Reducing the cost of treating sickle-cell anemia

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A drug that had previously been proven effective for treatment of adults

and children with sickle-cell anemia has been found to significantly cut annual hospital costs for children with the disease. Its utility and cost savings in children was evaluated in a study just published in the journal Pediatrics.

The 6-year study (called BABY HUG) was focused on the economic impact of the drug hydroxyurea in children with the inherited blood disorder. And the impact was found to be substantial. The children, all between were 9 to 18 months of age, received either hydroxyurea OR A placebo. The researchers found that the estimated annual cost of treatment was $11,072 for children who received hydroxyurea, and $13,962 for children who received placebo a 21 percent savings.

Hydroxyurea, a simple chemical that was first synthesized almost 150 years ago, is the only disease-modifying drug used to treat sickle-cell anemia, a very serious blood condition that affects about 100,000 Americans. The drug first received approval as an anti-cancer agent in 1967 (and is still used for this today), but in 1998 it was also approved to treat against sickle-cell anemia, and it is the first-line treatment for patients with moderate-to-severe disease.

According to principal investigator Winfred Wang, M.D., of the St. Jude Department of Hematology, "We estimate that hydroxyurea cut overall annual medical expenses about $3,000 for each patient by helping patients avoid disease complications that require inpatient hospital care." Dr. Wang added, "We expect those savings will grow along with patients, whose symptoms often increase in severity and frequency as they age."

Wang and co-workers had previously reported that IN infants and toddlers, hydroxyurea reduced the episodes of acute pain and pneumonia-like illness, as well as the need for blood transfusions, so it is not surprising that this would translate into reduced hospital costs.
ACSH’s Dr. Josh Bloom says, this is an early example of repurposing of drugs a very hot topic right now. A very old cancer drug was found to be effective against a serious disease, which until then, had no satisfactory treatment. Expect to be seeing much more of this as healthcare costs continue to become an even bigger issue, and new drug discovery becomes more expensive and difficult.