

Personalized Medicine by the Numbers

13 prominent examples of personalized medicine drugs, treatments and diagnostics products available in 2006¹

72 prominent examples of personalized medicine drugs, treatments and diagnostics products available in 2011²

\$300,000,000 cost of sequencing a human genome in 2001²

\$5,000 cost of sequencing a human genome in 2011²

4% U.S. hospitals with fully operational electronic health records in 2008³

22% U.S. hospitals with fully operational electronic health records in 2009⁴

50% U.S. population that had medical information recorded in electronic health records in some form in 2010³

1% of marketed drugs have a companion diagnostic⁵

10% of marketed drugs inform or recommend genetic testing for optimal treatment⁶

33 pharmacogenomic biomarkers are included on FDA-approved drug labels⁶

30% of all treatments in late clinical development rely on biomarker data⁷

50% of all treatments in early clinical development rely on biomarker data⁷

60% of all treatments in preclinical development rely on biomarker data⁷

30% of all biopharmaceutical companies surveyed require all compounds in development to have a biomarker⁵

50% of all clinical trials collect DNA from patients to aid in biomarker development⁵

75% increase in personalized medicine investment by industry over the last 5 years⁷

34% reduction in chemotherapy use would occur if women with breast cancer receive a genetic test prior to treatment⁸

17,000 strokes could be prevented each year if a genetic test is used to properly dose the blood thinner warfarin⁹

\$604,000,000 annual cost savings to the health care system if patients with metastatic colorectal cancer receive a genetic test for the *KRAS* gene prior to treatment¹⁰

20 members of the Personalized Medicine Coalition in 2004¹¹

200 members of the Personalized Medicine Coalition in 2011¹¹

- ¹ Personalized Medicine Coalition. *The Case for Personalized Medicine*. 2006.
- ² Personalized Medicine Coalition. *The Case for Personalized Medicine*. 2011.
- ³ Hsiao CJ, Hing E, Socy TC, *et al.* Centers for Disease Control, National Center for Health Statistics, 2010. Division of Health Care Statistics Electronic Medical Record/Electronic Health Record Systems of Office-based Physicians: United States, 2009 and Preliminary 2010 State Estimates. CDC web site. (Available at: http://www.cdc.gov/nchs/data/hestat/emr_ehr_09/emr_ehr_09.pdf)
- ⁴ Health Information and Management System Society (HIMSS) 2011 Leadership survey. HIMSS web site. (Available at: http://www.himss.org/2011Survey/healthcareCIO_final01.asp)
- ⁵ Tufts Center for the Study of Drug Development. Lack of Clinically Useful Diagnostics Hinder Growth in Personalized Medicines. *Impact Report*, 13 (July/August 2011): 4.
- ⁶ U.S. Food and Drug Administration. Table of Pharmacogenomic Biomarkers in Drug Labels. FDA web site. (Available at <http://www.fda.gov/Drugs/ScienceResearch/ResearchAreas/Pharmacogenetics/ucm083378.htm>)
- ⁷ Tufts Center for the Study of Drug Development. Personalized Medicine Is Playing a Growing Role in Development Pipelines. *Impact Report*, 12 (November/December 2010): 6.
- ⁸ Genomic Health. Economic Validity. Genomic Health web site. (Available at: <http://www.genomichealth.com/en-US/sitecore/content/Home/Breast/ManagedCareOrgs/EconomicValidity.aspx>)
- ⁹ McWilliam A, Lutter R, Nardinelli C. AEI-Brookings Joint Center for Regulatory Studies Health Care Savings from Personalizing Medicine Using Genetic Testing: The Case of Warfarin. 2006 AEI-Brookings Joint Center; *AEI-Brookings Joint Center for Regulatory Studies* 2006.
- ¹⁰ Shankaran V. Conference presentation at the Gastrointestinal Cancers Symposium. January 2009. Medscape web site. (Available at: <http://www.medscape.com/viewarticle/586946>)
- ¹¹ Personalized Medicine Coalition. PMC Membership. PMC web site. (Available at: <http://www.personalizedmedicinecoalition.org/>)

Personalized Medicine Coalition

1225 New York Avenue, NW, Suite 450
Washington, DC 20005

Phone 202-589-1770 | Fax 202-589-1778
Email info@personalizedmedicinecoalition.org
www.PersonalizedMedicineCoalition.org