A Century of Healthcare Innovation from IBM

IBM

ARMONK, N.Y. - 07 Apr 2011: To mark World Health Day, IBM (NYSE: IBM [1]) announced several new contributions to public health as well as historical breakthroughs of the past that have contributed to Smarter Healthcare.

From the first continuous blood separator which led to treatment for leukemia patients, the first heart lung machine to keep patients alive during surgery, to the excimer laser used in LASIK eye surgery, IBM has made vast contributions to the fields of healthcare and life sciences over the last century.

Today, one in every eight of the earth's inhabitants will be over 65 by 2030, and more than one billion people are overweight and another 388 million people will die in the next 10 years of a chronic disease. New ways to treat illnesses, battle major outbreaks and transform how healthcare is delivered around the world are critical for the health of populations and for the economic health of our communities.

IBM’s history of using principles and technologies from computing, physics, material sciences and chemistry, has allowed the company to build a track record of successfully transferring technology to create new solutions for healthcare.

Breakthroughs in nanotechnology, gene sequencing and even innovations in chip design will continue to improve healthcare around the world. For example, earlier this week, Researchers from IBM and the Institute of Bioengineering and Nanotechnology announced the first biodegradable nanoparticles that can seek out destroy drug-resistant bacteria better than conventional antibiotics today. These new nanoparticles are physically attracted like magnets to infected cells, leaving healthy cells alone, and could greatly improve medications' effectiveness.

IBM is also applying its expertise to address public health issues such as in Cross River State, Nigeria (link to release). Here biometric identification and solar energy are just a few of the technologies in use to provide access to free healthcare and reduce child and maternal mortality rates by a goal of 50 percent by the end of 2011.

Through the years, IBM has created hardware and applications specifically designed to improve care, diagnosis and treatment of disease, and advance how medical knowledge is shared.

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- IBM's World Community Grid, released in 2004, continues to use pervasive networking and crowdsourcing to apply supercomputer levels of processing power to urgent healthcare and societal needs such as fighting AIDs, cancer and dengue fever and malaria.
- Using IBM's Blue Gene supercomputing simulations, researchers at IBM and the University of Edinburgh are currently collaborating on lab experiments to design drugs aimed at preventing the spread of the HIV virus.
- IBM is working with Roche on new nanopore-based technology that will directly read and sequence human DNA quickly and efficiently. The technology has the potential to improve throughput and reduce costs to achieve the vision of whole human genome sequencing at a cost of $100 to $1,000.

Today, IBM is turning its focus to healthcare transformation, helping entire countries develop new patient-centric models of care, connecting health information and enabling deep analytics of medical data.

At the heart of any healthcare transformation are electronic health records, the basic building blocks of healthcare efficiency. IBM has a long history of creating and connecting systems to share patient information [2]. When standardized and shared, electronic health records provide a powerful means of increasing accuracy and speeding the delivery of patient information to the point of care. They enable better collaboration, more complete records, and better service. Advanced health analytics provides new insight into the treatment of disease, can speed discovery of new drugs and therapies, and empowers healthcare providers with better information to improve care.

IBM's work to create smarter healthcare systems, optimized around the patient, is aimed at reducing medical errors, achieving better patient safety and quality outcomes and saving lives.

This year marks IBM's centennial and healthcare continues to be one of its most important areas of industry focus. The company spends more than $6B a year on R&D, much of it on healthcare, and IBM is one of the few technology companies with large teams of physicians and other clinicians on staff to ensure we are addressing healthcare's most pressing needs.

Click here for video: Harnessing the Power of Electronic Medical Records [2]

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