# Harry Reyes Nieva, MAS

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## Research Overview

My primary research area involves leveraging artificial intelligence to improve the quality and safety of patient care, support knowledge discovery, and promote health equity. Generally, my research interests concern developing and applying novel machine learning and natural language processing methods to examine and support clinical cognition and decision making; assess disease risk, presence, progression and treatment response; identify disease subtypes and biomarkers associated with important outcomes; and study the fairness, accountability, and transparency of intelligent systems in the health care setting.

## Education

Columbia University in the City of New York, New York, NY *Doctor of Philosophy* in Biomedical Informatics, Expected May 2024

Beijing Language and Culture University, Beijing, China *Summer Student*, Intensive Mandarin, 2019

Johns Hopkins Bloomberg School of Public Health, Baltimore, MD *Master of Applied Science* in Spatial Analysis, 2019
Thesis: Spatiotemporal modeling of opioid prescribing and persistent opioid use, 2000-2018

Harvard T.H. Chan School of Public Health, Boston, MA *Special Student*, International and Population Health, 2009-2011

Yale University, New Haven, CT *Bachelor of Arts* in Sociology and History, 2005

# Research Experience

| 2019-present | National Library of Medicine Predoctoral Research Fellow, Department of Biomedical Informatics, Columbia University, New York, NY |
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| 2013-present | Visiting Postgraduate Research Fellow, Department of Medicine, Harvard Medical School, Boston, MA                                 |
| 2013-2019    | Predoctoral Research Fellow, Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital, Boston, MA     |
| 2012-2019    | Research Manager, Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital, Boston, MA                |

| 2012-2019 | Network Manager, Brigham and Women's Primary Care Practice-Based Research<br>Network, Boston, MA                                 |
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| 2008-2011 | Research Assistant (per diem), Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital, Boston, MA  |
| 2007-2008 | Research Assistant (full-time), Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital, Boston, MA |
| 2004      | Research Assistant, Yale University, Department of Sociology, New Haven, CT  |

# **Teaching Experience**

| Summer 2017 | Teaching Fellow, HPM299 Research with Large Databases, Harvard T.H. Chan School of Public Health, Boston, MA         |
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| Summer 2016 | Teaching Fellow, HPM299 Research with Large Databases, Harvard T.H. Chan School of Public Health, Boston, MA         |
| 2005–2006   | Teacher, English-as-a-Second-Language, New York City Board of Education/New York City Teaching Fellows, New York, NY |
| 2000-2001   | Reading Tutor (work study), America Reads, New Haven, CT   |

# Committee Service

| 2019–present | Electronic Health Record Phenotyping Working Group, Columbia University 2019–present Member                        |
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| 2015–2018    | Partners Sexual Orientation and Gender Identity Working Group 2015–2018 Founding Member                            |
| 2015–2016    | Brigham Health Equity and Diversity Council<br>2015–2016 Founding Member<br>2015–2016 Co-Chair, Data Working Group |
| 2013–2015    | Partners eCare Research Working Group<br>2013–2015 Member  |
| 2013–2015    | Partners eCare Sexual Orientation and Gender Identity Working Group 2013–2015 Member                               |
| 2013-2014    | Member, Partners Human Research Committee, Insight Usability Working Group 2013–2014 Member                        |
| 2013–2014    | Member, Partners Enterprise Research Portal Working Group<br>2013–2014 Member                                      |

2011–2019 Member, Brigham Health LGBTQ and Allies Employee Resource Group

2011–2019 Member 2014–2016 Co-Chair

2007–2008 Association of Multicultural Members of Partners Healthcare

2007–2008 Member

2007–2008 Vice-Chair, Brigham and Women's Hospital Chapter

# Professional Organizations and Societies

2019-present Member, New York Academy of Sciences

2017–present Member, Association for Computing Machinery

Special Interest Groups: Artificial Intelligence; Knowledge Discovery in Data; High Performance Computing; Bioinformatics, Computational Biology, and

**Biomedical Informatics** 

2014-present Member, American Medical Informatics Association

Special Interest Groups: Clinical Decision Support; Natural Language Processing;

Knowledge Discovery and Data Mining; Ethics, Legal, and Social Issues

2014–present Abstract Reviewer, Annual Symposium 2019–present Mentor, AMIA High School Scholars Program

