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## **CURRICULUM VITAE**

Hadi Kharrazi  
Part I

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### ***PERSONAL DATA***

Affiliation: Johns Hopkins School of Public Health  
Department of Health Policy and Management  
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Latest CV: <http://hkharrazi.com/pdf/cv.pdf>

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### ***EDUCATION AND TRAINING***

2010 *Interdisciplinary PhD in Health Informatics*  
Dalhousie University, Halifax, Canada  
2005 *Masters of Health Informatics (MHI)*  
Dalhousie University, Halifax, Canada  
2003 *Medical Doctorate (MD)*  
Tehran/Iran University (IUMS), Tehran, Iran  
Medical License: #92174

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### ***PROFESSIONAL EXPERIENCE***

2012- *Assistant Professor*  
*Department of Health Policy and Management*  
Johns Hopkins Bloomberg School of Public Health  
2012- *Director of the DrPH Informatics Track*  
*Department of Health Policy and Management*  
Johns Hopkins Bloomberg School of Public Health  
2012- *Co-Director of the PhD Program*  
*Division of Health Sciences Informatics*  
Johns Hopkins School of Medicine  
2012- *Research Director*  
*Center for Population Health Informatics Technology (CPHIT)*  
*Department of Health Policy and Management*  
Johns Hopkins Bloomberg School of Public Health

2012- *Joint Appointment (Assistant Professor)*  
 Division of Health Sciences Informatics  
 Johns Hopkins School of Medicine

2018- *Associate Faculty*  
*Armstrong Institute for Patient Safety and Quality*  
 Johns Hopkins School of Medicine

2012- *Core Faculty*  
*Center for Health Services and Outcomes Research (CHSOR)*  
 Johns Hopkins School of Public Health

2011-2012 *Assistant Professor*  
 School of Informatics & Regenstrief Institute  
 Indiana University Purdue University Indianapolis

2008-2011 *Instructor (Acting Faculty)*  
 School of Informatics  
 Indiana University Purdue University Indianapolis

2005-2008 *Principal Instructor [Lecturer]*  
 School of Medicine & Business School  
 Dalhousie University, Halifax, Canada

2005-2008 *Teaching & Research Assistant*  
 School of Computer Sciences  
 Dalhousie University, Halifax, Canada

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**PROFESSIONAL ACTIVITIES**

**Memberships**

2012- *Academy Health*

2009- *National Institute of Health Informatics (NIHI), Canada*

2005- *American Medical Informatics Association (AMIA)*

2004- *Canada's Health Informatics Association (COACH), Canada*

2016-2017 *American Statistical Association (ASA)*

**Committees**

2012- *Academy Health*  
 Executive Committee: Health Information Technology Interest Group  
 Executive Committee: Population Health Community of Practice  
 Committee: Electronic Data Methods Forum

2005- *American Medical Informatics Association (AMIA)*  
 Elected Member: Membership and Outreach Committee (2018-present)

- Executive Committee: Public Health Informatics Working Group  
 Member: Clinical Decision Support Working Group  
 Member: Consumer Health Informatics Working Group
- 2013- *AMIA Presymposium – Population HIT WG (2013, 2014, 2017)*  
 Chair / Co-Chair – Washington DC
- 2014- *AMIA Presymposium – Visual Analytics in Healthcare (2014, 2017)*  
 Co-Chair – Washington DC
- 2015-2015 *DHHS – Office of the National Coordinator (ONC)*  
 Exchange and Interoperability Measurement Community of Practice  
 Executive Committee Member
- 2013-2013 *Health Affairs / Project Hope – Planning Committee*  
 Special Issue: “Big Data: Potential Impact on Health Care and Research”  
 Invited Member – Washington DC
- 2013-2013 *Wireless Health 2013 Conference (WHC13)*  
 Planning Committee / Session Leader
- 2010-2012 *Midwestern Conference on Health Games (MCHG)*  
 Chair – Indianapolis

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## **EDITORIAL ACTIVITIES**

### **Editorial Board Membership**

- 2018- *Journal of the American Medical Informatics Association (JAMIA) Open*  
 Oxford University Press  
 Editorial Board Member
- 2017- *Population Health Management Journal*  
 Mary Ann Libert Inc.  
 Editorial Board Member
- 2013-2014 *Generating Evidence and Methods to Improve Patient Outcomes*  
 Special Issue: “Lessons from the Field: Health-IT Enabled Community-  
 Based Transformation”  
 Academy Health / EDM Forum [eGEMs] / AHRQ  
 [Guest] Co-Editor

### **Peer Review Activities – Journals**

*Journal of the American Medical Association (JAMA)*  
 American Medical Association

*JAMA Open Network*  
 American Medical Association

*Annals of Internal Medicine*

American College of Physicians

*Medical Care*

Lippincott Williams & Wilkins

*Journal of the American Medical Information Association (JAMIA)*

American Medical Information Association

*JAMIA Open*

American Medical Information Association

*Journal of General Internal Medicine (JGIM)*

Society of General Internal Medicine

*Artificial Intelligence in Medicine (AIM)*

Elsevier

*BMC Medical Informatics and Decision Making (MIDM)*

BioMed Central

*Journal of Patient Safety (JPS)*

*Generating Evidence & Methods to Improve Patient Outcomes (eGEMs)*

Academy Health

### **Review of Proposals**

- 2018      *NIH-NIDDK PARs on Pragmatic Research and Natural Experiments*  
National Institute of Health  
[ZDK1 GRB-1 \(M1\)](#)
- 2018      *NIDA SBIR Phase II – Analytical Tools for Biomedical Research*  
*Small Business Innovation Research (SBIR)*  
National Institute of Health  
[ZDA1 JXB-N \(32\)](#)
- 2015      *inHealth Funding Opportunity*  
Johns Hopkins University
- 2012      *Sustainable and Collaborative Informatics Projects (SCIP)*  
Indiana University (School of Medicine, Regenstrief Institute)
- 2011      *Multidisciplinary Undergraduate Research Institute (MURI)*  
Indiana University (Center for Research and Learning)

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### **HONORS AND AWARDS**

#### **Awards**

- 2017-2018      *Technology Transfer Award*  
Johns Hopkins School of Public Health
- 2016      *HIMSS Book of the Year Award (Chapter Contribution)*

Healthcare Information and Management Systems Society

2016

*Dr. Robert Lewis Kane Memorial Award (Report)*  
Agency for Healthcare Research and Quality (AHRQ)

2013-2014

*Faculty Innovation Fund Award*  
Johns Hopkins School of Public Health

2010-2011

*IUPUI Research RTR Award*  
Indiana University Purdue University Indianapolis

2010-2011

*IUPUI Curriculum Enhancement Teaching & Conference Awards*  
Indiana University Purdue University Indianapolis

2006-2008

*CIHR Doctoral Award*  
Canadian Institute for Health Research

2004-2006

*NSHRF Initiative Award*  
Nova Scotia Health Research Foundation

**Honors**

2017-2018

*Excellence in Teaching AY17-18 3<sup>rd</sup> Term*  
Johns Hopkins Bloomberg School of Public Health  
Masters of Population Health Management (OPAL)  
Course: Population and Consumer Health Informatics (602.731.86)

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## **PUBLICATIONS <sup>1</sup>**

### ***Journal Articles (Peer-Reviewed)***

- [1] Kan HJ, **Kharrazi H**, Chang HY, Bodycombe D, Lemke K, Weiner JP. Exploring the use of machine learning for risk adjustment: a comparison of standard and penalized linear regression models in predicting health care costs in older adults. *PLoS One*. 2018 [in-press]
- [2] Zolnoori M, Fung KW, Fontelo P, **Kharrazi H**, Faiola A, Wu YSS, Stoffel V, Patrick TB. Identifying the underlying factors associated with patients' attitudes toward antidepressants: qualitative and quantitative analysis of patient-generated data. *J Med Intern Res Ment Health*. 2018; 5(4): e10726  
PMID: [30287417](#) DOI: [10.2196/10726](#)
- [3] **Kharrazi H**, Chang HY, Heins S, Weiner JP, Gudzone K. Enhancing the prediction of healthcare costs and utilization by including outpatient BMI values to diagnosis-based risk models. *Med Care*. 2018; 56 (12): 1042-1050  
PMID: [30339574](#) DOI: [10.1097/MLR.0000000000001001](#)
- [4] Durojaiye AB, Puett LL, Levin S, Toerper M, McGeorge N, Webster K, Deol GS, **Kharrazi H**, Lehmann HP, Gurses AP. Linking electronic health record data to trauma registry data: assessing the value of probabilistic linkage. *Methods Inf Med*. 2018 [in-press]
- [5] Tseng E, Zhang A, Shogbesan O, Gudzone K, Wilson R, **Kharrazi H**, Cheskin L, Bass EB, Bennett W. Effectiveness of policies and programs to combat adult obesity: a systematic review. *J Gen Intern Med*. 2018; 33(11) 1990–2001  
PMID: [30206789](#) DOI: [10.1007/s11606-018-4619-z](#)
- [6] Gamache R, **Kharrazi H**, Weiner JP. Public health and population health informatics: the bridging of big data to benefit communities. *Yearb Med Inform*. 2018; 27(1): 199-206  
PMID: [30157524](#) DOI: [10.1055/s-0038-1667081](#)
- [7] Musci RJ, **Kharrazi H**, Wilson RF, Susikida R, Gharghabi F, Zhang A, Wissow L, Robinson KA, Wilcox HC. The study of effect moderation in youth suicide prevention studies. *Soc Psychiatry Psychiatr Epidemiol*. 2018  
PMID: [30088027](#) DOI: [10.1007/s00127-018-1574-2](#)
- [8] **Kharrazi H**, Gonzalez CP, Lowe KB, Huerta TR, Ford EW. Forecasting the

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<sup>1</sup> **Kharrazi**: first/senior author; **Kharrazi**: co-author

\*: mentored [student] publications

maturation of electronic health record functions among US hospitals. *J Med Internet Res.* 2018; 20(8): e10458  
PMID: [30087090](#) DOI: [10.2196/10458](#) Posts: [News](#)

