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**NICHOLAS DEAN SOULAKIS, PHD**

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**EDUCATION**

1998 – 2012      PhD (Epidemiology), University of Pittsburgh School of Public Health  
Dissertation: “Syndromic Surveillance for Bioterrorism-related Inhalation Anthrax in an  
Emergency Department Population”

1996 – 1998      MS (Epidemiology), University of Texas School of Public Health  
Thesis: “Evaluation of Disease Monitoring and Reporting System in Vihiga District, Chavogere,  
Kenya”

1991 – 1995      BA (Religious Studies), University of Pittsburgh

**ACADEMIC APPOINTMENTS**

2022 – Present      Associate Professor and Chair  
Department of Health Informatics and Data Science  
Parkinson School of Health Sciences and Public Health  
Loyola University Chicago

2022 – Present      Director, Center for Health Outcomes and Informatics Research  
Loyola University Chicago

2013 – 2022      Assistant Professor  
Department of Preventive Medicine  
Division of Health and Biomedical Informatics (Primary)  
Division of Epidemiology (Secondary)

2018 – 2022      Department of Medical Social Sciences (Secondary)

2019 – 2022      Director of Data Science Services  
Northwestern University Clinical and Translational Science Institute (NUCATS)

Feinberg School of Medicine  
Northwestern University  
Chicago, IL

## OTHER EMPLOYMENT

2021 – 2022	Chief Public Health Informatics Officer Deputy Commissioner Bureau of Informatics and IT Chicago Department of Public Health Chicago, IL
2020 – 2021	Chief Public Health Informatics Adviser COVID-Response Bureau Chicago Department of Public Health Chicago, IL
2020 – 2021	Epidemiologist Office of Health Protection Illinois Department of Public Health Chicago, IL
2016 – 2017	Founder PRIMR Primary Care Start-up Chicago, IL
2010 – 2013	Senior Manager, Small Merchant Portfolio Risk and Information Management American Express New York, NY
2008 – 2010	Director, Health Information Exchange Primary Care Information Project (PCIP) New York City Department of Health and Mental Hygiene New York, NY
2005 – 2007	Epidemiologist (City Research Scientist III) Bureau of Epidemiology Services New York City Department of Health and Mental Hygiene New York, NY
1999 – 2005	Senior Programmer/Analyst, NLM Integrated Advanced Information Management Systems University of Pittsburgh Department of Biomedical Informatics Pittsburgh, PA

## HONORS AND AWARDS

11/2021	2020-21 Dean's Teaching Award, Health Science Integrated Program
02/2015 – 02/2016	InciteHealth Fellowship, Harvard Medical School Center for Primary Care <i>Competitive award, seed-funded (\$25k) by Harvard Medical School to launch primary care analytics startup</i>

## INSTITUTIONAL SERVICE (Committees, Councils, Task Forces)



## University

07/2019 – 02/2020 Conference Chair, Biomedical Data Science Day 2020  
09/2017 – Present University Senate, Student Affairs Committee

## Departmental

12/2014 – Present Comprehensive Committee Member. Health Sciences Integrated PhD Program. Health and Biomedical Informatics Track  
08/2014 – 08/2017 Admissions Committee Member - Program in Public Health Master's in Public Health

## PARTICIPATION IN PROFESSIONAL SOCIETIES AND EXTRAMURAL ORGANIZATIONS

### Leadership

09/2019 Chair, Chicago Initiative for Biomedical Informatics and Data Science Training Annual Meeting  
07/2019 Session Chair, "SC11 - Health and Healthcare Systems: Collaboration and Connection" INFORMS Healthcare 2019

### Memberships

2019 - Present Member, Institute for Operations Research and the Management Sciences  
2005 - Present Member, American Medical Informatics Association  
2005 - 2019 Member, International Society for Disease Surveillance  
2007 - 2010 Public Health Representative, Interboro RHIO  
2007 - 2010 Public Health Representative, Bronx Regional Health Information Exchange (BronxRHIO)  
2007 - 2010 Member, Trial Implementations Core Services Content Working Group, Nationwide Health Information Network  
2007 - 2010 Public Health Representative, New York Clinical Information Exchange (NYCLIX)  
2008 - 2010 Member, Protocols and Services Working Group, New York eHealth Collaborative  
2008 - 2010 Member, Policy & Operations Council, New York eHealth Collaborative  
2008 - 2010 Member, Public Health Priorities Working Group, New York eHealth Collaborative  
2008 - 2010 Member, Technical Subcommittee, Health Information Technology Standards Panel

## EDITORIAL AND MANUSCRIPT REVIEW RESPONSIBILITIES

08/2021 – Present Reviewer, Journal of the American Medical Informatics Association  
01/2016 – Present Reviewer, PLOS One  
02/2015 – Present Reviewer, Applied Clinical Informatics