2012–2014 Member, American Public Health Association

Special Interest Groups: Medical Care, Health Informatics Information Technology

2012–2014 Member, AcademyHealth

## **Editorial Activities**

Ad hoc Reviewer

Health Services Research

Journal of General Internal Medicine

Medical Care

## Honors

2019–present National Library of Medicine Predoctoral Research Fellowship, Training in Biomedical

Informatics at Columbia University (T15LM007079-28)

2019 Dean's Diversity Fellowship, Columbia University Vagelos College of Physicians and

Surgeons

2018 Ford Foundation Predoctoral Fellowship Honorable Mention, National Academies of

Sciences, Engineering, and Medicine

| 2018<br>2018 | Partners in Excellence Award for Leadership and Innovation, Partners HealthCare<br>Ruth and William Silen, MD Award, Third Place, New England Science Symposium |
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| 2016-2018    | Merit Scholarship, Johns Hopkins Bloomberg School of Public Health  |
| 2016         | LGBTQ Leadership Award, Brigham Health  |
| 2015         | Brigham Way honoree, Brigham and Women's Hospital   |
| 2015         | Practice-Based Research Network Conference Travel Scholarship, North American Primary Care Research Group   |
| 2014         | Partners in Excellence Award for Quality Treatment and Service, Partners HealthCare   |
| 2014         | Outstanding Quality and Patient Safety Oral Presentation Award, Society of General Internal Medicine  |
| 2012         | Partners in Excellence Award for Leadership and Innovation, Partners HealthCare   |
| 2004         | Mellon Forum Undergraduate Thesis Research Funding Award, Yale University   |
| 2002         | Y50K Business Plan Competition, Second Place (Social Enterprise), Yale Entrepreneurship Society   |

# Report of Funded and Unfunded Projects

## Funding Information

#### **Past**

2018-2019 A Multicenter Randomized Controlled Trial of Pharmacist-Directed Transitional Care to Reduce Post-Hospitalization Utilization

National Institute on Aging (NIA) Ro1 AG 058911-01

Project Manager (Site PI: Schnipper)

Aim: To measure the impact of pharmacist-led discharge (PHARM-DC) interventions on post-discharge utilization within 30 days. We will also identify patient sub-populations most likely to benefit from PHARM-DC.

Novel electronic health record phenotyping of LGBTQ intersectional identities and 2017-2018 associated health disparities using natural language processing and machine learning Harvard Catalyst

Co-Investigator (PI: Zhou)

Aim: To examine documentation of sexual orientation and gender identity (SOGI) in the electronic health record (EHR) and characterize LGBTQ health and potential health inequities.

2016-2018 Electronic Medication Adherence Reporting and Feedback During Care Transitions Agency for Healthcare Research and Quality (AHRQ) R21 HS 024587-01 Project Manager/Statistical Programmer (PI: Schnipper)

> Aim: To implement a smart pillbox intervention for patients discharged from the hospital to the community and to evaluate the effects of the intervention on post-discharge medication discrepancies, medication adherence, and chronic disease management.

Implementation of a Medication Reconciliation Protocol to Improve Patient Safety 2015-2018 Agency for Healthcare Research and Quality (AHRQ) R18 HS 023757-01A1 Project Manager/Statistical Programmer (PI: Schnipper)

Aim: The long-term objective of this research is to widely disseminate, implement, and evaluate sustainable medication reconciliation interventions that improve patient safety during care transitions.

Clinician-Patient Relationships: Boundaries, Barriers, Breakdowns 2015-2017

Gold Foundation/Lucian Leape Family Foundation

Project Director (PI: Schiff)

Aim: This study examines physician attitudes and practices related to caring acts that have been questioned as "inappropriate" or "unethical" crossing of professional-patient boundaries.

2014-2016 Understanding and Preventing Diagnostic Pitfalls

Risk Management Foundations of the Harvard Medical Institutions (CRICO)

Project Director (PI: Schiff)

Aim: The goal of this project is to identify leading diagnostic pitfalls that pose safety and malpractice risks, then design and test the accuracy of electronic screens for these pitfalls in the electronic health record.

Evaluating Variation in Overactive Bladder Medication Use and Other Treatment Options 2014-2016 Astellas Pharma US, Inc.

Statistical Programmer (PI: Loughlin)

Aim: To understand variation in overactive bladder treatment, medication adherence, and outcomes.

