

Nate C. Apathy, PhD

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Academic Appointments

Postdoctoral Fellow , Health Services Research Perelman School of Medicine, University of Pennsylvania	July 2020 – Present
Associate Fellow , Leonard Davis Institute of Health Economics	Aug. 2020 – Present
Affiliated Research Scientist , Regenstrief Institute	Aug. 2020 – Present
Adjunct Faculty , Health Policy & Management Richard M. Fairbanks School of Public Health, Indiana University	Aug. 2020 – Present

Education

Ph.D., Health Policy & Management Richard M. Fairbanks School of Public Health Dissertation: <i>Health information exchange use in primary care</i>	Indiana University, 2020 Indianapolis, IN
B.S., Business Administration (summa cum laude) Major: Economics Minor: Behavioral and Cognitive Neuropsychology	Creighton University, 2011 Omaha, NE

Previous Employment

Department of Health Policy & Management Fairbanks School of Public Health (IUPUI) Predoctoral Fellow, Population & Public Health Informatics (NLM T15) Graduate Research Assistant to <i>Christopher A. Harle, PhD, MS</i>	August 2016 – June 2020 Aug. 2017 – June 2020 Aug. 2016 – June 2020
Cerner Corporation , Kansas City, MO	July 2011 – April 2016

Honors & Awards

AMIA Doctoral Dissertation Award Nominee	Feb 2021
Delta Omega (Public Health Honors Society)	April 2020
Med About Data Hackathon (Haifa, Israel) – Second Place	March 2019
IUPUI University Fellowship	Aug. 2016 – Jul. 2017
Population Health Leadership Development Program	Jan. 2015 – Dec. 2015
Cerner Masters Award	Aug. 2014
Successful Presentations – Advanced Facilitator	Certified May 2014

Peer-Reviewed Publications

- Apathy, NC**; Vest, JR; Adler-Milstein, J; Blackburn, J; Harle, CA. Practice and market factors associated with provider volume of health information exchange. *Journal of the American Medical Informatics Association*. In Press.
- Baxter, SL; **Apathy, NC**; Cross, DA; Sinsky, C; Hribar, ME. Measures of electronic health record use in outpatient settings across vendors. *Journal of the American Medical Informatics Association*. 2020 Nov.
- Taylor, HL; **Apathy, NC**; Vest, JR. Health information exchange use during dental visits. *AMIA Annual Symposium Proceedings*. 2020 Nov. *Student Paper Competition Finalist*

4. **Apathy, NC**; Everson, J. High rates of partial participation in the first year of the Merit-Based Incentive Program. *Health Affairs*. 2020 Sept.
5. **Apathy, NC**; Harle, CA; Vest, JR; Morea, JG; Menachemi, N. Use of electronic health records on days off: Comparing physicians to other EHR users. *Journal of General Internal Medicine*. 2020 Aug.
6. Holmgren, AJ; **Apathy, NC**. Prescription drug monitoring program integration with hospital EHRs is low, especially in high opioid prescribing areas. *JAMA Network Open*. 2020 Jun 1;3(6).
7. Holmgren, AJ; **Apathy, NC**; Adler-Milstein, J. Barriers to Hospital Public Health Reporting and Implications for the COVID-19 Pandemic. *Journal of the American Medical Informatics Association*. 2020 May.
8. **Apathy, NC**; Holmgren, AJ. Opt-in consent policies: potential barriers to hospital health information exchange. *American Journal of Managed Care*. 2020;26(1).
9. Holmgren, AJ; **Apathy, NC**. Hospital adoption of API-enabled patient data access. *Healthcare: The Journal of Delivery Science and Innovation*. 2019;8.
10. Comer, AR; **Apathy, NC**; Waite C; Bestmann Z; Bradshaw J; Burchfield E; Harmon B; Legg R; Meyer S; O'Brien P, Sabec M; Sayeed J; Weaver A; D'Cruz L; Bartlett S; Marchand M; Zepeda I; Finnell, JT; Grannis, S; Silverman, RD; Embi, PJ. Electric Scooters (e-scooters): A Threat to Public Health and Safety. In Press, *Chronicles of Health Impact Assessment*.
11. Balio, CP; **Apathy, NC**; Danek, R. Health information technology and accountable care organizations: synthesis of the literature and future directions. *eGEMs (Generating Evidence & Methods to improve patient outcomes)*. 2019;7(1):24.
12. **Apathy NC**; Yeager VA. Examining Training Motivations Among Public Health Workers. *Journal of Public Health Management and Practice*. 2019;25(2), Public Health Workforce Interests and Needs Survey 2017: S157 –65.
13. Harle, CA; **Apathy, NC**; Cook, RL; Danielson, EC; Dilulio, J; Downs, SM; Hurley, RW; Mamlin, BW; Militello, LG; Anders, S. Information Needs and Requirements for Decision Support in Primary Care: An Analysis of Chronic Pain Care. *AMIA Annual Symposium Proceedings*. 2018 Nov.
14. **Apathy, NC**; Menser, T; Keeran, L; Ford, EW; Harle, CA; Huerta, TR. Trends and gaps in awareness of direct-to-consumer genetic tests from 2007-2014. *American Journal of Preventive Medicine*. 2018 Jun 1;54(6):806-13.
15. Mosa, AS; Yoo, I; **Apathy, NC**; Ko, KJ; Parker, JC. Secondary Use of Clinical Data to Enable Data-Driven Translational Science with Trustworthy Access Management. *Missouri Medicine*. 2015;112(6):443-448.

