

Ellen B Ball

Curriculum Vitae

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Summary

Dynamic **Senior Implementation Manager** with extensive expertise in medical informatics and global health in settings of poverty. Proven success at delivering effective electronic health record systems to a range of facilities -- rural health centers to tertiary teaching hospitals. Strives to bring the benefits of modern medical systems to those most in need of them and to mentor local talent.

Experience

Partners In Health (2004 to present)

Global health organization relentlessly committed to improving the health of poor & marginalized people
Boston, MA

Responsible for development and implementation of Partners In Health's medical informatics systems at field sites such as Haiti, Rwanda, Malawi, Lesotho, Liberia, Sierra Leone, Peru, and Mexico. Business analysis and DevOps to support clinical systems at Boston headquarters and cross-site. Design and implement of clinical electronic forms and reports. Train users and mentor local technical staff. Essential systems include OpenMRS (Electronic Health Records), OpenBoxes (Supply chain), and a legacy HIV EMR system. Collaboration with local teams and Ministries of Health.

Major accomplishments:

Design and implement OpenMRS for point of care clinical EMR for **COVID-19** (2020), **maternal and child health** (2019), **biometrics** (2018), **non-communicable diseases** (2017), **primary care and mental health at multiple Haiti health centers** (2016) and for **patient registration and diagnosis capture at rural Liberia health center** (2015).

Develop and implement **University Hospital in Mirebalais (Haiti) OpenMRS** (2013) which is used at point of care for the 300+ bed inpatient and outpatient national teaching hospital. This sophisticated open-source system produced the OpenMRS Reference Application. This software incorporated enhancements to make OpenMRS a more effective point of care system including a new UX design, expanded point of care registration, clinical notes, hospital workflow, surgery post-op notes, oncology, patient workflow, appointment scheduling, PACS integration, diagnoses (outpatient, inpatient, pediatrics, dental, women's health, surgery, oncology, emergency, etc), vitals capture, emergency triage, mental health assessment, lab results, dispensing, patient identifier system (ID cards, labels, and wristbands), and reporting.

Cross-site management of the PIH OpenMRS concept dictionary, guiding best practices for metadata, and harmonization of concepts between implementations.

Positions and employment

2004-present Software Engineer, Partners In Health, Boston, MA
1995-2002 Software Engineer, Bolt Beranek & Newman (BBN), Cambridge, MA
1994-1995 Programmer/Analyst, Brigham & Women's Hospital (Radiology), Boston, MA
1984-1994 Software Engineer, IBM Kingston, NY and IBM TJ Watson Research

Education

Rutgers University, MS, Biomedical Engineering, 1984
Rutgers University, BS, Electrical Engineering, 1982

Major Software skills

OpenMRS
MySQL
Agile development
Linux (every flavor)
Java, JavaScript, and shell programming
Web applications (Tomcat, Apache, HTML, CSS)
Software tools (JIRA, Confluence, Bamboo, Github, IntelliJ)

Presentations

Kabukyea J, Casaceli A, **Ball E**, De Armas M, Cornet R (2019) "Towards an Open-Source Oncology Electronic Medical Records System for Low Resource Settings: Development of Chemotherapy Management in OpenMRS". MedInfo 2019.

Ball E (2018) "Maternal Child Health EMR at University Hospital in Mirebalais (Haiti)" OpenMRS Implementers Conference in Nairobi.

Greenberg L, O'Brien E, Damuse R, **Ball E**, DeSimone D, Dessin W, Pierre V, Baptiste JJ and Shulman L. (2018) "Design and implementation of an oncology module in an electronic medical record system to support cancer care in rural Haiti". CUGH/Global Cancer Research Symposium

Flowers J, **Ball E**, Dick J, João V, Wanyee S. (2017) "OpenMRS in Point of Care: Real World Case Studies of Approaches and Challenges in Kenya, Mozambique, and Haiti." Panel discussion at 2017 Global Digital Health Forum

Seaton M, **Ball E**, Goodrich M (2016) "OpenMRS Emergency Triage at University Hospital at Mirebalais, Haiti" OpenMRS Implementers Conference 2016.

Ball E (2015) "OpenMRS at Pleebo Health Center (Liberia)" OpenMRS Worldwide Summit 2015.

Kanter A, **Ball E** (2015) "OpenMRS Concept Management" OpenMRS Worldwide Summit 2015.

Ball E, Seaton M (2015) "Implementing electronic medical record systems in rural Haiti" LibrePlanet 2015

Jazayeri D, Oza S, Ramos G, Fraser H, Teich JM, Kanter AS, **Ball E**. (2015) "Design and development of an EMR for Ebola Treatment Centers in Sierra Leone using OpenMRS." *Studies in health technology and informatics*. 2014 Dec;216:916-. MedInfo 2015

Eddy B, Mendy G, Jerome JG, Peckarsky M, Chiu D, Waters E, **Ball E**, Masson ML, Birru E, Hirschhorn L (2013) "Using a point-of-care EMR for primary care and disease surveillance at university hospital in Mirebalais, Haiti." APHA 2013

Ball E, Waters E, Eddy B, Jerome JG, Jean-Paul T, Neumann C, Hiscox J, Peckarsky M, Fraser H. (2012) "Clinically Relevant Coded Diagnoses for Developing Countries." AMIA 2012.

Publications

Oza S, Jazayeri D, Teich JM, **Ball E**, Nankubuge PA, Rwebembera J, Wing K, Sesay AA, Kanter AS, Ramos GD, Walton D, Cummings R, Checchi F, Fraser HS (2017). "Development and Deployment of the OpenMRS-Ebola Electronic Health Record System for an Ebola Treatment Center in Sierra Leone." *J Med Internet Res* 2017;19(8):e294

Fraser HS, Jazayeri D, **Ball E** (2017) "OpenMRS the Open Medical Record System: Software, Community, Philosophy". [Book Chapter] from Celi LA, Fraser HS, Nikore V, Osorio JS, Paik K. "Global health informatics: principles of eHealth and mHealth to improve quality of care." *MIT Press*; 2017 Apr 14.

Kwan GF, Bukhman AK, Miller AC, Ngoga G, Mucumbitsi J, Bavuma C, Dusabeyezu S, Rich M, Mutabazi F, Mutumbira C, Ngiruwera JP, Amoroso C, **Ball E**, Fraser HS, Hirschhorn L, Farmer P, Rusingiza E, Bukhman G (2013). A simplified echocardiographic strategy for heart failure diagnosis and management within an integrated noncommunicable disease clinic at district hospital level for sub-Saharan Africa. *JACC: Heart Failure*, 1(3), 230-236.

Ball E (1984). Visual receptive field mapping: a comparison between spatio-temporal fields for adjacent neurons (Master's thesis). Rutgers University, New Brunswick, NJ.

Awards

Stop Ebola Hack-a-thon (2014) CAMTech. Medtronic Ebola Innovation Award. Proxime: A voice controlled, low-cost bracelet worn by patients to monitor heart rate and temperature, alerting healthcare workers of potential problems.