2014-2015 Are Physicians and Patients Adhering to the Published Guidelines for Fasting during Ramadan?

Martin P. Solomon Award for Primary Care Scholarship, BWH

Co-Investigator (PI: Ali)

2012–2014 Medical Malpractice and Patient Safety Protocol

Agency for Healthcare Research and Quality (AHRQ) 1R18HS019508-01

Project Manager (PI: Schiff)

Aim: To test the impact of quality improvement techniques to accomplish innovations and improvements in 3 high risk ambulatory malpractice areas: 1) medication management, 2) test ordering and results management 3) follow-up and referral management.

2012–2014 Use of Behavioral Economics to Improve Treatment of Acute Respiratory Infections

National Institutes of Health/University of Southern California 1RC4AG039115-01

Data Manager/Statistical Programmer (Site PI: Linder)

Aim: To evaluate the use of behavioral economic concepts such as enhanced defaults, alternative options, and social norms on inappropriate antibiotic prescribing for acute respiratory infections.

2010–2012 President's Emergency Plan for AIDS Relief (PEPFAR)

Health Resources and Services Administration (HRSA) U51HA02522

Data Quality Assurance Manager (PI: Kanki)

A \$362 million grant for work in Nigeria, Botswana, and Tanzania to train health care workers, develop monitoring and evaluation systems, strengthen health care infrastructures, and collaborate with local hospitals and clinics that provide treatment for patients living with HIV/AIDS.

2008–2010 President's Emergency Plan for AIDS Relief (PEPFAR)

Health Resources and Services Administration (HRSA) U51HA02522

Data, Training, and Education Coordinator (PI: Kanki)

A \$362 million grant for work in Nigeria, Botswana, and Tanzania to train health care workers, develop monitoring and evaluation systems, strengthen health care infrastructures, and collaborate with local hospitals and clinics that provide treatment for patients living with HIV/AIDS.

2007–2008 Pharmacist Intervention to Decrease Medication Errors in Heart Disease Patients (The PILL-CVD Study)

National Heart, Lung, and Blood Institute (NHLBI), Ro1HL089755

Research Assistant (Site PI: Schnipper)

Aim: To evaluate a literacy-focused program that provides educational assistance from pharmacists at the time of hospital discharge to people hospitalized with heart problems.

2007 Influenza in the Partners Primary Care Practice-Based Research Network

Roche Laboratories, RLI 06001207

Research Assistant (PI: Linder)

Aim: To measure and evaluate antiviral and antibiotic prescribing for patients with influenza being treated in primary care clinics.

## Projects Submitted for Funding

ARtificial Intelligence for the Study and Enhancement of Sexual and Gender Minority health (ARISE-SGM)

NIH/NIMHD 1R21HD097292-01

Co-investigator (PI: Zhou) – Direct Costs Requested – \$275,000

The goals of the ARISE-SGM (ARtificial Intelligence for the Study and Enhancement of Sexual and Gender Minority health) research project are to leverage advances in artificial intelligence to address logistical challenges in obtaining representative samples of sexual and gender minority (SGM) populations and characterize comorbidity prevalence and potential health inequities associated with different segments of SGM populations. Original SRG Action: Impact Score:38 Percentile:24+

## **Unfunded Current Projects**

Gender-based differences in presentation and treatment of acute myocardial infarction Advisor: Noemie Elhadad, PhD

We aim to measure and characterize differences in acute myocardial infarction (AMI) among men and women using structured electronic health record data and free-text from clinical notes. We are using empirical distributional semantics methods (e.g., word2vec and GloVe) to identify potential biases and empirical associations based on gender. We are also analyzing clinical notes over time prior to and after initial diagnosis to understand differences in the trajectories of sign or symptom documentation for patients.

# Report of Clinical Activities and Innovations

### Clinical Innovations

2011 Electronic health record (EHR) data quality assessment tool, version 2.0 at 33 Harvard PEPFAR sites in Nigeria

Instituted major modifications to and evaluated a pre-existing EHR utility to incorporate expanded data quality indicators. With this utility, central and site-level data managers are able to better monitor and improve data completeness, validity, accuracy, and currency.