- [9] Lemke K, Gudzone KA, **Kharrazi H**, Weiner JP. Assessing markers from ambulatory laboratory tests for predicting high-risk patients. *Am J Manag Care.* 2018; 24(6): e190-e195  
PMID: [29939509](#)
- [10] Chang HY, **Kharrazi H**, Bodycombe D, Weiner JP, Alexander GC. Healthcare costs and utilization associated with high-risk prescription opioid use: a retrospective cohort study. *BMC Med.* 2018; 16(1): 69  
PMID: [29764482](#) DOI: [10.1186/s12916-018-1058-y](#) Posts: [Blog](#)
- [11] Bennett WL, Wilson RF, Zhang A, Tseng E, Knapp EA, **Kharrazi H**, Stuart EA, Shogbesan O, Bass EB, Cheskin LJ. Methods for evaluating natural experiments in obesity: a systematic review. *Ann Intern Med.* 2018; 168(11): 791-800  
PMID: [29710087](#) DOI: [10.7326/M18-0309](#)
- [12] Kan H, Dyagilev K, Schulam P, Saria S, **Kharrazi H**, Bodycombe D, Molta CT, Curtis JR. Factors associated with physicians' prescriptions for rheumatoid arthritis drugs not filled by patients. *Arthritis Res Ther.* 2018; 20(1): 79-92  
PMID: [29720237](#) DOI: [10.1186/s13075-018-1580-5](#)
- [13] **Kharrazi H**, Anzaldi L, Hernandez L, Davison A, Boyd CM, Leff B, Kimura J, Weiner JP. Measuring the value of electronic health record's free text in identification of geriatric syndromes. *J Am Geriatr Soc.* 2018; 66(1) 1499-1507  
PMID: [29972595](#) DOI: [10.1111/jgs.15411](#)
- [14] Kan H, **Kharrazi H**, Leff B, Boyd C, Davison A, Chang H-Y, Kimura J, Wu S, Anzaldi LJ, Richards T, Lasser E, Weiner JP. Defining and assessing geriatric risk and associated health care utilization among elderly patients using claims and electronic health records. *Med Care.* 2018; 56(3): 233-239  
PMID: [29438193](#) DOI: [10.1097/MLR.0000000000000865](#) Posts: [Blog](#)
- [15] Sheehan OC, **Kharrazi H**, Carl KJ, Leff B, Wolff JL, Roth DL, Gabbard J, Boyd CM. Helping Older adults improve their Medication Experience (HOME) by addressing medication regimen complexity in skilled home health care. *Home Healthc Now.* 2018; 36(1): 10-19  
PMID: [29298192](#) DOI: [10.1097/NHH.0000000000000632](#)
- [16] Hatef E, **Kharrazi H**, VanBaak E, Falcone M, Ferris L, Mertz K, Perman C, Bauman A, Lasser EC, Weiner JP. A state-wide health IT infrastructure for population health: building a community-wide electronic platform for Maryland's all-payer global budget. *Online J Public Health Inform.* 2017; 9(3): e195

PMID: [29403574](#) DOI: [10.5210/ojphi.v9i3.8129](#)

- [17] Lu AS, **Kharrazi H**. A state-of-the-art systematic content analysis of games for health. *Games Health J*. 2018; 7(1): 1- 15  
PMID: [29293368](#) DOI: [10.1089/g4h.2017.0095](#)
- [18] Anzaldi LJ\*, Davison A, Boyd C, Leff B, **Kharrazi H**. Comparing clinician descriptions of frailty and geriatric syndromes using electronic health records: a retrospective cohort study. *BMC Geriatr*. 2017; 17 (247): 1-7  
PMID: [29070036](#) DOI: [10.1186/s12877-017-0645-7](#)
- [19] Bae J, Ford EW, **Kharrazi H**, Huerta TR. Electronic medical record reminders and smoking cessation activities in primary care. *Addict Behav*. 2017; 16 (77): 203-209  
PMID: [29065376](#) DOI: [10.1016/j.addbeh.2017.10.009](#)
- [20] Hatef E, Lasser EC, **Kharrazi H**, Perman C, Montgomery R, Weiner JP. A population health measurement framework: evidence-based metrics for assessing community-level population health in the global budget context. *Popul Health Manag*. 2017; 21(4): 261-270  
PMID: [29035630](#) DOI: [10.1089/pop.2017.0112](#)
- [21] Chang HY\*, Richards TM, Shermock KM, Elder-Dalpoas S, Kan H, Alexander CG, Weiner JP, **Kharrazi H**. Evaluating the impact of prescription fill rates on risk stratification model performance. *Med Care*. 2017; 55 (12): 1052-1060  
PMID: [29036011](#) DOI: [10.1097/MLR.0000000000000825](#)
- [22] Karami A\*, Dahl AA, Turner-McGrievy G, **Kharrazi H**, Shaw JG. Characterizing diabetes, diet, exercise, and obesity comments on Twitter. *Int J Inf Manage*. 2017; 38: 1-6  
DOI: [10.1016/j.ijinfomgt.2017.08.002](#)
- [23] **Kharrazi H**, Chi W, Chang HY, Richards TM, Gallagher JM, Knudson SM, Weiner JP. Comparing population-based risk-stratification model performance using data extracted from electronic health records versus administrative claims. *Med Care*. 2017; 55 (8): 789-796  
PMID: [28598890](#) DOI: [10.1097/MLR.0000000000000754](#) Posts: [Blog1](#) & [Blog2](#)
- [24] Karami A\*, Gangopadhyay A, Zhou B, **Kharrazi H**. Fuzzy approach topic modeling for health and medical corpora. *Int J Fuzzy Sys*. 2017; 1-12  
DOI: [10.1007/s40815-017-0327-9](#)
- [25] **Kharrazi H**, Lasser E, Yasnoff WA, Loonsk J, Advani A, Lehmann H, Chin D, Weiner JP. A proposed national research and development agenda for population health informatics: summary recommendations from a national expert workshop. *J*

*Am Med Inform Assoc.* 2017; 24 (1):2-12  
PMID: [27018264](#) DOI: [10.1093/jamia/ocv210](#)

- [26] Chan KS, **Kharrazi H**, Parikh M, Ford EW. Assessing electronic health record implementation challenges using item response theory. *Am J Manag Care.* 2016; 22 (12): e409-e415  
PMID: [27982669](#)
- [27] Wilcox HC, **Kharrazi H**, Wilson RF, Musci RJ, Susukida R, Gharghabi F, Zhang A, Wissow L, Robinson KA. Data linkage strategies to advance youth suicide prevention: a systematic review for a national institute of health pathways to prevention workshop. *Ann Intern Med.* 2016; 165 (11): 779-785  
PMID: [27699389](#) DOI: [10.7326/M16-1281](#)
- [28] Lasser E, Pfo E, Chang HY, Chan KS, Baily J, **Kharrazi H**, Weiner JP, Dy S. Has Choosing Wisely affected use of dual-energy X-ray absorptiometry (DXA) rates? *Osteoporos Int.* 2016; 27 (7): 2311-2316  
PMID: [26860499](#) DOI: [10.1007/s00198-016-3511-0](#)
- [29] Swain MJ\*, **Kharrazi H**. Feasibility of 30-day hospital-readmission prediction modeling based on health information exchange data. *Int J Med Inform.* 2015; 84 (12):1048-1056  
PMID: [26412010](#) DOI: [10.1016/j.ijmedinf.2015.09.003](#)
- [30] Dixon B, Pina J, **Kharrazi H**, Gharghabi F, Richards J. What's past is prologue: a scoping review of recent public and global health informatics literature. *Online J Public Health Inform.* 2015; 7 (2) e1-31  
PMID: [26392846](#) DOI: [10.5210/ojphi.v7i2.5931](#)
- [31] Dixon B, **Kharrazi H**, Lehman H. Public health and epidemiology informatics: recent research and events. *Yearb Med Inform.* 2015; 10 (1): 199-206  
PMID: [26293869](#) DOI: [10.15265/IY-2015-012](#)
- [32] **Kharrazi H**, Weiner JP. IT-enabled community health interventions: challenges, opportunities, and future directions. *Generating Evidence & Methods to Improve Patient Outcomes (eGEMs).* 2014; 2 (3): 1-9  
PMID: [25848627](#) DOI: [10.13063/2327-9214.1117](#)
- [33] Devaraj S\*, Sharma S, Fausto D, Viernes S, **Kharrazi H**. Barriers and facilitators to clinical decision support systems adoption: a systematic review. *Journal of Business Administration Research (JBAR).* 2014; 3 (2): 36-53  
DOI: [10.5430/jbar.v3n2p36](#)
- [34] **Kharrazi H**, Wang C, Scharfstein D. Prospective EHR-based clinical trials: the challenge of missing data. *J Gen Intern Med.* 2014; 29 (7): 976-978

PMID: [24839057](#) DOI: [10.1007/s11606-014-2883-0](#)

- [35] Wu A, **Kharrazi H**, Boulware LE, Snyder CF. Measure once, cut twice – adding patient reported outcome measures to the electronic health record for comparative effectiveness research. *J Clin Epidemiol*. 2013; 66 (8): S12-20  
PMID: [23849145](#) DOI: [10.1016/j.jclinepi.2013.04.005](#)
- [36] Lu AS, **Kharrazi H**, Gharghabi F, Thompson D. A systematic review of health videogames on childhood obesity prevention and intervention. *Games Health J*. 2013; 2 (3): 131-141  
PMID: [24353906](#) DOI: [10.1089/g4h.2013.0025](#)
- [37] **Kharrazi H**, Chisholm R, VanNasdale D, Thompson B. Mobile personal health records: an evaluation of features and functionality. *Int J Med Inform*. 2012; 81 (9): 579-593  
PMID: [22809779](#) DOI: [10.1016/j.ijmedinf.2012.04.007](#)
- [38] **Kharrazi H**, Lu AS, Gharghabi F, Coleman W. A scoping review of health game research: past, present, and future. *Games Health J*. 2012; 1 (2): 153-164  
PMID: [24416638](#) DOI: [10.1089/g4h.2012.0011](#)
- [39] Gadde P, **Kharrazi H**, Patel H, MacDorman K. Toward monitoring and increasing exercise adherence in older adults by robotic intervention: a proof of concept study. *Journal of Robotics (JRob)*. 2011; 1-11  
DOI: [10.1155/2011/438514](#)
- [40] BenMessaoud C, **Kharrazi H**, MacDorman K. Facilitators and barriers to adopting robotic-assisted surgery: contextualizing the unified theory of acceptance and use of technology. *PLoS One*. 2011; 6 (1): e16395  
PMID: [21283719](#) DOI: [10.1371/journal.pone.0016395](#)
- [41] **Kharrazi H**, Watters C, Oore S. Improving behavioral stages in children by adaptive applications. *Journal of Information Technology in Healthcare (JITH)*. 2008; 6 (1), 83-95.  
PMID: [101173280](#)

### **Conference Articles (Full-length & Peer-Reviewed) <sup>2</sup>**

- [1] Gold S\*, Batch A, McClure R, Jiang G, **Kharrazi H**, Saripalle R, Huser V, Weng C, Roderer N, Szarfman A, Elmquist N, Gotz D. Infrastructures and interfaces to

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<sup>2</sup> Full papers published in conference proceedings are considered an influential route of knowledge dissemination in informatics. Papers listed in this section are full-length manuscripts that are peer reviewed by scientific committees. See “Presentations → Conference Proceedings” [end of the CV] for the list of peer-reviewed abstracts and short-papers.

encourage value set reuse for health data analytics. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. 2018; San Francisco, CA. [accepted]

URL: [amia\\_2018.pdf](#) [in-press]

