Investment in research saves lives and money

facts about:

Prematurity

Today:

- Globally, complications associated with prematurity are the leading cause of death among children under 5, resulting in nearly 1 million deaths annually. *
- In 2015, the U.S. rate of preterm births (gestation period of less than 37 weeks) increased for the first time in eight years. *
- Preterm infants have a higher risk of breathing difficulties, cerebral palsy, developmental delays, feeding problems, hearing impairment and vision problems. *
- Low birthweight infants (birthweight under five pounds eight ounces) have a 70% increased chance of developing chronic kidney disease as an adult. *
- In 2013, the U.S. had an infant mortality rate of 5.96 per 1,000 live births; disorders related to low birth weight and premature birth accounted for 18% of those deaths. *
- One study found the survival rate for babies born 12 weeks premature is 81%, dropping drastically to only 65% survival at 13 weeks premature and down to 33% at 14 weeks premature. *

The Cost:

- Preterm births account for more than $26 billion in annual economic burden (including medical and education costs), as well as lost productivity. ^
- Average medical costs for preterm infants in their first year are nearly $50,000 more than the cost of care for full term infants. *
- Comorbidities associated with babies born on average 6 weeks premature can add as much as $23,121 in additional costs per comorbid condition. *
- An estimated 47.8% of preterm infants (born between 34 and 36 weeks gestation) will be admitted to the neonatal intensive care unit (NICU), compared to just 7.2% of infants born after 38 weeks. On average, preterm infants will spend 4.9 more days in the NICU, incurring an additional $21,000 in direct medical costs, compared to full term infants. ^

perspective:

NAME: Ismael Torres-Castrodad Jr.
AGE: 13
CONDITION: Born 5 weeks premature

At a routine 35-week appointment, Isamari Torres-Castrodad pushed her doctor to check her amniotic fluid levels. She had previously been hospitalized for low amniotic levels and was anxious about her current levels. When the results of the test came back, her doctor informed her that her amniotic fluid levels were more than 60% lower than normal, which led to an emergency cesarean section 48 hours later. She gave birth to a pink and crying baby boy, giving the concerned mother momentary relief that her 5-week premature child was healthy.

However, six days after Ismael Torres Castrodad, Jr., was discharged, he was re-hospitalized after developing jaundice, a lung infection known as Respiratory Syncytial Virus (RSV) and pneumonia. Ismael soon developed chronic asthma that led to monthly attacks for several years. Isamari recalls how she was “desperate, watching him fight to breathe.”

Luckily, Ismael’s asthma began to ease as he entered grade school and he has not had an attack in many years. Today, he is a happy, healthy 13-year-old boy who gets straight As and loves to sing and play soccer. March of Dimes was proud to have Ismael represent the organization as its March of Dimes National Ambassador for 2016. Isamari, who has long been an active volunteer in March of Dimes, joined her son on the road. The two of them will continue to tell their story to spread awareness and continue to inspire people nationwide.

$savedlives savesmoney

HOW RESEARCH SAVES LIVES:

- Due to preventative care, innovative treatments and improved understanding of the causes of premature births, the rate of prematurity dropped by 8% between 2007 and 2014 in the U.S. *
- Implementing the five most effective preventive interventions would reduce the preterm births in the highest-income countries by 5%, preventing 58,000 preterm births and saving a total cost of $3 billion each year. *
- Researchers at Wayne State University studied the effects of antenatal steroids (ANS) on extremely preterm babies, and found the mortality rates decreased by 18% for babies who received a full course of ANS treatment compared to the babies who did not receive any treatment. *

HOW RESEARCH SAVES MONEY:

- It is estimated that early employment of prenatal care would result in more than 10,000 avoided preterm births per year. This annual decrease would result in an estimated $88.9 million in avoided costs. *
- Researchers estimate that the influenza vaccine given during pregnancy reduces the risk of preterm birth. Vaccination is also 91.5% effective in preventing flu-related hospitalization of infants in the first 6 months of life, saving millions of dollars in averted hospital stays. #

* WORLD HEALTH ORGANIZATION <WWW.WHO.ORG>  ^ MARCH OF DIMES <WWW.MARCHOFDIMES.ORG>
○ CENTER FOR DISEASE CONTROL AND PREVENTION <WWW.CDC.GOV>
○ NATIONAL PERINATAL INFORMATION SYSTEM/QUALITY ANALYTIC SERVICES <WWW.NPIC.ORG>
^ MARCH OF DIMES <WWW.MARCHOFDIMES.ORG> ‡ BLACK, L ET AL. MANAG CARE, 2015. 24:54-60
○ CENTER FOR DISEASE CONTROL AND PREVENTION <WWW.CDC.GOV>
‡ CENTER FOR DISEASE CONTROL AND PREVENTION <WWW.CDC.GOV>
‡ MARCH OF DIMES <WWW.MARCHOFDIMES.ORG>
‡ MARCH OF DIMES <WWW.MARCHOFDIMES.ORG>
‡ BLACK, L ET AL. MANAG CARE, 2015. 24:54-60
‡ CENTER FOR DISEASE CONTROL AND PREVENTION <WWW.CDC.GOV>
£ THOMAS, M AND BAILIT, J. OBSTETRICS AND GYNECOLOGY, 2016. 127
^ CENTER FOR DISEASE CONTROL AND PREVENTION <WWW.CDC.GOV>
^ MARCH OF DIMES <WWW.MARCHOFDIMES.ORG>  ▲ CHAWLA, S. ET, AL. JAMA PEDIATR, 2016. EPUB
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Hope for the Future:

- Researchers at the March of Dimes Prematurity Research Center at Stanford University have found differences in the microbial communities in the reproductive tracts of women who delivered their babies prematurely. Differences in the women’s microbiome were found early in pregnancy and tended to persist throughout. These findings suggest a possible avenue for identifying individuals at risk for, and potentially preventing, preterm births.*

- Scientists at Washington University in St. Louis are developing a novel device that would act as a pacemaker in the uterus. Just as a pacemaker regulates the heartbeat, this device works to control contractions of the uterus through electrical stimuli to delay labor and prevent preterm births.*

- Researchers at the University of Pennsylvania have developed a “placenta-on-a-chip” that can model the transfer of nutrients across the placenta. This will greatly impact future research and allow scientists to study metabolic changes associated with preterm births.^

The Bottom Line:

Medical research has identified several strategies for the prevention of preterm birth and the treatment of premature babies. These advances have made a remarkable difference, saving lives and preventing serious disabilities. However, the incidence of preterm birth still remains high, and these births can result in lifelong, chronic health complications. Additional research on the biological and psychosocial causes of, and treatment for, prematurity is desperately needed to address this serious medical threat.

Percentange of Preterm Births by State, 2015

SOURCE: March of Dimes Foundation

* MARCH OF DIMES <WWW.MARCHOFDIMES.ORG>

^ UNIVERSITY OF PENNSYLVANIA <NEWS.UPENN.EDU>

Research America
241 18th Street South, Suite 501
Arlington, VA 22202
703.739.2577
www.researchamerica.org
info@researchamerica.org

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