- EHR pediatric quality improvement tool at 33 Harvard PEPFAR sites in Nigeria Co-developed and evaluated a utility to extract information from data warehouse and generate measures based on 23 pediatric quality of care indicators. Programmed module to review continuity of care, drug therapy initiation, medication adherence, loss to follow-up, laboratory monitoring, disease screening based on clinical symptoms assessment or diagnostic evaluation, treatment failure, toxicity management, nutritional assessment, and treatment response.
- EHR adult quality improvement tool at 33 Harvard PEPFAR sites in Nigeria Co-developed and evaluated a utility to extract information from data warehouse and generate measures based on 15 adult quality of care indicators. Module reviews continuity of care, drug therapy initiation, loss to follow-up, laboratory monitoring, disease screening based on clinical symptoms assessment, treatment failure, and treatment response.

# Report of Invited Teaching and Presentations

No presentations below were sponsored by outside entities.

### Local

- Diversity, Culture, and Inclusion Series LGBTQ Health
   Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital
- Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital
- 2017 Algorithmic Bias and Health Disparities
  Machine Learning Working Group, Partners HealthCare
- Improving and Leveraging Sexual Orientation and Gender Identity Demographics in Epic Sexual Orientation and Gender Identity Working Group, Partners HealthCare
- Designing and Building Clinical Research Databases
  Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital
- 2014 Data Management and Manipulation using Microsoft Access Division of General Internal Medicine and Primary Care, BWH
- The LGBTQ Data Collection Gap: Sexual Orientation and Gender Identity in the EHR LGBTQ and Allies Employee Resource Group, Brigham Health
- How Busy Clinicians Can Improve Care and Pursue Scholarship/Faculty Retreat
  Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital

## Regional

2016 Identifying and Understanding Malpractice-Prone Diagnostic Pitfalls.
Risk Management Foundation of the Harvard Medical Institutions Incorporated (RMF), CRICO Research Day. Boston, MA

#### International

- 2011 Introduction to Data Management/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Critical Elements in Database Cleaning, a Checklist /Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Basics of Programming and Scripting/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Monitoring data and trouble-shooting/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria

- 2011 Programming: Creating a Utility and Basics of Scripting/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Programming and Trouble-shooting databases/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Cohort Analyses I: Using EHR Data/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2011 Cohort Analyses II: Using EHR Data/Seminar AIDS Prevention Initiative Nigeria Plus (APIN Plus), Abuja, Nigeria
- 2009 Improving Understanding and Medication Adherence with Flipcharts/Podium Presentation HIV Counselor Training, AIDS Prevention Initiative Nigeria (APIN), Abuja, Nigeria

# Report of Education of Patients and Service to the Community Activities

2018 Queer Health Hackathon/Co-organizer

Organized 3-day collaborative data analysis event to convene software engineers, data scientists, and clinical experts to examine EHR data for potential LGBTQ health disparities. Extracted and transformed/de-identified EHR data from health system enterprise data warehouse; loaded on Amazon Web Services Cloud platform.

2013-2016 Human Rights Commission, City of Cambridge/Vice Chair, Commissioner Adjudicated complaints of discrimination occurring in Cambridge, Massachusetts related to housing, employment, education, and public accommodation. Facilitated conciliations to settle disputes among parties. Conducted information sessions on civil rights

throughout Cambridge.

2006-2009 Boston Medical Reserve Corps/Emergency Medical Technician

The Boston Medical Reserve Corps is a group of volunteers who are ready to respond should there be a public health emergency in Boston.

2007 Timmy Global Health, Dominican Republic/Medical Relief Volunteer

Helped establish temporary medical clinics along Haiti-Dominican Republic border; triaged patients, managed pharmacy, translated proper drug use and application.

2001-2005 Latino Youth Enrichment Team (LYET), New Haven, CT/Co-Director

Managed community center mentorship program and developed instructional methods for Latino youth ranging in age from 6 through 13.

# Educational Material for Patients and the Lay Community

No educational materials below were sponsored by outside entities

Books, monographs, articles and presentations in other media

2012 Harvard School of Public Health/AIDS Prevention Initiative in Nigeria: Reducing the Burden of AIDS U.S. President's Emergency Plan for AIDS Relief Contributor, Harvard PEPFAR Nigeria Program Report

- Harvard School of Public Health/Management and Development for Health: Reducing the Burden of AIDS in Tanzania U.S. President's Emergency Plan for AIDS Relief Contributor, Harvard PEPFAR Tanzania Program Report
- Botswana-Harvard AIDS Institute Partnership: Reducing the Burden of AIDS U.S. President's Emergency Plan for AIDS Relief Contributor, Harvard PEPFAR Botswana Program Report