- [2] Karami A\*, Gangopadhyay A, Zhou B, **Kharrazi H**. FLATM: A fuzzy logic approach topic model for medical documents. *Proceedings of the North American Fuzzy Information Processing Society Annual Conference (NAFIPS)*. 2015. 1-6; Redmond, WA: IEEE  
DOI: [10.1109/NAFIPS-WConSC.2015.7284190](#)
- [3] Knowles R\*, Dredze M, Evans K, Lasser E, Richards T, Weiner JP, **Kharrazi H**. High risk pregnancy prediction from clinical text. *Proceedings of the 27th Neural Information Processing Systems (NIPS): Workshop on Machine Learning for Clinical Data Analysis*. 2014. Montreal, Canada  
URL: [sematicscholar.pdf](#)
- [4] Mehrabi S\*, Mohammadi I, Kunjan K, **Kharrazi H**. Effects of data transformation methods on classification of patients diagnosed with myocardial infarction. *Proceedings of the 11th World Congress of Medical and Health Informatics (MedInfo 2013)*. 2013; 192: 1203. Copenhagen, Denmark: Studies in Health Technology and Informatics, IOS Press.  
PMID: [23920977](#) DOI: [10.3233/978-1-61499-289-9-1203](#)
- [5] **Kharrazi H**, Vincz L. Increasing physical activity by implementing a behavioral change intervention using pervasive personal health record system: an exploratory study. In S. Constantine (Eds.), *Universal Access in Human Computer Interaction Applications and Services: Proceedings of the SMART Interfaces for Consumer Health Applications*. 2011; 366-375. Orlando, FL: Springer  
DOI: [10.1007/978-3-642-21657-2](#)
- [6] **Kharrazi H**, Faiola A, Bolchini D. Framework-driven health game design: a formative approach for treatment adherence in children with chronic diseases. *Proceedings of Games for Health Sixth Annual Conference*. 2010. Boston, MA.
- [7] **Kharrazi H**. Improving healthy behaviors in type 1 diabetic patients by interactive frameworks. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. 2009; 322-326. San Francisco, CA  
PMID: [20351873](#)
- [8] **Kharrazi H**, Faiola A, Defazio J. Healthcare game design: behavioral modeling of serious gaming design for children with chronic diseases. *Proceedings of the 13th International Conference on Human-Computer Interaction (HCI-International)*. Part IV: Interacting in Various Application Domains. 2009; 335-344. San Diego, CA: Springer

DOI: [10.1007/978-3-642-02583-9\\_37](https://doi.org/10.1007/978-3-642-02583-9_37)

- [9] Duke J\*, Faiola A, **Kharrazi H**. A novel visualization tool for evaluating medication side-effects in multi-drug regimens. *Proceedings of the 13th International Conference on Human-Computer Interaction (HCI-International)*. Part IV: Interacting in Various Application Domains. 2009; 478-487. San Diego, CA: Springer  
DOI: [10.1007/978-3-642-02583-9\\_52](https://doi.org/10.1007/978-3-642-02583-9_52)
- [10] Abidi SR, Elvidge K, **Kharrazi H**, Shepherd M, Watters C, Duffy J. Reformulation of consumer health queries with standard medical vocabulary. *Proceedings of the 11th International Symposium on Health Information Management Research (iSHIMR)*. 2006; 146-153. Halifax, NS  
URL: [iSHIMR.pdf](#)
- [11] Watters C, Oore S, Shepherd M, Abouzied A, Cox A, Kellar M, **Kharrazi H**, Liu F, Otley A. Extending the use of games in health care. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS)*. 2006; 88b. Kauia, HI: IEEE  
DOI: [10.1109/HICSS.2006.179](https://doi.org/10.1109/HICSS.2006.179)
- [12] **Kharrazi H**, Paterson G, Thieu T, Wang Z. Transforming bone marrow transplantation data into a case-based reasoning system for decision support. *Proceedings of the 5th Annual Symposium on Medical/Health Professions Education and Inter-Professional Learning*. 2004; Halifax, NS: Dalhousie Press  
URL: [10.1.1.91.5895](https://doi.org/10.1.1.91.5895)

### **Book Chapters**

- [1] **Kharrazi H**, Lehmann HP, Overby C. (in-press). Integration of registries with electronic health records. Forthcoming in Gliklich RE, Dreyer NA & Leavy MB (Eds.) *Registry Informatics: Rapid Advances and New Challenges*. 2018; Rockville MD: AHRQ [in-press]
- [2] **Kharrazi H**, Lehmann HP. Role of population health informatics in understanding data, information and knowledge. In Joshi A, Thorpe L, & Waldron L (Eds.) *Population Health Informatics: Driving Evidence-Based Solutions into Practice*. 2017; 65-89. Burlington, MA: Jones and Bartlett Learning. ISBN: 978-1-28-410396-0  
URL 1: <http://www.jblearning.com/catalog/9781284103960/>  
URL 2: <https://www.amazon.com/Population-Health-Informatics-Evidence-Based-Solutions/dp/128410396X>
- [3] **Kharrazi H**, Horrocks D, Weiner JP. Use of HIEs for value-based care delivery: a case study of Maryland's HIE. In Dixon B (Ed.) *Health Information Exchange:*

*Navigating and Managing a Network of Health Information Systems*. 2016; 313-332. Cambridge, MA: Academic Press Elsevier. ISBN: 978-0-12-803135-3

URL 1: <https://www.elsevier.com/books/health-information-exchange/dixon/978-0-12-803135-3>

URL 2: [www.amazon.com/Health-Information-Exchange-Navigating-Managing/dp/0128031352](http://www.amazon.com/Health-Information-Exchange-Navigating-Managing/dp/0128031352)

★ Received the 2016 “HIMSS Book of the Year Award”:

<http://www.himss.org/awards/book-of-the-year>

- [4] Lu AS, **Kharrazi H**, Baranowski T. Digital games for nutrition and healthy eating: a systematic review. In Dadaczynski K, Schiemann S & Paulus P (Eds.), *Health promotion through gaming? Potentials and challenges of digital games for health promotion and prevention* (in German). 2016; 261-281. Basel, Germany: Beltz Juventa. ISBN: 978-3-7799-3342-7  
URL: [https://www.beltz.de/fachmedien/erziehungs\\_und\\_sozialwissenschaften/buecher/produkt\\_produktdetails/30471-gesundheit\\_spielend\\_foerdern.html](https://www.beltz.de/fachmedien/erziehungs_und_sozialwissenschaften/buecher/produkt_produktdetails/30471-gesundheit_spielend_foerdern.html)
- [5] Faiola A, **Kharrazi H**. Diabetes education and serious gaming: teaching adolescents to cope with diabetes. In Hayes B & Aspray W (Eds.), *Health Informatics: A Patient-Centered Approach to Diabetes*. 2010; 151-177. Cambridge, MA: MIT Press. ISBN: 978-0-262-01432-8  
URL: <http://mitpress.mit.edu/books/health-informatics>
- [6] Watters C, Oore S, **Kharrazi H**. Games for children with long-term problems. In Kaufman D & Sauvé L (Eds.), *Educational Gameplay and Simulation Environments*. 2010; 286-302. Hershey, NY: Information Science Reference. ISBN: 978-1-616-92242-9  
URL: <http://www.igi-global.com/book/educational-gameplay-simulation-environments/37262>

### **Government Reports**

- [1] Bennett W, Cheskin LJ, Wilson RF, Zhang A, Tseng E, Shogbesan O, Knapp EA, Stuart E, Bass EB, **Kharrazi H**. Methods for Evaluating Natural Experiments in Obesity: A Systematic Evidence Review. *Agency for Healthcare Research and Quality (AHRQ)*. Dec 2017. Contract No. 290-2012-00007-I. AHRQ Publication No. 18-EHC006-EF  
URL 1: <https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/cer-204-obesity-prepublication.pdf>  
URL 2: <https://www.ncbi.nlm.nih.gov/books/NBK493804>  
PMID: [29708675](https://pubmed.ncbi.nlm.nih.gov/29708675/) DOI: [10.23970/AHRQEPCCER204](https://doi.org/10.23970/AHRQEPCCER204)
- [2] Wilcox H, Wissow L, **Kharrazi H**, Wilson RF, Musci RF, Zhang A, Robinson KA. Data Linkage Strategies to Advance Youth Suicide Prevention. *Agency for*

*Healthcare Research and Quality (AHRQ)*. Oct 2016. Contract No. 290-2012-00007-I. AHRQ Publication No. 16(17)-E001-EF

URL1: <https://www.ncbi.nlm.nih.gov/pubmed/30307734>

URL2: <https://www.ncbi.nlm.nih.gov/books/NBK390956/>

DOI: [10.23970/AHRQEPERTA222](https://doi.org/10.23970/AHRQEPERTA222)

★ *Received AHRQ's "Dr. Robert Lewis Kane Memorial Award"*

- [3] Sorace J, Patel V, **Kharrazi H**, Boone E, Kemper N, Rafiqi F, Yencha R, Samarth A. Measurement of Interoperable Electronic Health Care Records Utilization. *Office of the Assistant Secretary for Planning and Evaluation (ASPE)*. Aug 2016. Contract No. HHSP233201500099I\_HHSP23337001. ASPE Publication No. 255526  
URL: <https://aspe.hhs.gov/sites/default/files/pdf/255526/EHRUtilizationReport.pdf>
- [4] **Kharrazi H**. Evaluation of Stage 3 Meaningful Use Objectives: Maryland and Arkansas. *Agency for Healthcare Research and Quality (AHRQ)*. Apr 2015. Contract No. HHS 290-2010-00027-I. AHRQ Publication No. 15-0032-EF  
URL: <https://healthit.ahrq.gov/sites/default/files/docs/citation/evaluation-stage-3-meaningful-use-md-ar-final-report.pdf>

#### **Other Publications** (invited editorials & letters)

- [1] Chang H-Y, **Kharrazi H**, Weiner JP. JHU CPHIT team details costs, predictors of opioid abuse. *Predictive Modeling News*. 2018; 11 (6): 1, 6-7.  
URL: <http://www.predictivemodelingnews.com>
- [2] Kan HJ, **Kharrazi H**, Weiner JP. Hopkins researchers validate using senior risk factors to predict utilization. *Predictive Modeling News*. 2018; 11 (4); 1, 4-6.  
URL: <http://www.predictivemodelingnews.com>
- [3] **Kharrazi H**, Weiner JP. A practical comparison between the predictive power of population-based risk stratification models using data from electronic health records versus administrative claims: setting a baseline for future EHR-derived risk stratification models. *Med Care*, 2017; 56(2), 202-203  
PMID: [29200132](https://pubmed.ncbi.nlm.nih.gov/29200132/) DOI: [10.1097/MLR.0000000000000849](https://doi.org/10.1097/MLR.0000000000000849)
- [4] **Kharrazi H**, Chang H-Y, Weiner JP. Hopkins team sees risk stratification value in Rx fill data. *Predictive Modeling News*. 2017; 10 (11); 1, 4-5.  
URL: <http://www.predictivemodelingnews.com>
- [5] **Kharrazi H**. The role of health IT in value-based care. *Management Rounds*. Johns Hopkins Master of Health Administration Program, 2015; 1 (10): 1-2  
URL: [MR single pages August 28 2015.pdf](#)

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## **PRACTICE ACTIVITIES**

### **Presentation to Policy-makers**

- 2014-2014      *Population Health Informatics Agenda*  
Institute of Medicine, DC
- 2014-2014      *HIE-Centric Population Health Analytic Framework*  
Department of Health and Mental Hygiene, Baltimore MD