Research in Progress

Apathy, NC; Vest, JR; Adler-Milstein, J; Dixon, BE; Blackburn, J; Harle, CA. Team-based use of health information exchange in primary care. (In Preparation)

Apathy, NC; Vest, JR; Adler-Milstein, J; Dixon, BE; Blackburn, J; Harle, CA. User-level patterns of health information exchange use. (In Preparation)

Apathy, NC; Wiley, K; Adams, M; Mazurenko, O; Hurley, RM; Harle, CA. The changing relationship between opioid prescribing rates and opioid overdose death rates. (In Preparation)

Apathy, NC; Holmgren, AJ; Greenstein, S. Innovation spillovers from government investment in information technology: evidence from the HITECH Act. (In Preparation)

Apathy, NC; Holmgren, AJ; Adler-Milstein, J. A Decade Post-HITECH: Critical Access Hospitals have EHRs but Struggle to Keep Up with Other Advanced Functions. (Under Review)

Apathy, NC; Holmgren, AJ; Werner, RM. Growth in health information exchange with ACO market penetration. (In Preparation)

Apathy, NC; Dixon, BE. Interoperability in the wild: Comparing two exchange networks for data accessibility and consistency. (In Preparation)

Book Chapters

Dixon, BE; Rahurkar, S; & **Apathy, NC.** Health Information Exchange. In: Magnuson, JA; Dixon, BE, editors. *Public Health Informatics and Information Systems*, 3rd edition. Springer London. August 2020.