# Report of Scholarship

### **Publications**

## Peer reviewed publications in print or other media

- 1. **Reyes Nieva H**, Ruan E, Schiff G. Professional-Patient Boundaries: a National Survey of Primary Care Physicians' Attitudes and Practices. *J Gen Intern Med.* 2020;35(2):457–464. PMID: 31755012.
- 2. Ali NB, **Reyes Nieva H**, Percac-Lima S, Shields HM, Linder JA, Yusuf Osman N. Health Care Utilization by Muslim Patients During Ramadan. *J Health Care Poor Underserved*. 2019;30(4):1360-1372. PMID: 31680102.
- 3. Mixon AS, Smith GR, Mallouk M, **Reyes Nieva H**, Kripalani S, Rennke S, Chu E, Sridharan A, Dalal A, Mueller S, Williams M, Wetterneck T, Stein JM, Stolldorf D, Howell E, Orav J, Labonville S, Levin B, Yoon C, Gresham M, Goldstein J, Platt S, Nyenpan C, Schnipper JL. Design of MARQUIS2: study protocol for a mentored implementation study of an evidence-based toolkit to improve patient safety through medication reconciliation. *BMC Health Serv Res.* 2019 Sep 11; 19(1):659. PMID: 31511070.
- 4. Schiff GD, **Reyes Nieva H**, Griswold P, Leydon N, Ling J, Federico F, Keohane C, Ellis BR, Foskett C, Orav EJ, Yoon C, Goldmann D, Weissman JS, Bates DW, Biondolillo M, Singer SJ. Randomized Trial of Reducing Ambulatory Malpractice and Safety Risk: Results of the Massachusetts PROMISES Project. *Med Care.* 2017 08; 55(8):797-805. PMID: 28650922.
- 5. Schiff GD, **Reyes Nieva H**, Griswold P, Leydon N, Ling J, Biondolillo M, Singer SJ. Addressing Ambulatory Safety and Malpractice: The Massachusetts PROMISES Project. *Health Serv Res.* 2016 12; 51 Suppl 3:2634-2641. PMID: 27892623.
- 6. Kroll DS, **Reyes Nieva H**, Barsky AJ, Linder JA. Benzodiazepines are Prescribed More Frequently to Patients Already at Risk for Benzodiazepine-Related Adverse Events in Primary Care. *J Gen Intern Med.* 2016 09; 31(9):1027-34. PMID: 27177914.
- 7. Bell SP, Schnipper JL, Goggins K, Bian A, Shintani A, Roumie CL, Dalal AK, Jacobson TA, Rask KJ, Vaccarino V, Gandhi TK, Labonville SA, Johnson D, Neal EB, Kripalani, PILL-CVD Study Group\*. Effect of Pharmacist Counseling Intervention on Health Care Utilization Following Hospital Discharge: A Randomized Control Trial. *J Gen Intern Med.* 2016 May; 31(5):470-7. (\*member of the investigative team cited in the appendix of the manuscript) PMID: 26883526.
- 8. Solomon SR, Gooding HC, **Reyes Nieva H**, Linder JA. Acute Care Utilization by Patients After Graduation of Their Resident Primary Care Physicians. *J Gen Intern Med.* 2015 Nov; 30(11):1611-7. PMID: 25896089.
- 9. Singer SJ, **Reyes Nieva H**, Brede N, Ling J, Leydon N, Weissman JS, Goldmann D, Griswold P, Yoon C, Orav EJ, Bates DW, Biondolillo M, Schiff GD. Evaluating ambulatory practice safety: the PROMISES project administrators and practice staff surveys. *Med Care.* 2015 Feb; 53(2):141-52. PMID: 25464161.