### **Software Development**

- 2015-2016      *Free-text HIPAA Scrubber (completed)*
- 2015-2016      *Medication Complexity HOME Tool (completed)*
- 2012-            *eACGs (EHR-based ACGs; long-term development)*

### **Media**

- [1] **Kharrazi H.** (interview) in DST Health. Can populations be risk stratified using only EHR data? Apr 2018.  
<https://www.dstsystems.com/insights/hc-population-risk-stratified-ehr-data>
- [2] **Kharrazi H.** (interview) in David R. Improving efficiency, quality through population health. Managed Healthcare Executive. Sep 2015.  
<http://managedhealthcareexecutive.modernmedicine.com/managed-healthcare-executive/news/improving-efficiency-quality-through-population-health>
- [3] **Kharrazi H.** (interview). Games Studies Insight. Digital Games Research Center. Aug 2015.  
<http://direc.com/Uploads/GameStudiesInsightsNo4.pdf>
- [4] **Kharrazi H.** (interview) in Haber G & Kessler B. Electronic medical records (EMRs) have security advantages, but systems aren't perfect. *York Daily Records*. Jun 2014. [http://www.ydr.com/local/ci\\_26004767/electronic-medical-records-have-security-advantages-but-systems](http://www.ydr.com/local/ci_26004767/electronic-medical-records-have-security-advantages-but-systems)
- [5] **Kharrazi H.** (interview) in Levin-Epstein M. Mobile health: Real game-changer. *Managed Care*. Oct 2013.  
<http://www.managedcaremag.com/archives/2013/10/mobile-health-real-game-changer>
- [6] **Kharrazi H.** (interview) in 'Heart + Mind Strategies'. Innovations to improve the quality of healthcare in the United States. 2013.
- [7] **Kharrazi H.** (interview) in AHC Media. Games people play could be good for their health, sense of empowerment. Dec 2009.

<https://www.ahcmedia.com/articles/115167-games-people-play-could-be-good-for-their-health-sense-of-empowerment>

CURRICULUM VITAE  
Hadi Kharrazi  
PART II

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**TEACHING**

**Advisees**

Masters

- 2017- Aymna Husain (MPH capstone)  
*“Using novel sources of data to determine the prevalence and factors associated with pediatric falls in Maryland” [tentative title]*
- 2017- Masatoshi Ishikawa (MPH capstone)
- 2017- Colleen Line (MPH capstone)
- 2017- Joseph Mercado (JHSoM-MSc capstone)  
*“An analysis on the prevalence of CKD using HCUP data” [tentative title]*
- 2017- Sonia Sarkar (MPH)
- 2017- Susan Whitfield (JHSoM- MSc)
- 2017- Allen Cassandra (JHSoM- MSc)
- 2017- Kathryn Foti (JHSPH-Epi)
- 2016- Cristina Mannie (MPH capstone)  
*“Distribution of co-morbidity indexes in South Africa: Analyzing a large national insurance claims database”*
- 2017-2018 Xiaomeng Ma (JHSoM- MSc capstone)  
*“Geographical Distribution of Disease Comorbidity among Maryland Residents Admitted to Hospitals in 2013 and 2014”*
- 2017-2018 Ariel Caldwell (MPH Epi/Biostat capstone)
- 2016-2018 Kristen Harvey (MPH capstone)  
*“Electronic Health Records, Primary Care Providers and Burnout”*
- 2016-2018 James Graziano (MPH capstone)
- 2016-2017 Takako Kanakubo (MPH MBA capstone)  
*“The requirement for Meaningful Use and cost-effectiveness of EHR in Japanese universal healthcare system”*
- 2016-2017 Jimmy Small (MPH capstone)  
*“Evaluation of priority case management member identification by a predictive model of patients at high-risk for future facility utilization for a Medicare advantage health plan in three counties of upstate New York”*
- 2016-2017 Afifah Handayani (MPH capstone + practicum)  
*“A systematic review of readmission prediction models: An informatics*

*perspective”*

- 2015-2018 Kathryn Esper (MPH capstone)
- 2014-2016 Virna Sales (MPH capstone)  
*“Meaningful use of health information technology in cardiac surgery: developing real-time clinical registries”*
- 2014-2015 Janani Veluchamy (MPH capstone)  
*“Evaluating the AECS data systems and proposing a data flow to monitor patients through the continuum of care of diabetic retinopathy”*
- 2015-2016 Sarah Youn (MPH capstone)  
*“Measuring population health metrics based on existing population-wide data in Maryland: Challenges and Opportunities”*
- 2014-2016 Brett Cropp (JHSoM-MSc thesis)  
*“Exploring the impact of HIE-based geo-data on 30-day hospital readmission”*
- 2014-2015 Mayank Patel (JHSoM-MSc thesis committee)  
*“Incorrect patient class assignment for obstetric observations in health information exchange ADT messages”*
- 2014-2015 Jeffrey Balsewicz (MPH capstone)  
*“An analysis of potentially preventable emergency department visits in Illinois”*
- 2013-2015 Matthew Swain (MPH capstone) – now at DHHS ONC  
*“Assessing the utility of electronic health information exchange transaction data to predict 30-day hospitals readmissions”*
- 2013-2014 Stella Ukaoma (MPH capstone)  
*“Smartphone apps for breast cancer awareness and treatment: Health consumer needs and current apps available”*
- 2013-2014 Minosco y de Cal (MPH capstone)  
*“The HITECH act: Emerging issue for the healthcare professional”*
- 2013-2014 Shmuel Goldberg (MPH capstone)  
*“Leveraging the SHIN-NY (HIE) to advance the consumer m-health market”*
- 2013-2014 Senyo Norgbey (JHSoM-MSc thesis)  
*“Exploring the readiness for ‘meaningful use’ of EHRs among eligible hospitals: A feasibility study within a combined AHA annual survey and CMS attestation datasets”*
- 2013-2014 Olatunde Animashaun (MPH capstone)
- 2013-2014 Damilola Onasanya (MPH capstone)
- 2013-2014 Yash Deo (MPH capstone)

#### Doctoral and PostDoc

- 2016- Priyanka Dua (DrPH adviser)

- 2016- Matt Castner (DrPH committee)
- 2016- Elyse Lasser (DrPH committee)  
*“Assessing social and behavioral data in electronic health records: availability, accuracy, and applicability”*
- 2015- Lindsey Ferris (DrPH committee)  
*“Conceptual framework for PDMP risk modeling project” [tentative title]*
- 2016-2018 Stella Liang (DrPH committee – unfinished)
- 2016-2018 Kelly Searle (PostDoc)  
*“Identifying the geospatial distribution of obesity among the VA patients”*
- 2015-2018 Maryam Zolnoori (PhD thesis committee) – now PostDoc at Mayo  
*“Seeking support on Facebook: A content analysis of depression groups”*
- 2016-2017 Claudia Nau (PostDoc)  
*“Prevalence of obesity among VHA patients: A national demographic analysis”*
- 2015-2017 Roza Vazin (PhD committee)  
*“Evaluation and Description of the CRISP [Maryland’s Statewide Health Information Exchange] Encounter Notification Service”*
- 2015-2016 Kirill Dyagilev (PostDoc)  
*“Predicting the trajectory of healthcare utilization among patients with type 2 diabetes”*
- 2014-2016 Amir Karami (PhD thesis committee) – now faculty at University of SC  
*“Fuzzy Approach Topic Models for Medical Corpus”*
- 2014-2016 Joy Lee (PhD thesis committee) – now faculty at IU Regenstrief Institute  
*“Patient-reported satisfaction and provider use of novel communication technologies”*
- 2014-2015 Remle Newton-Dame (DrPH thesis committee – unfinished)  
*“Obesity Surveillance in the Age of Big Data”*
- Others
- 2018- Majid Shafiq (Fellowship Rotation; Interventional Pulmonologist)  
*“Sub-phenotyping unexplained pleural effusion using cluster analysis”*
- 2017-2018 Christopher Britt (Fellowship Rotation; ENT Surgeon)  
*“Vestibular-Related Falls in Maryland: 2013-2015”*
- 2015-2017 Anand Bery (MD research rotation)  
*“A systematic review of the feasibility of implementing frailty measures in EHRs: Meaningful use implications”*
- 2015-2017 Laura Anzaldi (MD research fellowship)  
*“Predicting fall among Baltimore elderly residents”; “Developing 30-day hospital readmission prediction models” & “Extracting frailty concepts from medical records using natural language processing tools” & “Developing a PHI-scrubbing automated tool: Challenges and opportunities”*

2015-2016 Morgan Opie (Maryland Department of Health - CDC Fellow)  
*Informatics Training In Place Program (i-TIPP)*

***Preliminary Oral Participation***

2015-2018 Paul Messino (DrPH committee)  
*"The Effect of Achieving "Meaningful Use" Among Maryland Medicaid Managed Care Network Providers on HEDIS® Childhood Immunization Status Scores"*

2016- Lindsey Ferris (DrPH)  
*"Conceptual framework for PDMP risk modeling project"*

2016- Rosa Vazin (PhD)  
*"Evaluation and description of the CRISP [Maryland's statewide health information exchange] encounter notification service"*

2014-2015 Joy Lee (PhD)  
*"Patient satisfaction and provider use of cellphones, email, and text messaging"*

2014-2015 Edrees Hanan (DrPH)  
*"Second victims & peer support programs in Maryland hospitals: a study of perceived need for organizational leaders"*

***Final Oral Participation***

2014-2018 Paul Messino (DrPH)  
*"The effect of achieving meaningful use among Maryland Medicaid managed care network providers on HEDIS childhood immunization status scores"*

## ***Classroom Instruction***

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2017-	<i>Population and Consumer Health Informatics (OPAL)</i> Johns Hopkins School of Public Health Role: Principal Instructor Type: Graduate course for MAS PHM Tasks: Developed the curriculum Developed educational content
2015-	<i>Principles of HIT for HPM (Summer Institute)</i> Johns Hopkins School of Public Health Role: Principal Instructor Type: Graduate course for MPH Tasks: Redesigned and developed the curriculum Developed educational content
2015-	<i>Advances in HIT and Preventative Medicine Applications</i> Johns Hopkins School of Public Health Role: Principal Instructor Type: Graduate course for Residents Tasks: Redesigned and developed the curriculum Developed educational content
2015-	<i>Web Analytics for Public Health (Fall Institute – Barcelona)</i> Johns Hopkins School of Public Health & UPF Role: Principal Instructor Type: Graduate course for MPH and others Tasks: Developed the curriculum Developed educational content
2012-	<i>Population Health Informatics (PH.309.631)</i> Johns Hopkins School of Public Health Role: Principal Instructor Type: Graduate course for MPH & PhD Tasks: Redesigned the curriculum Developed and recorded most of the lectures Conducted the live sessions
2015-	<i>DrPH and PhD Doctoral Seminars</i> Johns Hopkins School of Public Health Role: Guest Lecturer Type: Graduate course for DrPH and PhD Tasks: Developed various sessions on HIT
2015-	<i>Research and Evaluation Methods for Health Policy</i> Johns Hopkins School of Public Health Role: Guest Lecturer

