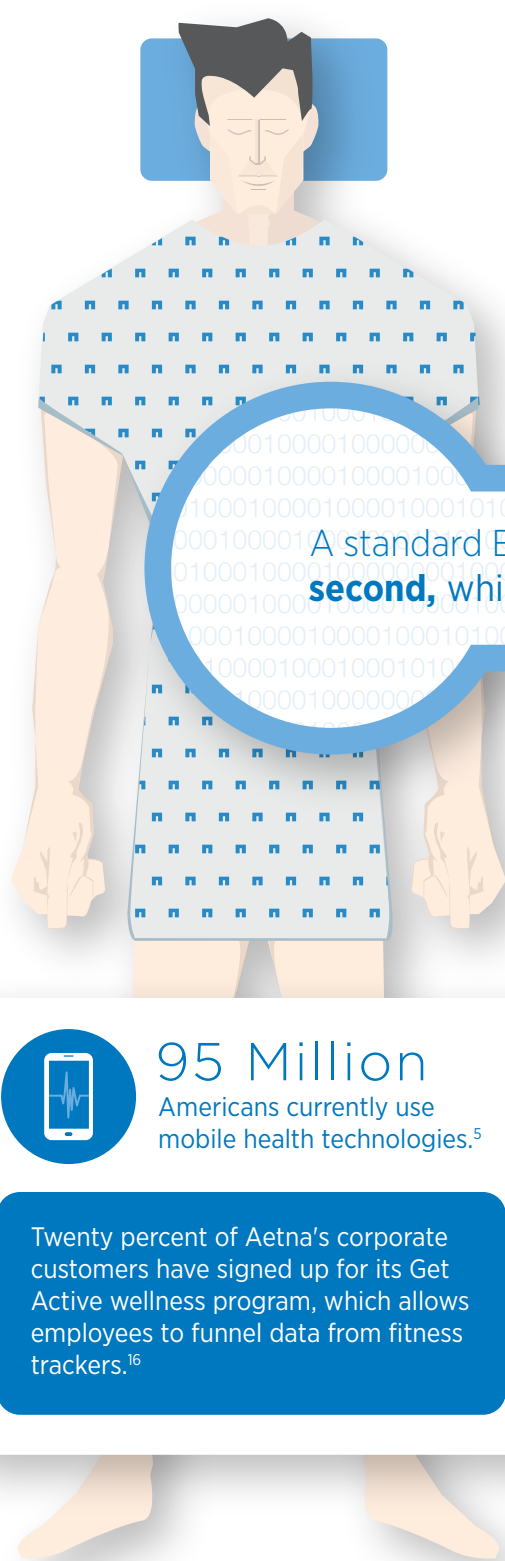# Making Data Work

For Providers, Patients, Payers and Population Health

Healthcare data is **MASSIVE** and it comes from **EVERYWHERE**

The human body produces up to 150 trillion GB of information, which can be collected in many ways.[1]

By 2020, healthcare organizations are expected to use 25,000 petabytes of data, 50 times more data than today.[3]

A standard EKG machine gathers about **1,000 data points every second,** while a 3D CT scan occupies over one **1 GB of space.**[2]

59% of hospitals keep patient electronic health records.[4]

95 Million Americans currently use mobile health technologies.[5]

Twenty percent of Aetna's corporate customers have signed up for its Get Active wellness program, which allows employees to funnel data from fitness trackers.[16]

How Analytics are Impacting and Improving Care

Health insurance company **WellPoint**, the second-largest U.S. health insurer, analyzes and processes data from 605,000 pieces of medical evidence, two million pages of text, 25,000 training cases and 14,700 clinician hours to assist in medical decision-making.

$
95% of healthcare CEOs say they're investigating better ways to use big data.[6]

Data storage for the NIH National Center for Biotechnology Information Initiative could fill 400 million four-drawer filing cabinets.[7]

By 2016, 15% of hospitals will create comprehensive patient profiles that will allow them to deliver personalized treatment plans.[10]

By 2020, 80% of healthcare data will pass through the cloud at some point in its lifetime.[10]

BUT HOW DOES IT HELP?

Applications of big data analysis in healthcare are more than promising.

A hospital in New Jersey analyzes geographical and historical data to create real-time predictions for where emergency services will be needed. The hospital's response rates now average fewer than **six minutes**, compared to the national average of **nine minutes**.

Before the new system, **one in five** patients regained a pulse after experiencing a cardiac arrest; now, it's **one in two.**[11]

A hospital in Belgium uses data both for patient care and as a tool to further healthcare research and education.

The hospital's radiology data is growing rapidly. A CT scan today consists of **2,000 images,** 20 times more than a typical CT scan five years ago.[17]
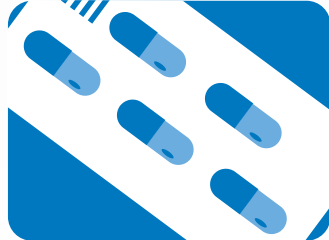
Express Scripts compiled data from doctors, pharmacies and laboratories to detect patterns among its **90 million U.S. members,** who receive **1.4 billion prescriptions annually**. The company can now predict, with **98% accuracy,** 12 months in advance, which patients may not take their medicine.[12]

Leveraging these predictions could **reduce the $289 billion annual cost** of medication noncompliance in the U.S.[13]

Transplant doctors search the Be The Match Registry® of more than **15 million donors** and **400,000 umbilical cord blood units** using a sophisticated matching algorithm application 100 million times more complex than blood typing programs.

Be The Match intends **to aid 10,000 transplants** by 2015.[14]

Better use of big data in healthcare could eventually result in $300 to $450 billion in savings every year.[15]

NetApp®

Source Links:
1.http://www.theguardian.com/healthcare-network/2014/nov/04/big-data-enabling-future-healthcare
2.https://gigaom.com/2013/08/03/big-data-is-healthcares-biggest-threat-and-also-its-likely-savior/
3.http://www.accenture.com/us-en/Pages/insight-stats-health-amount-data-health-organizations.aspx
4.http://www.eweek.com/it-management/health-care-it-investment-falling-short-in-mobile.html
5.http://www.entrepreneur.com/article/238955
6.http://www.informationweek.com/healthcare/analytics/healthcare-dives-into-big-data/d/d-id/1251138
7.http://www.nih.gov/news/health/oct2014/od-09.htm
8.http://www.bloomberg.com/news/articles/2013-02-08/ibm-s-watson-turned-into-cloud-products-for-wellpoint-s-doctors
9.http://www.forbes.com/sites/bruceupbin/2013/02/08/ibms-watson-gets-its-first-piece-of-business-in-healthcare/
10.http://www.idc.com/getdoc.jsp?containerId=prUS25262514
11.http://techcrunch.com/2014/11/20/healthcares-big-data-opportunity/
12.http://www.technologyreview.com/news/529011/can-technology-fix-medicine/
13.https://hbr.org/2014/10/predictive-medicine-depends-on-analytics/
14.http://www.netapp.com/us/company/news/press-releases/news-rel-20111101-787689.aspx
15.http://www.mckinsey.com/insights/health_systems_and_services/the_big-data_revolution_in_us_health_care
16.http://blogs.wsj.com/cio/2014/06/24/fitness-tracking-programs-enter-the-big-data-challenge/
17.http://www.netapp.com/us/system/pdf-reader.aspx?pdfuri=tcm:10-126883-16&m=uz-leuven.pdf&q=UZ%20Leuven&cp=1