- 10. Linder JA, Doctor JN, Friedberg MW, **Reyes Nieva H**, Birks C, Meeker D, Fox CR. Time of day and the decision to prescribe antibiotics. *JAMA Intern Med.* 2014 Dec; 174(12):2029-31. PMID: 25286067.
- 11. Chaplin B, Meloni S, Eisen G, Jolayemi T, Banigbe B, Adeola J, Wen C, **Reyes Nieva H**, Chang C, Okonkwo P, Kanki P. Scale-up of networked HIV treatment in Nigeria: creation of an integrated electronic medical records system. *Int J Med Inform.* 2015 Jan; 84(1):58-68. PMID: 25301692.
- 12. Schiff G, Griswold P, Ellis BR, Puopolo AL, Brede N, **Reyes Nieva H**, Federico F, Leydon N, Ling J, Wachenheim D, Leape LL, Biondolillo M. Doing right by our patients when things go wrong in the ambulatory setting. *Jt Comm J Qual Patient Saf.* 2014 Feb; 40(2):91-6. PMID: 24716332.
- 13. Kripalani S, Roumie CL, Dalal AK, Cawthon C, Businger A, Eden SK, Shintani A, Sponsler KC, Harris LJ, Theobald C, Huang RL, Scheurer D, Hunt S, Jacobson TA, Rask KJ, Vaccarino V, Gandhi TK, Bates DW, Williams MV, Schnipper JL, PILL-CVD Study Group\*. Effect of a pharmacist intervention on clinically important medication errors after hospital discharge: a randomized trial. *Ann Intern Med.* 2012 Jul 03; 157(1):1-10. (\*member of the investigative team cited in the appendix of the manuscript) PMID: 22751755.
- 14. Schnipper JL, Roumie CL, Cawthon C, Businger A, Dalal AK, Mugalla I, Eden S, Jacobson TA, Rask KJ, Vaccarino V, Gandhi TK, Bates DW, Johnson DC, Labonville S, Gregory D, Kripalani S, PILL-CVD Study Group\*. Rationale and design of the Pharmacist Intervention for Low Literacy in Cardiovascular Disease (PILL-CVD) study. *Circ Cardiovasc Qual Outcomes*. 2010 Mar; 3(2):212-9. (\*member of the investigative team cited in the appendix of the manuscript) PMID: 20233982.
- 15. Linder JA, **Reyes Nieva H**, Blumentals WA. Antiviral and antibiotic prescribing for influenza in primary care. *J Gen Intern Med.* 2009 Apr; 24(4):504-10. PMID: 19225847.

#### Proceedings of meetings and other non-peer reviewed research publications

1. **Reyes Nieva H**, Kaplan RL, Madani N. Women and HIV: Update from the Middle East and North Africa. Global Network of Researchers on HIV/AIDS in the Middle East and North Africa (GNR-MENA). 2010 International AIDS Conference, Vienna, Austria.

### Professional educational materials or reports, in print or other media

- 1. When Things Go Wrong in the Ambulatory Setting. 2013. The PROMISES Study.\* \*member of the writing committee
- 2. Using the Monthly Report Form Tool. 2011. Harvard PEPFAR Nigeria. Training Manual.
- 3. Using the Adult Quality Improvement Tool. 2011. Harvard PEPFAR Nigeria. Training Manual.
- 4. Using the Pediatric Quality Improvement Tool. 2011. Harvard PEPFAR Nigeria. Training Manual.
- 5. Using the Data Quality Assessment Tool. 2011. Harvard PEPFAR Nigeria. Training Manual.
- 6. Data Quality Control and Assurance (Intermediate Data Manual). 2010. Harvard PEPFAR Nigeria. Training Manual.
- 7. Guidelines for Reporting Clinical Data Quality Assessments. 2010. Harvard PEPFAR Nigeria. Technical Guideline.
- 8. Generating Adult Quality of Clinical Care Indicators in an HIV Program. 2010. Harvard PEPFAR Nigeria. Technical Guideline.

- 9. Generating Pediatric Quality of Clinical Care Indicators in an HIV Program. 2010. Harvard PEPFAR Nigeria. Technical Guideline.
- Introduction to Data Management (Beginner Data Manual). 2009. Harvard PEPFAR Nigeria. Training Manual.