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Type: Graduate course for MPH and PhDs  
Tasks: Developed a session on Big Data and HPM

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2015- *Fundamentals of Health Policy and Management*  
Johns Hopkins School of Public Health  
Role: Guest Lecturer  
Type: Undergraduate course  
Tasks: Developed a session on Health Information Exchanges

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2015- *Digital Health for Medical Students*  
Johns Hopkins School of Medicine  
Role: Guest Lecturer  
Type: Graduate course for MD students  
Tasks: Developed a session on HIT policies in clinical care

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2012-2014 *Health Information Systems: Design to Development*  
Johns Hopkins School of Public Health  
Role: Guest Lecturer  
Type: Graduate course for MPH & PhD  
Tasks: Conducted two live sessions on HIEs

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2013 *Concepts, Theories and Current Trends in Health Informatics*  
Johns Hopkins School of Public Health / Summer Institute  
Role: Guest Lecturer  
Type: Graduate course

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## **RESEARCH GRANT PARTICIPATION**

### ***Awarded - Ongoing***

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**ID** (#1) NIMH 1R56-MH117560-01  
**Title** *“Addressing Suicide Research Gaps: Understanding Mortality Outcomes in the Mid-Atlantic Region”*  
**Funding** National Institute of Mental Health (NIHM)  
**Period** 09/2018 – 09/2019  
**Role** Principal Investigator; Co-PI: Wilcox H  
**Total** ~\$492,000 (R56 mechanism – FY1 of 1R01-MH117560-01)  
**Topic** This study will conduct data linkage and informatics approaches to utilize existing resources to improve suicide risk identification and prevention. The project will also offer essential measures for providers and payers to reduce suicide events in their systems. The methods will be assessed against and shared as a resource with other states/regions to establish a similar analytics framework to advance suicide prevention.

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**ID** (#2) ACG-GSAP Integration  
**Title** *“Integrating the Geo-Social Predictive Model Platform in ACGs”*  
**Funding** Johns Hopkins Health Care (JHHC) Solutions  
**Period** 10/2018 – 10/2019  
**Role** Principal Investigator  
**Total** ~\$400,000 (contract)  
**Topic** This study will develop novel patient-level geo-derived risk scores that can be used to enhance existing risk scores such as ACGs, and ultimately become integrated into traditional care management workflows.

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**ID** (#3) JHU IDIES  
**Title** *“Using Epidemiological and Simulation Data to Inform the Testing of Autonomous Vehicles”*  
**Funding** Johns Hopkins Institute for Data-Intensive Engineering and Science  
**Period** 03/2018 – 03/2019  
**Role** Co-Investigator; PI: Ehsani J  
**Total** \$25,000  
**Topic** Using epidemiologic and simulated models of crash risk, we propose the development of a tool to assist AV engineers and federal regulators to inform AV testing. This tool will assess safety as a function of the road types, neighborhoods and traffic patterns along a specific route, and the elements of the AV algorithms that govern speed, lane changing and other driving behaviors.

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**ID** (#4) JHU IDIES  
**Title** *“Harnessing Big Data for Population Health: Advancing Natural Language Processing Techniques to Extract Social-Behavioral Risk Factors from Free Text within Large Electronic Health Record Systems”*  
**Funding** Johns Hopkins Institute for Data-Intensive Engineering and Science  
**Period** 03/2018 – 03/2019  
**Role** Co-Investigator; PI: Weiner JP

**Total** \$25,000  
**Topic** We propose to build on the machine learning tools developed using a mix of pattern matching techniques for note categorization and deep learning methods (i.e., long short-term memory recursive neural networks). Our goal in this pilot is to establish the viability of these methods for social determinants of health (SDH) data and to extract a first-pass corpus of SDH factors.

**ID** (#5) *VHA Phase-IV*  
**Title** *“Analytical Framework to Project BMI Trajectory for VHA Veterans at the Population Level”*  
**Funding** Veteran Health Affairs – Office of Analytics and Business Intelligence  
**Period** 09/2017 – 11/2018  
**Role** Principal Investigator; Co-PI: Weiner JP  
**Total** ~\$255,000 (IPA mechanism)  
**Topic** This project will utilize high priority data sources including the VHA’s CDW to develop a series of predictive models to forecast obesity trajectory in a given population denominator. Underlying GIS information and other sources of social determinants of health will be used to improve the prediction of obesity trajectory geographically.

**ID** (#6) *DST Health Solutions – GSAP*  
**Title** *“Geo-Social [Risk Prediction and Visualization] Analytic Platform (GSAP)”*  
**Funding** DST Health Solutions  
**Period** 09/2017 – 09/2019  
**Role** Principal Investigator  
**Total** \$325,000  
**Topic** We are proposing the development of the Johns Hopkins Geo-Social Analytic Platform (GSAP) that will incorporate geo-social factors for risk prediction on both aggregated and patient levels. GSAP data will be used to improve risk stratification of various sub-populations (e.g., health plan members, employees).

**ID** (#7) *TDAF C14627 – 2017*  
**Title** *“Helping Older adults improve their Medication Experience (HOME)”*  
**Funding** JHSPH– Technology Development Accelerator Fund (TDAF)  
**Period** 07/2017 – 07/2019  
**Role** Principal Investigator  
**Total** \$25,000  
**Topic** A pilot study of 20 patients demonstrated that the tool is useful for communication between nurses and primary care physicians (PCP) and is easily integrated into clinical workflow. The HOME tool automated the medication complexity reduction process and improved medication management among older adults.

**ID** (#8) *VHA PACT Evaluation*  
**Title** *“Developing and Testing an Approach for the Integration of Population and Patient Level Information in Support of Patient Centered Primary Care at the VHA”*  
**Funding** Veteran Health Affairs – Office of Analytics and Business Intelligence  
**Period** 10/2016 – 10/2018

**Role** Co - Principal Investigator; PI: Weiner JP  
**Total** ~\$175,000 (contract)  
**Topic** PACT is part of the national “Patient Centered Medical Home” (PCMH) movement, where accountable primary care delivery teams, equipped with comprehensive information support systems, provide coordinated care attuned to the patient's individual needs.

**ID** (#9) *CMS CPC+ AIR PRO*  
**Title** *“Patient Reported Outcome-based Performance Measure (PRO-PM) and Patient Experience of Care Surveys for Primary Care Practices Participating in the Centers for Medicare & Medicaid Services / Center for Medicare and Medicaid Innovation Comprehensive Primary Care (CPC+)”*  
**Funding** CMS – Subcontract to AIR (American Institute for Research)  
**Period** 09/2017 – 09/2023  
**Role** Co-Investigator; PI of JHU Subcontract: Wu A  
**Total** ~\$6,500,000 (JHU Subcontract); \$55,000,000 (AIR CMS)  
**Topic** This project focuses on recommending CMS one or more PROM(s) that is feasible and appropriate in a primary care patient population with clinical emphasis on patients with multiple chronic conditions. EHRs will be used to collect PROs and then applied to improve the risk stratification of comorbid older adult populations using predictive modeling.

**ID** (#10) *B’FRIEND – Multiple Funding Streams*  
**Title** *“Baltimore Falls Reduction Initiative Engaging Neighborhoods and Data (B’FRIEND)”*  
**Funding** (a) Johns Hopkins inHealth Initiative  
 (b) Robert Wood Johnson Foundation (RWJF) DASH Program  
 (c) Center for Government Excellence at the 21<sup>st</sup> Century Cities Initiative  
**Period** 01/2016 – 12/2018  
**Role** Principal Investigator; Co-PI: Sharfstein J  
 Co-Investigator; PI: Wen L  
 Co-Investigator; PI: Sharfstein J  
**Total** (a) ~\$75,000  
 (b) ~\$200,000  
 (c) ~\$25,000  
**Topic** Baltimore Falls Reduction Initiative Engaging Neighborhoods and Data (B’FRIEND) is a citywide effort to reduce such falls by one-third in three years. Hospital discharge summary as well as health information exchange (HIE) data will be used to develop a risk prediction model for severe falls among older adults. B’FRIEND will involve standing up a real-time data and trajectory surveillance capacity for all falls requiring hospital care in a major city.

**ID** (#11) *eACG – Internal*  
**Title** *“Developing Next Generation EHR-Supported Predictive Modeling: Developing the Johns Hopkins e-ACG System”*  
**Funding** Internal (ACG)  
**Period** 09/2012 – NA  
**Role** Co - Principal Investigator; PI: Weiner JP  
**Total** ~\$2,000,000 (~8 FTEs \* 3 yrs)

**Topic** In collaboration with Health Partners in Minnesota, this research seeks to incorporate EHR elements into the advanced models of the ACG System. The goal is to identify EHR and other HIT elements amenable to incorporation with traditional claims-based ACG measures and test how to best integrate a combination of elements with the ACG System to enhance our predictive modeling ability.

**ID** (#12) JHSoM ICTR BSSS Nexus Award [Phase II] – Internal  
**Title** “Behavioral, Social and Systems Science: Extracting Social Science Data from Epic Electronic Health Record System”  
**Funding** Internal (JHU ICTR)  
**Period** 12/2017 – 09/2018  
**Role** Principal Investigator  
**Total** \$65,000  
**Topic** This phase of the project will document the social determinant measure available, provide a guide to researchers wishing to integrate them into studies and make recommendations on how to integrate new measures going forward.

**ID** (#13) PDMP BJA-2015-4189  
**Title** “Prescription Drug Monitoring Program’s Risk Modeling Project”  
**Funding** U.S. Department of Justice  
**Period** 09/2015 – 12/2018  
**Role** Co - Investigator; PIs: Weiner JP & Saloner B  
**Total** ~\$530,000 (subcontract to DHMH)  
**Topic** This research will increase understanding about the risk factors for prescription drug overdose and inform interventions to help curb the prescription drug abuse and overdose epidemic in Maryland, and hopefully generalizable to other states.

**ID** (#14) Patient Safety in Ambulatory Care  
**Title** “What is Patient Safety in the Medical Home?”  
**Funding** AHRQ R01HS24859-01  
**Period** 09/2016 – 09/2019  
**Role** Co - Investigator; PI: Dy S  
**Total** ~\$499,998  
**Topic** No previous research has explicitly evaluated safety in the PCMH. This partnership between Johns Hopkins and the National Committee on Quality Assurance (NCQA) is a unique opportunity to evaluate how the PCMH can best address safety.

***Awarded - Completed***

**ID** (#15) Frailty – Atrius Health  
**Title** “The Development and Testing of the Frailty Component of a Novel EHR-Based “Geriatric e-risk” Measure for Predictive Modeling”  
**Funding** Atrius Health Foundation – Harvard Vanguard Medical Associates  
**Period** 06/2015 – 06/2018  
**Role** Co - Principal Investigator; PI: Weiner JP  
**Total** ~\$25,000  
**Topic** Develop advanced predictive modeling tools for high-risk case detection and management

for a geriatric population. Using the ACG frailty constructs as a baseline we are exploring how new elements found in the EHR as structured or unstructured information (using advanced NLP techniques) may improve the current model.

