DIGITAL *prevention*

Every day, more than 200,000,000,000,000,000 bytes of data are created about our health. Hidden in these data is information about what we eat, what pills we take, how good our doctors are and, ultimately, what determines life and death.

But, in spite of how much data we have, we analyze less than one percent of this information. Our society has created some of the world's most advanced microchips and computers, which we use to play videogames and email our friends. We haven't yet used their power to fight disease.

Finding Solutions through Effective Analysis

Using state-of-the-art computer models, Dr. Basu and his colleagues analyze massive amounts of information through new systems that answer fundamental questions about our health. Which community prevention programs are most effective? Which ones give us the best bang for the buck? Can we identify what nutrients and everyday hazards are the most important for our health—despite a bewildering number of claims in the news? And, when we are faced with so many people with chronic medical problems, can we find a way to optimize our healthcare system to keep people healthy into their golden years, rather than having them struggle with complex and difficult bureaucracies?

Crunching Billion of Bytes a Day

Dr. Basu and his colleagues have been working with teams around the world, including such organizations as UNICEF and the World Health Organization, to tackle the most pressing global prevention issues of our time. This includes understanding how the recent economic recession affects our health, and what prevention programs are most effective. The research team also exams what strategies for improving food systems are most effective in reducing heart disease and diabetes. The team keeps track of how effectively prevention research affects a community, producing computer systems to help public health departments keep better tabs on their progress. Using the latest tools in statistics, engineering, economics, and computer science, the team crunches billions of bytes a day to discover how we can live smarter, longer, and healthier.

over
200,000,000,000,000,000
BYTES OF DATA ARE CREATED
ABOUT HEALTH EVERY DAY

<1%
OF THESE DATA ARE ANALYZED

$300 billion
OF HEALTHCARE COSTS COULD
BE SAVED BY USING THIS DATA TO
IMPROVE PREVENTION

1,073,741,824
BYTES OF DATA CAN BE ANALYZED
EVERY SECOND IN STANFORD'S
DISEASE PREVENTION COMPUTER
MODELS