### **Working Papers**

- 1. **Reyes Nieva H**, Blackley S, Streed C, Fiskio J, Zhou L. Variation in Documentation of Sexual Orientation and Gender Identity in the Electronic Health Record.
- 2. **Reyes Nieva H**, Fiskio J, Blackley S, Streed C, Zhou L. Increased Risk of Ambulatory Care–Sensitive Condition Hospitalization Among Sexual and Gender Minorities.
- 3. **Reyes Nieva H**, Balaguera M, Lonsdale J, Mendez T, Rodriguez Y, Troncoso N, Flores CA, Ray M, Kieffer T, Rosselli-Risal L. Comunidad en Acción: A social support weight loss intervention for Spanish-speaking patients with type 2 diabetes mellitus.
- 4. **Reyes Nieva H**, Volodarskaya M, Wright A, Singh H, Ruan E, Schiff G. Divisive hierarchical clustering analysis of primary care malpractice claims to identify patterns of diagnostic error.
- 5. Chabria A, **Reyes Nieva H**, Shannon EM, Czado K, Jain R, Cerciello E, Ganesan E, Dave J, DeCastro R, Cruz Garcia J, Schnipper JL. Barriers and Facilitators to Implementing an Electronic Pillbox Intervention During Care Transitions.
- 6. Groisser A, **Reyes Nieva H**, Ruan E, Wright A, Schiff GD. Terminations in Primary Care: A Retrospective Observational Study of 16 Primary Care Clinics in Eastern Massachusetts. Under Review. JAMA Netw Open.
- 7. Stolldorf DP, Schnipper JL, Mixon AS, **Reyes Nieva H**, Dietrich MS, Kripalani S. MARQUIS Medication Reconciliation Toolkit Implementation: Do Organizational Context and Readiness for Change Matter? Under Review. J Healthc Qual.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings Works resulting in publication are not included below.

### Regional

- Reyes Nieva H, Blackley S, Streed C, Fiskio J, Zhou L. High physician and clinic-level variation in documentation of sexual orientation and gender identity in the electronic health record. Plenary presentation. New England Science Symposium, Boston, MA; 4/2018.
   Received a Ruth and William Silen, MD Oral Presentation Award
- 2. Singer S, **Reyes Nieva H**, Ling J, Leydon N, Weissman J, Griswold P, Yoon C, Bates, DW, Biondolilo M, Schiff GD. Risks for Making Promises: Increased Expectations but Limited Improvement with a Malpractice Safety Intervention. Poster presentation. Society of General Internal Medicine New England Regional Meeting. Boston, MA; 03/2015.

#### **National**

1. **Reyes Nieva H**, Sun T, Gorman SR, Mao G, Elhadad N. Delays in care and differential presentation of acute myocardial infarction. Open Mic oral presentation. National Library of Medicine Informatics Training Conference. Portland, OR; 06/2020.

- 2. **Reyes Nieva H**, Ruan E, Volodarskaya M, Wright A, Lim A, Singh H, Agarwal S, Schiff GD. Diagnostic Pitfalls: Operationalizing a New Paradigm to Understand and Prevent Diagnostic Errors. Poster presentation. Society of General Internal Medicine Annual Meeting. Washington, DC; 05/2019.
- 3. Schnipper JL, **Reyes Nieva H**, Mallouk M, Mixon AS, Rennke S, Chu E, Mueller S, Smith GR, Williams M, Wetterneck TB, Stein J, Dalal A, Labonville SA, Sridharan A, Orav EJ, Levin B, Yoon C, Gresham M, Goldstein J, Kripilani S. Effects of a Refined Evidence-based Toolkit on Medication Reconciliation Quality and Safety at Multiple Hospitals: Results of the MARQUIS2 Study. Plenary presentation. Hospital Medicine 2019. National Harbor, MD; 03/2019.
- 4. Groisser A, **Reyes Nieva H**, Wright A, Ruan E, Schiff GD. Don't Come Back: Patient Terminations in Primary Care. Poster presentation. Society of General Internal Medicine Annual Meeting; 04/2018.
- 5. Schnipper JL, Cruz Garcia J, **Reyes Nieva H**, Chabria A, Shannon EM, Czado K, Jain R, Cerciello E, Ganesan E, Dave J. Barriers and Facilitators to Implementing an Electronic Pillbox Intervention During Care Transitions. Poster presentation. Hospital Medicine 2018. Orlando, FL; 04/2018.
- 6. Mlaver E, Dalal AK, **Reyes Nieva H**, Chang F, Hanna J, Ravindran S, McNally K, Stade D, Morrison C, Bates D, Dykes P. An Analysis of Patient Portal Use in the Acute Care Setting. Oral Presentation. American Medical Informatics Association Annual Meeting. San Francisco, CA; 11/2015.
- 7. **Reyes Nieva H**, Palm K, Zucconi T. Advocacy and Implementation: Gathering SOGI Demographics in the Clinical Setting. Oral presentation. GLMA 33rd Annual Conference. Portland, OR; 9/2015.
- 8. Kroll DS, **Reyes Nieva H**, Barsky A, Linder JA. Benzodiazepines and Primary Care. Poster presentation. Academy of Psychosomatic Medicine, 61st Annual Meeting; 11/2014.
- 9. Reyes Nieva H, Doctor JN, Friedberg MW, Birks C, Fiskio JM, Volk LA, Linder JA. Comparing Clinicians' Perception of Their Own and Their Peers' Antibiotic Prescribing to Actual Antibiotic Prescribing for Acute Respiratory Infections in Primary Care. Oral presentation. Society of General Internal Medicine Annual Meeting, San Diego, CA; 4/2014.
  Received the Outstanding Quality and Patient Safety Oral Presentation Award
- 10. Dempsey P, **Reyes Nieva H**, Businger A, Linder JA. Accuracy and Gaming of the Acute Bronchitis Antibiotic Prescribing Performance Measure. Poster presentation. Society of General Internal Medicine Annual Meeting. San Diego, CA; 04/2014.
- 11. Brede N, Singer S, **Reyes Nieva H**, Ling J, Leydon N, Colling CA, Satterstrom P, Yoon C, Orav EJ, Weissman JS, Goldmann D, Biondolillo M, Schiff GD. Patients Have Something to Say: Analysis of 514 Patient Safety and Quality Comments from the PROMISES Patient Survey. Oral presentation. Society of General Internal Medicine Annual Meeting; 04/2013.
- 12. Schiff GD, Brede N, Singer S, Foskett CA, **Reyes Nieva H**, Colling CA, Whitney DL, Ling J, Leydon N, Orav EJ, Bates DW, Biondolillo M. Courting Malpractice Risk: Failures in High Risk Outpatient Test and Referral Management and Documentation. Poster presentation. Society of General Internal Medicine Annual Meeting; 04/2013.