<b>ID</b>	<i>(#16) JHSoM ICTR BSSS Nexus Award [Phase I] – Internal</i>
<b>Title</b>	<i>“Behavioral, Social and Systems Science: Extracting Social Science Data from Epic Electronic Health Record System”</i>
<b>Funding</b>	Internal (JHU ICTR)
<b>Period</b>	02/2017 – 12/2017
<b>Role</b>	Co-Investigator; PI: Ford E
<b>Total</b>	\$65,000
<b>Topic</b>	The aims of this project are: First, describing the existing frameworks for assessing social determinants of health in patient populations. Second, interviewing key informants to assess the current SDH routinely collected at JHMI. Third, produce a plan for assessing the current social determinants that are available for research.
<b>ID</b>	<i>(#17) ONC WF-WF-15-300</i>
<b>Title</b>	<i>“Workforce Development Programs: Population Health IT”</i>
<b>Funding</b>	HHS – Office of the National Coordinator (ONC) for Health IT
<b>Period</b>	07/2015 – 07/2017
<b>Role</b>	<u>Co - Principal Investigator</u> ; PI: Lehmann H
<b>Total</b>	~\$969,000
<b>Topic</b>	We will update training materials from the original Workforce Curriculum Development program funded under HITECH. In addition to updating training materials, the goal of this program is to train 6,000 incumbent health care workers to use new health information technologies in a variety of settings. The updates will focus on the four key topic areas of Population Health, Care Coordination, New Care Delivery and Payments Models, and Value Based & Patient Centered Care
<b>ID</b>	<i>(#18) AHRQ-RFTO22</i>
<b>Title</b>	<i>“Advancing Research Methods for Evaluation of Natural Experiments in Obesity Prevention and Control”</i>
<b>Funding</b>	HHS – Agency for Healthcare Research and Quality (AHRQ)
<b>Period</b>	02/2016 – 12/2017
<b>Role</b>	Co - Investigator; PI: Bennett W
<b>Total</b>	~\$400,000
<b>Topic</b>	This task order is a distributed under the EPC (Evidence-based Practice Center) IDIQ. The main aim of the task order is to systematically identify & assess population-level data sources, and approaches for evaluation of policies for obesity prevention and control.
<b>ID</b>	<i>(#19) VHA Phase-III</i>
<b>Title</b>	<i>“Analytical Framework to Project BMI Trajectory for VHA Veterans at the Population Level”</i>
<b>Funding</b>	Veteran Health Affairs – Office of Analytics and Business Intelligence
<b>Period</b>	09/2015 – 09/2016
<b>Role</b>	<u>Principal Investigator</u> ; Co-PI: Weiner JP
<b>Total</b>	~\$240,000 (IPA mechanism)

Topic	The aim of this phase of the VHA project is to develop a series of predictive models to forecast obesity trajectory in a given population denominator (which could be eventually tailored as feedback to clinicians, policy makers and others).
<i>ID</i>	<i>(#20) DHMH SIM</i>
Title	<i>“Care Coordination and Expanded Analytics Infrastructure of the All-Payer Demonstration Project”</i>
Funding Period	Maryland Department of Health and Mental Hygiene (DHMH) 12/2015 – 09/2016
Role	Co - Principal Investigator; PI: Weiner JP
Total	~\$200,000 (subcontract to DHMH/CRISP)
Topic	We will develop a comprehensive framework of population health measures that can be derived from electronic data to assess the state of health of target populations/communities. We will also assist Maryland public health, social welfare and medical care providers and community organizations plan for population health targeted interventions.
<i>ID</i>	<i>(#21) Discovery Fund Synergy Award</i>
Title	<i>“Addressing medication regimen complexity in skilled home health care”</i>
Funding Period	Johns Hopkins School of Medicine 9/2014 – 12/2015
Role	Co - Investigator; PI: Boyd C
Total	~\$100,000
Topic	This project develops and tests the feasibility of an innovative, largely automated informatics solution (the HOME tool) to efficiently and clearly communicate information about medication regimens and insights gained by the home health nurse in the process of evaluating the patient at home.
<i>ID</i>	<i>(#22) ASPE 15-233-SOL-00303</i>
Title	<i>“Measurement of Interoperable Electronic Healthcare Records Utilization”</i>
Funding Period	HHS – Assistant Secretary for Planning and Evaluation (ASPE) & ONC 09/2015 – 09/2016
Role	Co - Investigator; PI: Samarth A
Total	~\$245,000
Topic	This project will develop methods for measuring interoperability between users of certified health information technology (IT) systems and information partners not covered by the Medicare and Medicaid EHR Incentive program, or who are not providers in long-term/post-acute care settings.
<i>ID</i>	<i>(#23) AHRQ-RFTO42</i>
Title	<i>“Data Sources and Methods to Analyze Suicide Prevention Interventions among Youth”</i>
Funding Period	HHS – Agency for Healthcare Research and Quality (AHRQ) 02/2015 – 04/2016
Role	Co - Investigator; PI: Robinson K
Total	~\$400,000
Topic	This task order is a distributed under the EPC (Evidence-based Practice Center) IDIQ. The main aim of the task order is are ‘topic refinement’ and ‘systematic review’ of existing and

effective interventions to prevent suicide among the younger population. Using HIT and various data sources is of special emphasis in this project.

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**ID** (#24) RFA-AG-14-009  
**Title** *“Clinical Trial of a Multifactorial Fall Injury Prevention Strategy in Older Persons (U01)”*  
**Funding** NIH U01 / PCORI Special Call  
**Period** 4/2014 – 5/2017  
**Role** Co - Investigator [in-kind; FY1 only]; PI: multiple institutions  
**Total** ~\$29,000,000  
**Topic** The investigators, patients and stakeholders will collaboratively refine and pilot a strategy for identifying persons at risk for falling and optimize the study design and intervention. The trial will incorporate an adaptive design and a pre-specified mid-term analysis.

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**ID** (#25) R21-HS022578  
**Title** *“Community-wide HIE- based Hospital Readmission Risk Prediction and Notification System”*  
**Funding** AHRQ R21  
**Period** 09/2013 – 12/2015  
**Role** Principal Investigator  
**Total** ~\$300,000  
**Topic** This research facilitates care coordination between inpatient and outpatient settings. This project will derive and validate a hospital readmission risk-prediction model based on Maryland’s Health Information Exchange. If adopted by primary care providers, the model can significantly reduce readmissions.

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**ID** (#26) ACTION-II RFTO32  
**Title** *“Evaluation of Stage 3 Meaningful Use Objectives among Eligible Hospitals”*  
**Funding** AHRQ RFTO  
**Period** 09/2013 – 09/2014  
**Role** Principal Investigator  
**Total** ~\$632,000  
**Topic** The aim of this (contract) project is to evaluate the readiness of 10 hospitals in MD and AR to roll out two of the meaningful use stage 3 measures. The project includes three phases of a conceptual framework development, implementation and evaluation of measures, and dissemination of the findings.

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**ID** (#27) 5-R01-LM009897  
**Title** *“Clinical Knowledge Hub - Conceptual Integration of Rules, Data Sets, and Queries”*  
**Funding** National Library of Medicine (NLM) R01  
**Period** 05/2010 – 04/2012  
**Role** Principal Investigator; Co-PI: Schadow G  
**Total** ~\$242,000  
**Topic** To create a standards-based clinical decision support (CDS) knowledge library which integrates, harmonizes, and disseminates a diverse set of major sources of clinically relevant biomedical knowledge which each in their own right have been proven effective at their

original institution but that could not be shared in the past due to technical and conceptual barriers.

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**ID** (#28) *VHA Phase-II*  
**Title:** *“Developing an Obesity Trajectory Population-based Risk Prediction Model (OT-PRPM)”*  
**Funding:** Veteran Health Affairs  
**Period:** 10/2014 – 10/2015  
**Role:** Principal Investigator; Co-PI: Weiner JP  
**Total:** ~\$150,000 (IPA mechanism)  
**Topic:** VHA has awarded CPHIT to develop a national population-health measurement framework and assist in the implementation of a population health platform. To pilot this framework and platform we are linking EHR and GIS data to understand population health facets of obesity.

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**ID** (#29) *VHA Phase-I*  
**Title** *“Framework for a VHA Population Health Program”*  
**Funding** Veteran Health Affairs  
**Period** 06/2014 – 10/2014  
**Role** Principal Investigator; Co-PI: Weiner JP  
**Total** Subcontract ~\$70,000 (IPA mechanism)  
**Topic** We collaborated with the VAH to more clearly define population health and population health informatics as well as develop ways to integrate new population-based data sources into an electronic health repository in a meaningful way. The collaboration will conclude with the development and evaluation of a high impact population HIT solutions.

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**ID** (#30) *FIF 2013*  
**Title** *“Faculty Innovation Funding”*  
**Funding** JHSPH  
**Period** 03/2013 – 03/2014  
**Role** Principal Investigator  
**Total** ~\$35,000  
**Topic** This research explores the derivation and evaluation of a hospital readmission risk-prediction model based on Maryland’s Health Information Exchange. If adopted by primary care providers, the model can significantly reduce readmissions.

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**ID** (#31) *PCORI – MSSDT2014*  
**Title** *“Methodology Standards Academic Curriculum: Comparative Effectiveness Research”*  
**Funding** PCORI (PCO-MSSDT2014)  
**Period** 09/2004 – 09/2008  
**Role** Co-Investigator; PI: Segal J  
**Total** ~\$335,000  
**Topic** The CIHR Team Grant in Access to Children’s Mental Health Services is organized around 5 projects. Each project has a unique focus that will provide us with the knowledge we need to create our unique system to minimize waiting list times.

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**ID** (#32) HHSM-500-TO-003  
**Title** "PHEMUR Project"  
**Funding** Mathematica  
**Period** 09/2013 – 09/2014  
**Role** Co - investigator; PI: Dy S  
**Total** ~\$100,000 (subcontract)  
**Topic** ARRA HITECH Eligible Professional (EP) Clinical Quality Measures (PHEMUR) contributes to the development of testing plan for new measures and ensuring requirements defined by CMS and NQF are addressed.

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**ID** (#33) 1-R13-LM011955  
**Title** "Symposium on Population Health Informatics"  
**Funding** National Library of Medicine (NLM) R13  
**Period** 04/2014 – 05/2014  
**Role** Co-Investigator; PI: Weiner JP  
**Total** \$12,500  
**Topic** This R13 application seeks federal support for a one-day meeting on population health informatics. The proposal wants to bring experts together in this emerging field.