Peer-Reviewed Conference Presentations

1. **Apathy, NC;** Holmgren, AJ; Adler-Milstein, J. Meaningful Use and the Digital Divide After a Decade. *AcademyHealth Annual Research Meeting.* June 2021.
2. **Apathy, NC;** Holmgren, AJ; Werner, RM. Growth in Health Information Exchange with ACO Market Penetration. *AcademyHealth Annual Research Meeting.* June 2021.
3. **Apathy, NC;** Holmgren, AJ; Greenstein, S. Innovation spillovers from government investment in information technology: evidence from the HITECH Act. *Conference on Health Information Technology & Analytics.* Oct 2020.
4. **Apathy, NC;** Vest, JR; Adler-Milstein, J; Dixon, BE; Blackburn, J; Harle, CA. Health information exchange in primary care: use among teams. *National Library of Medicine Informatics Training Conference.* June 2020.
5. **Apathy, NC;** Vest, JR; Adler-Milstein, J; Dixon, BE; Blackburn, J; Harle, CA. Factors related to primary care use of health information exchange. *AcademyHealth Annual Research Meeting.* June 2020.
6. **Apathy, NC;** Roberts, A; Hayden, R; Harle, CA; Vest, JR. Visualizing patient-level risk factors from clinical risk prediction algorithms. *American Medical Informatics Association Clinical Informatics Conference.* May 2020.
7. **Apathy, NC.** Team-based measures of health information exchange. *Kentucky Bluegrass and Indiana Chapters of HIMSS Annual Conference.* April 2020.
8. **Apathy, NC;** Vest, JR; Menachemi, N; Morea, JG; Harle, CA. Differing patterns in frequency of electronic health records documentation among clinicians following the replacement of a legacy EHR system. *American Medical Informatics Association Annual Symposium.* Nov. 2019
9. **Apathy, NC;** Yeager, VA. Training Motivations Among Public Health Workers. *American Public Health Association Annual Meeting.* Nov. 2019.
10. **Apathy, NC.** Association between physician usage of health information exchange and quality measures. *National Library of Medicine Informatics Training Conference.* June 2019
11. **Apathy, NC;** Vest, JR; Menachemi, N; Morea, JG; Harle, CA. Impact of Transitioning from a Homegrown to a Commercial EHR on User Satisfaction. *AcademyHealth Annual Research Meeting.* June 2019
12. **Apathy, NC;** Everson, J. Variations in Primary Care Provider Competition Indices across Commonly Used Data Sources. *AcademyHealth Annual Research Meeting.* June 2019
13. **Apathy, NC;** Harle, CA. Patient consent policies for state health information exchange and level of provider exchange. *American Medical Informatics Association Annual Symposium.* Nov. 2018
14. **Apathy, NC.** Measurement of Health Information Exchange & Interoperability. *National Library of Medicine Informatics Training Conference.* June 2018
15. Balio, CP; **Apathy, NC;** Wiley, K; Holmes, A. The association between usual source of care at a patient-centered medical home and high-expense service utilization. *AcademyHealth Annual Research Meeting.* June 2018

16. Harle, CA; Anders, S; **Apathy, NC**; Cook, RL; Danielson, EC; Dilulio, J; Downs, SM; Hurley, RW; Mamlin, BW; Militello, LG. Designing a user-centered electronic health record decision support system for guideline-concordant opioid prescribing. *AcademyHealth Annual Research Meeting*. June 2018
17. **Apathy, NC**; Vest, JR; Menachemi, N; Putz, JW; Morea, JG; Harle, CA. Differing patterns of satisfaction and perception among clinical and non-clinical users following replacement of a legacy EHR system. *American Medical Informatics Association Annual Symposium*. Nov. 2017
18. **Apathy, NC**; Vest, JR; Menachemi, N; Harle, CA. Changes in user perceptions of their electronic health record following the replacement of a legacy system: a longitudinal analysis. *AcademyHealth Annual Research Meeting*. June 2017
19. Bako, AT; **Apathy, NC**; Vest, JR; Harle, CA. User concerns following replacement of a legacy electronic health record: A longitudinal qualitative study. *AcademyHealth Annual Research Meeting*. June 2017
20. **Apathy, NC**; Balio, CP; Danek, RL. Underrepresentation of health information technology studies in the context of accountable care organizations: Using the HSRProj database. *AcademyHealth Annual Research Meeting*. June 2017
21. **Apathy, NC**; Mosa, AS; & Ko, KJ. Protecting Patient Data and Maintaining Site Autonomy: Managing Project Access in a Multi-Site i2b2 Database. *American Medical Informatics Association Annual Symposium*. Nov. 2014

Web Applications

Economics Seminar Diversity	RShiny Dashboard w/ ggplot2	v2.0.0 deployed August 2019
<i>Interactive visualizations of invited seminar speakers to examine representation of female and under-represented minority economists at university economics departments</i>		
CHF Risk Prediction Tool (Demo)	RShiny, randomForest, & ggplot2	v1.2.1 deployed March 2019
<i>Interactive visualization of risk scores for CHF at the population level, with option to view individual level risk factors underlying low, rising, or high-risk prediction</i>		
Opioid Prescribing Rate Visualization Tool	RShiny, ggplot2, & leaflet	v2.0.0 deployed August 2018
<i>Interactive mapping visualization of CDC prescribing rates and changes over time by county and state</i>		
EHR Survey Response Visualizer	RShiny & ggplot2	v2.0.0 released Dec 2018
<i>Interactive tool to analyze responses to a user satisfaction survey administered during an electronic health record transition at a large public safety net hospital</i>		

