Two Boston Hospitals To Sequence Genome Of Newborns For The First Time Ever

By Dr. Mallika Marshall November 12, 2015 at 11:26 pm

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BOSTON (CBS) – It's the very definition of optimism: a newborn baby . And to keep these little ones the perfect pictures of health, some day in the near future, routine newborn care could include a sci-fi screening that is slowly going mainstream.

"Some people have called this the book of life," explained Dr. Robert Green of Brigham & Women's Hospital.

For the first time ever doctors at Brigham & Women's and Boston Children's Hospital are sequencing the genome of newborns . This allows doctors to decode the DNA and look for the possibility of future diseases and conditions.

"Here we have the opportunity to learn much more about somebody's potential future and help guide their care," said Children's Hospital Doctor Alan Beggs.

Right now all newborn babies are screened with a blood test for dozens of medical conditions but with genomic sequencing doctors are able to check for more than 1,600 hereditary conditions. Sequencing the genome can reveal the risk of future illnesses like Alzheimer's, heart disease, and certain cancers. It can also determine if a patient will have a positive or negative reaction to a particular medication.

Metro-West moms we spoke with at their Stroller Strides Fit4Mom class could see the good and the bad.

"I think it will help you cope with whatever it is that you're going to have to cope with anyways," said Newton mom, Kristen Feig.

Emily Haranas of Natick told us if given this option when her little ones were first born she would have said "yes." But realized there could be a downside, "it is a little scary, the thought of actually finding something out." Doctors Robert Green and Alan Beggs understand this could be a tough sell for some new parents.

"There are some families that don't want to know about something that they may not be able to control," said Dr. Beggs.

Doctors are looking to enroll about 240 healthy newborns at Brigham & Women's and another 240 newborns from the Neonatal Intensive Care Unit at Children's Hospital in the "BabySeq" study.

The goal of the project is to find out what role — if any — genomic sequencing will have on their future medical care.

"The question is: how is this going to impact individuals who can have this from day one of life," said Dr. Green.

Will knowing these genetic codes lead to superior medical care? Or will it raise privacy issues, and the possibility of genetic discrimination?

The research team will follow these newborns for five years, or longer, in hopes of getting the answer.

"It might help, it might confuse things, it might be totally irrelevant. But it's trying to anticipate what the world's going to be like when you actually have genomic information available for all of us."

For more information, email the BabySeq Project here.

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