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## **ACADEMIC SERVICE**

### **Department**

- 2015- *DrPH Program*  
Admission Committee
- 2012- *Center for Population Health IT (CPHIT)*  
Research Director
- 2012- *Center for Health Services and Outcomes Research (CHSOR)*  
Data Infrastructure Committee

### **School**

- 2016- *Bloomberg American Health Initiative (BAHI)*  
Evidence Workgroup – Committee Member & Liaison  
Obesity Workgroup – Committee Member
- 2013- *ACG Technical Advisory Board*  
Committee Member
- 2012- *Global mHealth Initiative (GmI)*  
Steering Committee Member

### **University**

- 2018- *AMIA Annual Symposiums*  
American Medical Information Association (AMIA)  
Scientific Program Committee (SPC)
- 2015- *Center on Aging and Health*  
Committee Member
- 2014- *Behavioral, Social and Systems Science (BSSS) Advisory Board*  
ICTR Translational Research Communities  
Committee Member
- 2013- *Data Trust Council – Research and Informatics Sub-council*  
Committee Member
- 2013- *JHSoM Div. of Health Science Informatics (DHISI) Executive Committee*  
Committee Member
- 2013-2015 *Clinical Informatics Fellowship Executive Committee*  
Committee Member
- 2013-2014 *Bloomberg Distinguished Professor (BDP) Search Committee for HIT*  
Committee Member

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## **PRESENTATIONS AT SCIENTIFIC MEETINGS<sup>3</sup>**

### **Conference Proceedings (peer-reviewed abstracts & short-papers)<sup>4,5</sup>**

- [1] Rouhizadeh M\*, Hatef E, Dredze M, Chute C, **Kharrazi H**. Identifying social determinants of health from clinical notes: a rule-based approach. *Proceedings of American Medical Informatics Association Annual Symposium*. 2018; San Francisco, CA: AMIA [upcoming].
- [2] Zolnoori M, Fung KW, Fontelo P, **Kharrazi H**, Faiola A, Wu YSS, Stoffel V, Patrick TB. Utilizing consumer health posts to identify underlying factors associated with patients' attitudes towards antidepressants. *Proceedings of American Medical Informatics Association Annual Symposium*. 2018; San Francisco, CA: AMIA [upcoming].
- [3] Hatef E, Searle KM, Predmore Z, Lasser E, **Kharrazi H**, Sylling P, Nelson K, Fihn S, Weiner JP. A conceptual framework and approach for integration of population and patient-level electronic data to address social determinants of health within Veterans Health Administration's patient centered medical home. *Proceedings of American Medical Informatics Association Annual Symposium*. 2018; San Francisco, CA: AMIA [upcoming].
- [4] **Kharrazi H**, Xiaomeng Ma, Lasser E, Richards T, Weiner JP. Population-level comparison of diagnostic data collected in EHRs versus insurance claims [using OptumLabs data]. *Proceedings of American Medical Informatics Association Annual Symposium*. 2018; San Francisco, CA: AMIA [upcoming].
- [5] Cantor MN, Gold R, Gottlieb L, **Kharrazi H**, Cullen T. Lessons learned from using informatics to address the social determinants of health. *Proceedings of American Medical Informatics Association Annual Symposium*. 2018. San Francisco, CA: AMIA [upcoming].
- [6] Dixon BE, Lourens SG, Fenton SH, **Kharrazi H**. Integrating data science into public health informatics training programs. *Proceedings of Center for Disease Control and Prevention's Public Health Informatics Conference*. 2018. Atlanta, GA: CDC.
- [7] **Kharrazi H**, Wilcox HC, Nestadt P. The role of population health IT in the future of mental health services. *Proceedings of National Institute of Mental Health's Mental Health Services Research (MHSR) Conference*. 2018; Bethesda, MD:

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<sup>3</sup> **Kharrazi**: first/corresponding presenter; **Kharrazi**: co-presenter; \*: mentored presentations

<sup>4</sup> Short-papers and abstracts published in conference proceedings are considered an influential route of knowledge dissemination in informatics. All publications are peer-reviewed.

<sup>5</sup> See <http://hkharrazi.com?section=pub> for links and full text of the abstracts and short-papers.

NIMH

- [8] **Kharrazi H**, Bennett W, Wilson R, Zhang A, Tseng E, Knapp E, Stuart E, Shogbesan O, Bass E, Cheskin L. A systematic review of data sources and data linkage methods in natural experiment studies of obesity. *Proceedings of Academy Health Annual Research Meeting (HIT Interest Group)*. 2018; Seattle, WA: Academy Health
- [9] **Kharrazi H**, Stephan C. Current and emerging issues for population health informatics in healthcare and public health [2017]. *Proceedings of American Medical Informatics Association Annual Symposium Workshop*. 2017; Washington DC: AMIA
- [10] Caban J, Dowding D, Wu D, **Kharrazi H**, West V. Current state of visualization of EHR data: What's needed? What's next? *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 359-360. Washington DC: AMIA
- [11] Gharghabi F\*, Anzaldi L, Richards T, Weiner JP, **Kharrazi H**. Measuring the value of EHR's free-text in identifying geriatric risk factors. *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 71-72. Washington DC: AMIA
- [12] Ford E, **Kharrazi H**. Forecasting the maturation of EHR functions among US hospitals. *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 65-66. Washington DC: AMIA
- [13] **Kharrazi H**, Box T, Fihn S, Weiner JP. Analyzing prevalence of obesity among VHA patients using clinical, temporal, and geographical data extracted from a nationwide EHR. *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 105-106. Washington DC: AMIA
- [14] Kan H, **Kharrazi H**, Chang H-Y, Weiner JP. A comparison of using full and partial information from administrative claims data to predict future health care costs. *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 101-102. Washington DC: AMIA
- [15] Anzaldi L\*, Lasser E, Sharfstein J, **Kharrazi H**. Identifying and predicting falls among elderly residents of Baltimore city using hospital discharge summaries and health information exchange data. *Proceedings of American Medical Informatics Association Annual Symposium*. 2017; 17-18. Washington DC: AMIA
- [16] **Kharrazi H**, Lee J, Padula W, Kan H, Burkom H, Saria S. Statistical methodologies for identifying, modeling, and managing subpopulations at risk. *Proceedings of Joint Statistical Meeting*. 2017; Baltimore, MD: American

Statistical Association [Discussant]

- [17] **Kharrazi H**, Anzaldi L, Gharghabi F, Richards T, Weiner JP. Measuring the value of EHRs in identifying geriatric risk factors. *Proceedings of Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [18] **Kharrazi H**, Chi W, Chang H-Y, Richards TM, Gallagher JM, Knudson SM, Weiner JP. Comparing the value of diagnostic and medication data extracted from EHR versus claims in risk stratification. *Proceedings of Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [19] **Kharrazi H**, Box T, Fihn S, Weiner JP. Using EHR records to analyze the trajectory of obesity among VHA patients from 2000 to 2015. *Proceedings of Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [20] Sheehan OC, Gabbard J, Carl KJ, Wolff JL, **Kharrazi H**, Leff BA, Boyd C. Patient and family perspectives on medication management for older adults receiving home health care: strengthening informal support resources for older adult patients. *Proceedings of International Association of Gerontology and Geriatrics*. 2017; San Francisco, CA: IAGG
- [21] Nassery N, Mane K, Liu F, Sangha NX, Sharp AL, Shamim EA, Rubenstein KB, **Kharrazi H**, Nagy P, Kanter MH, Horberg M, Ford D, Pronovost PJ, Newman-Toker DE. Measuring missed strokes using administrative and claims data: towards a diagnostic performance dashboard to monitor diagnostic errors. *Proceedings of Diagnostic Error in Medicine*. 2016; Los Angeles, CA: DeGruyter
- [22] Karami A\*, Gangopadhyay A, Zhou B, **Kharrazi H**. A fuzzy approach model for uncovering hidden latent semantic structure in medical text collections. *Proceedings of iConference*. 2015; e1-5: iSchools
- [23] Dixon B, Pina J, Richards J, **Kharrazi H**, Turner A. Public and global health informatics year in review [2015]. *Proceedings of American Medical Informatics Association Annual Symposium*. 2015; Washington DC: AMIA
- [24] **Kharrazi H**. Evaluation of stage-3 care coordination Meaningful Use objectives among eligible hospitals [Maryland and Arkansas]. *Proceedings of Academy Health Annual Research Meeting*. 2014; San Diego, CA: Academy Health
- [25] **Kharrazi H**, Joshi A, Loonsk J. Current and emerging issues for population health informatics in healthcare and public health [2013]. *Proceedings of American Medical Informatics Association Annual Symposium*. 2013; Washington DC: AMIA

- [26] Dixon B, Pina J, Richards J, **Kharrazi H**, Turner A. Public and global health informatics year in review [2014]. *Proceedings of American Medical Informatics Association Annual Symposium*. 2014; 166-168. Washington DC: AMIA
- [27] **Kharrazi H**. Evaluation of stage 3 meaningful use objectives among hospitals. *Proceedings of American Medical Informatics Association Annual Symposium*. 2014; 57-58. Washington DC: AMIA
- [28] Loonsk J, **Kharrazi H**. A hybrid electronic surveillance design pattern for public and population health. *Proceedings of American Medical Informatics Association Annual Symposium*. 2014; 71-72. Washington DC: AMIA
- [29] Gudzone K, Lemke K, **Kharrazi H**, Weiner JP. Refining a patient risk assessment using Adjusted Clinical Groups (ACG) with outpatient lab results. *Proceedings of American Medical Informatics Association Annual Symposium*. 2014; 42-43. Washington DC: AMIA
- [30] **Kharrazi H**. 'Clinical Knowledge Hub' – conceptual integration of rules, data sets, and queries: A proof of concept pilot. *Proceedings of Academy Health Annual Research Meeting*. 2013; Baltimore, MD: Academy Health
- [31] **Kharrazi H**, Joshi A, Loonsk J. Current and emerging issues for population health informatics in healthcare and public health [2013]. *Proceedings of American Medical Informatics Association Annual Symposium Workshop*. 2013; Washington DC: AMIA
- [32] Dixon B, Turner A, Pina J, Richards J, **Kharrazi H**. Public and global health informatics year in review [2013]. *Proceedings of American Medical Informatics Association Annual Symposium*. 2013; 326-328. Washington DC: AMIA
- [33] **Kharrazi H**, Lu AS, Gharghabi F, Coleman W. The effectiveness of health games in improving health outcomes: a systematic review. *Proceedings of Midwestern Conference on Health Games*. 2011. Indianapolis, IN: IUPUI
- [34] Mokashi A, **Kharrazi H**, Otley A. Can a video game improve adherence to treatment in children with type 1 diabetes? *Proceedings of the American Diabetes Association 71st Scientific Sessions*. 2011; San Diego, CA: American Diabetes Association
- [35] **Kharrazi H**, Mehrabi S. Meaningful use of personal health records. *Proceedings of Individualized Healthcare Conference*. 2011. Washington DC: AMA-IEEE Medical Technology
- [36] **Kharrazi H**, Vincz L. Using health information technology and behavior change model to increase exercise adherence in obesity. *Proceedings of Individualized*

