DIGITAL DIAGNOSIS: A NEW DIMENSION

A New York Times Magazine story “The Medical Detectives” by Robin Marantz Henig (Sunday, February 22, 2009) described the efforts of a unique medical team at the National Institutes of Health that takes on very sick patients with complex multiple problems and tries to figure out the mystery of what happened to these individuals. The unique approach of these doctors at NIH who are part of the Undiagnosed Diseases Program is to look at the entire litany of issues that the patient presents and not one problem at a time. Although their efforts may not cure the individual patients they are reviewing, they promise to provide new insights that could impact future generations.

This exciting work coupled with the research coming out of work on the human genome that has unveiled unimaginable insights about the functioning of the human body in relation to genetic mutations, has the potential to revolutionize the way that healthcare professionals approach disease. A key enabling technology to accomplish such intense data analysis and problem solving is the digitization of patient information, using an electronic health record. At the most basic level, the wide-spread use of the EHR for data analysis purposes enables healthcare professionals to aggregate baseline information on disease across populations. From this information they make assumptions that apply to a wide spectrum of health issues. Digital diagnosis is being used in little pockets throughout the medical world. The expansion of electronic health records throughout the population and the sophistication of these intelligent digital databases promise a new way of looking at health problems that astute diagnosticians such as the team at NIH will deploy to understand and ultimately cure many of the diseases that plague the citizens of the world.