### International

- 1. **Reyes Nieva H**, Ruan E, Schiff GD. Primary Care Physician-Patient Boundaries. Oral Presentation. 35th International Conference in Healthcare Quality & Safety, Kuala Lumpur, Malaysia; 9/2018.
- 2. **Reyes Nieva H**, Volodarskaya M, Wright A, Singh H, Ruan E, Schiff GD. Diagnostic Pitfalls: A New Approach to Understand and Prevent Diagnostic Error. Poster presentation. Society to Improve Diagnosis in Medicine 9th International Conference. Hollywood, CA; 11/2016.

- 3. **Reyes Nieva H**, Linder JA. Gathering Sexual Orientation and Gender Identity Demographics in the Clinical Setting. Oral Presentation. North American Primary Care Research Group Practice-Based Research Network Conference, Bethesda, MD; 7/2015.
- 4. **Reyes Nieva H**, Linder JA. PBRN Organization and Governance to Promote Practice, Clinician, Researcher, and Patient Engagement. Workshop. North American Primary Care Research Group Practice-Based Research Network Conference, Bethesda, MD; 07/2014.
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# Computer and Language Skills

Computing Python, bash, SQL, R, SAS, LATEX, HTML, CSS, Javascript, ArcGIS, QGIS, SaTScan,

REDCap, MS Access, FileMaker, git

Languages English (native), Spanish (proficient), Mandarin (beginner)

# Other Experience

| 2010-2012 | Data Quality Assurance Manager, Harvard/US President's Emergency Plan for AIDS Relief (PEPFAR), Boston, MA            |
|-----------|---|
| 2008-2010 | Data, Training, and Education Coordinator, Harvard/US President's Emergency Plan for AIDS Relief (PEPFAR), Boston, MA |
| 2006-2007 | Emergency Medical Technician, Tufts Emergency Medical Services, Medford, MA   |
| 2004-2005 | Client Outreach Officer, Advanced Strategies for Healthcare Access, New Haven, CT                                     |
| 2003-2004 | Editorial Assistant/Contributor, Yale Medicine Magazine, New Haven, CT  |
| 2003      | Paralegal, Raymond B. Schwartzberg & Associates, New York, NY   |
| 2001-2002 | Client Advocate, Student Health Outreach (SHOut), New Haven, CT, 2001-2002  |
| 2000-2001 | Library Clerk, Yale University, Sterling Memorial Library   |
|           |   |

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## References

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