*Healthcare Conference*. 2011. Washington DC: AMA-IEEE Medical Technology

- [37] **Kharrazi H**, Rand K, Ross T, Militello L. Behavioral change health games: From theory to practice. *Proceedings of Midwestern Conference on Health Games*. 2010; Indianapolis, IN: IUPUI
- [38] Vincz L\*, **Kharrazi H**. Interactive health information technology and obesity. *Proceedings of Midwestern Conference on Health Games*. 2010; Indianapolis, IN: IUPUI
- [39] Locke T\*, **Kharrazi H**. Health games and attention deficit hyperactivity disorder: opportunities and challenges. *Proceedings of Midwestern Conference on Health Games*. 2010; Indianapolis, IN: IUPUI
- [40] **Kharrazi H**. A behavior change game for people with type 1 diabetes. *Proceedings of Games for Health Fifth Annual Conference*. 2009; Boston, MA: Robert Wood Johnson Foundation
- [41] Paterson G, **Kharrazi H**, Taylor B, Abidi S, Mensink N, Cheng C. Caregiver, researcher and educator responses to the training requirement for applied clinical informatics subspecialty. *Proceedings of the 9th Annual Symposium on Medical Professions Education*. 2009; Halifax, NS: Dalhousie Press
- [42] **Kharrazi H**, Watters C, Oore S, Liu F. Improving behavioral stages in children by adaptive applications. *Proceedings of Information Technology and Communications in Health*. 2007; Victoria, BC: ITCH
- [43] **Kharrazi H**, Lichodzijewski P. Efficient evolution of rule-based classifiers: Findings of the application in breast cancer diagnosis. *Proceedings of Dalhousie Computer Science In-House Conference*. 2007; Halifax, NS: Dalhousie Press
- [44] Lichodzijewski P, **Kharrazi H**. Efficient evolution of rule-based classifiers: An application in medical diagnosis. *Proceedings of the 11th International Symposium on Health Information Management Research*. 2006; 122-124. Halifax, NS: iSHIMR
- [45] **Kharrazi H**. An automated telephony natural speech interface as a 'virtual coach' for child healthcare. *Proceedings of the 3rd Annual Crossroads Conference*. 2005; Halifax, NS: Dalhousie Press
- [46] Watters C, Liu F, **Kharrazi H**, Oore S, Kellar M, Shepherd M. Building classes of entertaining games for health education. *Proceeding of Digital Games Research Association: Changing Views - Worlds in Play*. 2005; Vancouver, BC: DiGRA

**Conference Posters (peer reviewed)<sup>6</sup>**

- [1] **Kharrazi H**, Anzaldi L. Using hospital discharge summaries to measure the incident and predict geriatric falls in Maryland. *Academy Health Annual Research Meeting*. 2018; Seattle, WA: Academy Health
- [2] **Kharrazi H**, Lasser E, Richards T, Xiaomeng Ma, Weiner JP. Comparison of diagnostic data collected in EHRs versus insurance claims [using HealthPartners data]. *Academy Health Annual Research Meeting*. 2018; Seattle, WA: Academy Health
- [3] Husain A\*, Sridharma S, **Kharrazi H**. Prevalence of pediatric fall injuries: a statewide study. *Academy Health Annual Research Meeting*. 2018; Seattle, WA: Academy Health
- [4] **Kharrazi H**, Ford E. An update on forecasting the maturation of EHR functions among US hospitals. *Academy Health Annual Research Meeting*. 2018; Seattle, WA: Academy Health
- [5] Kan HJ, Chang H-Y, **Kharrazi H**, Weiner JP. A comparison of risk adjustment models based on traditional statistical and machine learning techniques in predicting health care costs in older adults. *Academy Health Annual Research Meeting*. 2018; Seattle, WA: Academy Health
- [6] **Kharrazi H**, Searle K, Box T, Fihn S, Weiner JP. Spatial distribution of obesity among the U.S. veteran health administration's male population in 2015. *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [7] Kan HJ, **Kharrazi H**, Leff B, Boyd C, Davison A, Chang H-Y, Kimura J, Lasser E, Weiner JP. Geriatric risk factors and their association with health care use in the elderly population. *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [8] **Kharrazi H**, Anzaldi L, Lasser E, Sharfstein J. Baltimore falls reduction initiative engaging neighborhoods & data (B'FRIEND). *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [9] **Kharrazi H**, Lasser EC, Yasnoff WA, Loonsk J, Advani A, Lehmann HP, Chin DC, Weiner JP. A proposed national research and development agenda for population health informatics. *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health

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<sup>6</sup> See <http://hkharrazi.com?section=pub> for links and full text of the posters.

- [10] Chang H-Y, Richards TM, Weiner JP, **Kharrazi H**. Using medication adherence extracted from EHR prescriptions and pharmacy claims fills to improve risk stratification. *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [11] Chan KS, **Kharrazi H**, Parikh MA, Ford EW. Assessing EHR implementation challenges using item response theory. *Academy Health Annual Research Meeting*. 2017; New Orleans, LA: Academy Health
- [12] **Kharrazi H**, Wilcox H, Wissow L, Wilson R, Musci R, Zhang A, Robinson K. Data Linkage Strategies to Advance Suicide Prevention. *Academy Health Annual Research Meeting*. 2016; Boston, MA: Academy Health
- [13] Lu AS & **Kharrazi H**. A comprehensive content analysis of games for health. *International Society of Behavioral Nutrition and Physical Activity Convention*. 2015, Edinburgh, Scotland: ISBNPA
- [14] **Kharrazi H**. Development of a community-wide HIE-based hospital readmission risk prediction and notification system: A feasibility and evaluation study. *Academy Health Annual Research Meeting*. 2014; San Diego, CA: Academy Health
- [15] **Kharrazi H**. The role of 'Big Data' in community-wide population healthcare delivery and research: Case study and matching conceptual framework. *Academy Health Annual Research Meeting*. 2014; San Diego, CA: Academy Health
- [16] **Kharrazi H**. The role of big data in community-wide population healthcare delivery and research. *American Medical Informatics Association Annual Symposium*. 2014; 1458. Washington DC: AMIA
- [17] **Kharrazi H**. 'Clinical Knowledge Hub' – technical integration of rules, data sets, and queries: a pilot study. *American Medical Informatics Association Annual Symposium*. 2012; 1812. Chicago, IL: AMIA
- [18] Vincz L\*, **Kharrazi H**. Increasing physical activity by implementing a behavioral change intervention using information technology. *Midwestern Conference on Health Games*. 2011. Indianapolis, IN: IUPUI
- [19] Blue T\*, **Kharrazi H**. Unlocking the potential use of video games in behavioral therapy of young children with attention deficiency/hyperactivity disorder. *Midwestern Conference on Health Games*. 2011. Indianapolis, IN: IUPUI
- [20] **Kharrazi H**, Watters C. Changing behavioral stages in diabetic children by adaptive interactive applications: theoretical considerations. *11th World Congress on Internet in Medicine*. 2006; Toronto, ON: MedNet

### **Keynotes and Invited Panels** (not peer-reviewed)

- [1] Pickering C, Vest JR, Tanzman B, Abujarad F, **Kharrazi H** [moderator]. Electronic referrals for connected & integrated service delivery for vulnerable older adult populations. Proceedings of AMIA Annual Symposium. 2018; San Francisco, CA [upcoming].
- [2] **Kharrazi H**. Methods for Evaluating Natural Experiments in Obesity: A Systematic Evidence Review (KQ1). Presented at: *NIH Methods for Evaluating Natural Experiments in Obesity*; Dec 2017; Bethesda MD.  
<https://prevention.nih.gov/p2p-workshop/2017/methods-evaluating-natural-experiments-obesity/agenda/day-1>
- [3] **Kharrazi H**. Population Health Informatics: Past, Present, and Future. Presented at: *Health Policy Seminar – George Mason University, Department of Health Administration and Policy*. Oct 2017; Fairfax, VA.
- [4] **Kharrazi H**. Population Health Informatics and Visualization [Keynote Address]. Presented at: *IEEE VIS – VAHC 2017*. Oct 2017; Phoenix, AZ.  
<http://www.visualanalyticshealthcare.org/speakers.html>
- [5] **Kharrazi H**. Population Health Informatics: Challenges, Opportunities, and Case Studies. Presented at: *Population Health Forum – Thomas Jefferson University, Jefferson College of Population Health*. Sep 2017; Philadelphia, PA.  
<http://jdc.jefferson.edu/hpforum/113/>  
<http://events.r20.constantcontact.com/register/event?oeidk=a07eed31tcx346a4e9f&llr=lrj4tqkab>
- [6] **Kharrazi H**, Fihn S, Advani A, Kachur S, Sutariya B, Yasnoff W. A Proposed National Research and Development Agenda for Population Health Informatics: Case Studies and Future Directions. Presented at: *iHealth 2017 Clinical Informatics Conference (AMIA)*; May 2017; Philadelphia, PA.  
<https://www.amia.org/ihealth2017/panels>
- [7] **Kharrazi H**, Wilcox H. Data Linkage Strategies and Methods to Advance Youth Suicide Prevention. Presented at: *NIH Pathways to Prevention Workshop: Advancing Research to Prevent Youth Suicide*; Mar 2016; Bethesda MD.  
<https://prevention.nih.gov/programs-events/pathways-to-prevention/workshops/binders/2016/suicide-prevention/day-1>
- [8] **Kharrazi H**, Yasnoff W. Learnings from the ‘Population Health Informatics’ conference. Presented at: *Institute of Medicine – Population Health Board*; May 2014; Washington DC.
- [9] **Kharrazi H**. What is ‘Health Informatics’, and how it can be leveraged to propel

healthcare in emerging markets? Presented at: *IAAPDC – Academics and Professionals*; May 2014; Bethesda, MD.

<http://www.iaapdc.org/2014/04/>

- [10] **Kharrazi H.** Using ‘Meaningful Use’ to provide population ‘Decision Support Systems’ for ‘Accountable Care Organizations’: Challenges and opportunities. Presented at: *Medical Informatics World Conference*; Apr 2014; Boston, MA. [http://www.medicalinformaticsworld.com/hit\\_content.aspx?id=139519&libID=139490](http://www.medicalinformaticsworld.com/hit_content.aspx?id=139519&libID=139490)
- [11] **Kharrazi H.** ‘Health Information Exchanges’ and ‘Big Data’: Challenges and opportunities. Presented at: *Big Data and Analytics in Healthcare: Reduce Costs and Increase Performance*; Apr 2013; Philadelphia, PA.
- [12] Weiner JP, **Kharrazi H.**, Sylvia M. Harnessing the power of data for population health. Presented at: *World Health Care Congress*; Apr 2013; Washington DC.
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***Other Presentations (not peer-reviewed)***

- [1] **Kharrazi H.**, Weiner JP, Sharfstein J, Anzaldi L. Baltimore Falls Reduction Initiative Engaging Neighborhoods and Data (B’FRIEND). Presented at: *Baltimore City Health Department, 2016*; Baltimore, MD.
- [2] **Kharrazi H.** Hospital Health IT in the U.S.: Lessons Learned Hospital IT System Design and Implementation. Presented at: *Chinese Hospital Delegation, 2014, 2015 and 2016*; Baltimore, MD.
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- [4] **Kharrazi H.** Public health informatics or population health informatics: Setting the debate context. Presented at: *Population Health Informatics Presymposium Workshop at AMIA Symposium*. Nov 2013; Washington DC.

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## **ADDITIONAL INFORMATION**

### **Keywords**

*Primary:* Population Health Informatics; Population Health Management; Risk Stratification; Predictive Analytics; Utilization Modeling; and, Data Quality

*Secondary:* Meaningful Use; EHR Adoption; Public Health Informatics; Clinical Informatics; Clinical Decision Support Systems; and, Consumer Health Informatics

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