal mortality of 29 deaths per 1,000 live births (as against an infant mortality of 42 per 1,000 live births).

Several Indian doctors have innovated on how to transport premature babies, some of them with weight as low as 600 grams. Almost two decades ago, pediatrician Dr

<p>THE STUDY</p> <ul style="list-style-type: none"> > 101 premature and low birth weight babies were part of a study conducted by a city-based neonatal hospital between June 2013 and January 2014 > The average distance these babies travelled was 15km, with some travelling from Malad to the Santa Cruz hospital and some from as far as Nashik 	<p>BABIES' DAY OUT</p> 	<p>WHY SUCH MEASURES ARE IMPORTANT</p> <ul style="list-style-type: none"> > Babies must be kept warm because hypothermia (or low temperature) could lead to death > Hypothermia may also result in a need for increased oxygen, problems with body acid and blood sugar fluctuations 	
<p>> Polythene wrap is easily available. Inexpensive and cost-effective in maintaining the temperature of infants during transportation</p>	<p>HOW POLYTHENE HELPS</p> <p>> It is a safe and an effective way of improving temperature of pre-term infants requiring superior to routine care (such as cotton blankets)</p>	<p>> It is simple to use while transporting babies to NICU from small maternity homes</p>	<p>MEDICALLY RECOMMENDED ALTERNATIVES</p> <p>In several parts of the country, low birth babies are transported in thermocol boxes. While some neo-natal ambulances are available, the incubators here are basic; other measures such as polythene sheets help</p>

Subhash Daga from JJ Group of Hospital innovated by transporting such children in discarded thermocol and styrofoam boxes. He won the British Medical Journal Award for Medical Innovation in 2011.

The polythene wrap, which is an essential part of any operation theatre and costs between Rs 5 and Rs 10, is another such low-cost innovation. "The first few hours after birth are golden hours of life and hence a safe and effective transportation of a new-

born is extremely critical," said Dr Avasthi.

His team of doctors, led by neonatologist Dr Nandkishor Kabra, thus started the study at Surya Hospital in June 2013, enrolling 101 prematurely born children until January 2014. "We knew polythene wraps are used in western countries to prevent hypothermia in preterm and low birth babies while being transported from the delivery room to the NICU," said Dr Kabra. Surya Hospital, which is one of the biggest NICU fa-

cilities in the city with 65 beds, decided to check the efficacy of these wraps during longer drives.

Fifty neonates were transported in polythene wraps while 51 were transported in sterile cloth. "We found that the body temperature of children who were brought in polythene wraps hadn't fallen as much as children brought in sterile cloth," said Dr Kabra. While the average temperature of the polythene group was 35.6, the other group was 34.7. The former group also

had better sugar control and oxygenation levels.

The study won the best paper award at the seventh annual national conference of the neonatology chapter of the Indian Academy of Pediatrics, which was held in Meerut on November 1.

"India alone accounts for 27% of global neonatal deaths. Such safe and effective transport of sick newborn will go a long way in improving the outcome of newborn babies in our country," said Dr Avasthi.