Research Interests

Health Information Technology	Health IT Policy	Population Health Informatics
Health Information Exchange	Health IT Use & Quality Measurement	Health Economics

Teaching

H320: Health Systems Administration	Guest Lecturer	Fall 2019
H325: Health Information Technology Management & Policy	Instructor (<i>rating: 4.7/5</i>)	Fall 2018, Fall 2019
E335: Chronic Disease Epidemiology	Guest Lecturer	Spring 2018
H628: Healthcare Information Systems	Teaching Assistant	Spring 2017, Spring 2019

Professional Memberships

American Public Health Association	2019 – Present
AcademyHealth	2016 – Present
Health Information & Management Systems Society (HIMSS)	2016 – Present
American Medical Informatics Association (AMIA)	2013 – Present

Editorial Experience

<i>Applied Clinical Informatics</i>	Peer Review
<i>Health Services Research</i>	Peer Review
<i>American Journal of Managed Care</i>	Peer Review
<i>Journal of General Internal Medicine</i>	Peer Review
<i>Milbank Quarterly</i>	Peer Review
<i>Digital Health</i>	Peer Review
International Conference on Information Systems, 2019	Conference Submission Review
AcademyHealth Annual Research Meeting, 2019-2021	Theme Reviewer & Session Chair
<i>Digital Technologies, Data, and Data Science Theme</i>	
Journal of the American Medical Informatics Association (JAMIA)	Assisted in Peer Review
AMIA Annual Symposium	Conference Submission Review
AMIA Informatics Summits	Conference Submission Review

Leadership & Service

NLM and Support for Health Services Research, Invited Panelist	August 2020
National Research Network Audit Log Measures Workgroup	Spring 2020 – Current
AMIA Annual Symposium, Session Moderator	Fall 2019
Collaborating Across Borders VII Conference, Session Moderator	Fall 2019
Indiana State Department of Health R Training Workshop, Instructor	July 2019
AMIA Policy Response Team, ONC Notices of Proposed Rulemaking	
<i>Draft Federal Health IT Strategic Plan</i>	Spring 2020
<i>21st Century Cures, Information Blocking</i>	Spring 2019
NLM Informatics Training Conference, 2018 & 2019	
<i>Student Planning Committee Co-Chair</i>	Nov. 2018 – June 2019
<i>Student Planning Committee Member</i>	Jan. 2018 – June 2018
AcademyHealth Student Competition: Identifying Gaps in HSR, Judge	April 2018
hsR: Using R for Health Services Research, Workshop Instructor	Spring 2018
AcademyHealth Student Chapter at IUPUI, President & Co-Founder	Feb. 2017 – March 2019

Press Coverage

The Practice of Medicine: MIPS and the Social Determinants of Health, Oct. 2020	<i>Health Affairs</i> Event
Barriers to Hospital Public Health Reporting and Implications for the COVID-19 Pandemic, JAMIA	
HealthcareIT News , Oct. 2020	
Becker's Hospital Review , May 2020	
Healthcare IT News , May 2020	
Healthcare Dive , May 2020	
What the Fax? Tradeoffs podcast episode , May 12, 2020	
Opt-In Health Information Exchange Drive Administrative Burden, EHRIntelligence.com , Jan. 2020	
API growing pains. POLITICO Morning eHealth , Sept. 2019	
IUPUI PhD student unpacks the impact scooters are having on Indianapolis, FOX59 Indianapolis , April 2019	
Researcher's data shows how Indianapolis is using scooters. IndyStar , Mar. 2019	
Lyft warns it may never make any money. Oversharing , Mar. 2019	