## GRANT REVIEW RESPONSIBILITIES

03/2020 – Panelist NSF – Computer and information Science and Engineering (CISE)  
04/2019 – Panelist NSF/NIH Smart & Connected Health  
10/2015 – Member NIH – Biomedical Computing and Health Informatics Study Section  
02/2015 – Panelist NSF/NIH Smart & Connected Health  
11/2014 – Member NIH – Biomedical Computing and Health Informatics Study Section  
06/2014 – Member NIH – Biomedical Computing and Health Informatics Study Section  
03/2014 – Panelist NSF/NIH Smart & Connected Health

## RESEARCH AWARDS

### Past Awards

*(Currently on Leave of Absence, 0% Effort since 03/2020)*

Agency: National Science Foundation  
ID Number: 2037171  
Title: SBIR Phase II: Development of a Noninvasive, Wireless Telemedicine Flow Sensor for Patients with Hydrocephalus  
Primary Investigator: Somera, Anna  
Role on project: Site - Principal Investigator  
Total Award: \$1,190,256  
Project period: 03/01/2021 – 08/31/2023

Agency: Food Allergy Research & Education  
Title: Data Commons for Food Allergy through FARE Clinical Network  
Primary Investigator: Nicholas Soulakis  
Role on project: Co - Principal Investigator  
Total Award: \$1,718,744  
Project period: 12/01/2019 – 12/31/2021

Agency: National Center for Advancing Translational Sciences  
Title: Northwestern University Clinical and Translational Science Institute (NUCATS)  
Primary Investigator: D'Aquila, Richard Thomas  
Role on project: Co-Investigator  
Total Award: \$45,602,616  
Project period: 07/15/2019 – 05/31/2022

Agency: National Board of Medical Examiners  
Title: Transition to Competency-Based Medical Education (CBME)  
Primary Investigator: O'Brien, Celia Laird  
Role on project: Co-Investigator  
Total Award: 150,000.00  
Project period: 07/01/2019 – 05/31/2022

Agency: National Institute of Allergy and Infectious Diseases  
ID Number: 1U19AI135964-01  
Title: Successful Clinical Response In Pneumonia Therapy (SCRIPT) Systems Biology Center  
Primary Investigator: Wunderink, Richard G  
Role on project: Co-Investigator  
Total Award: \$12,000,000  
Project period: 01/17/2018 – 12/31/2022

Agency: National Center for Advancing Translational Sciences  
ID Number: 5U01TR001806-01  
Title: Improving Patient Reported Outcome Data for Research through Seamless Integration of the PROMIS Toolkit into EHR Workflows  
Primary Investigator: Starren, Justin  
Role on project: Co-Investigator  
Total Award: \$3,200,000  
Project period: 09/15/2016 – 06/30/2020

Agency: Northwestern Memorial Hospital  
Title: Davee Innovations Endowment Award  
Primary Investigator: Soulakis, Nicholas D  
Total Award: \$5,000  
Project period: 08/01/2015 – 08/01/2016

Agency: Agency for Healthcare Research and Quality  
ID#: R18 HS023921  
Title: Midwest Small Practice Care Transformation Research Alliance  
Principal Investigator: Kho, Abel  
Role on project: Co-Investigator  
Total Award: \$13,095,372  
Project period: 5/01/2015-2/29/2020

Agency: National Library of Medicine  
ID Number: 1K01LM011973-01  
Title: A Novel Graph Processing Architecture to Ascertain & Monitor Care Coordination  
Primary Investigator: Soulakis, Nicholas D  
Total Award: \$477,657  
Project period: 02/08/2014 – 05/01/2018

Agency: New York State Department of Health  
Title: Healthcare Efficiency and Affordability Law  
Connecting Providers to the State Health Information Network of New York  
Expanding Care Coordination Through the Use of Interoperable Health Information Technology  
HEAL NY Phase 17  
Primary Investigator: Mostashari, Farzad  
Role on project: Co-Investigator  
Total Award: \$6,996,837  
Project period: 01/01/2010 – 12/30/2012

Agency: Council of State and Territorial Epidemiologists  
Title: Enhanced Influenza Surveillance Testing in a Primary Care Setting  
Influenza Incidence Surveillance Project  
Primary Investigator: Mostashari, Farzad  
Role on project: Co-Investigator  
Total Award: \$150,000  
Project period: 06/01/2009 – 06/30/2012

Agency: Centers for Disease Control and Prevention  
Title: Accelerating Public Health Situational Awareness through Health Information Exchanges Primary  
Investigator: Mostashari, Farzad  
Role on Project: Co-Investigator  
Total Award: \$1,670,000  
Project period: 10/01/2008 – 02/30/2011

Agency: New York State Department of Health  
Title: Healthcare Efficiency and Affordability Law  
Bidirectional Immunization Reporting, Interoperable EHRs for Medicaid  
Advancing Interoperability and Community-wide EHR Adoption - HEAL NY Phase 5  
Primary Investigator: Mostashari, Farzad

Role on project: Co-Investigator  
Total Award: \$8,000,000  
Project period: 01/01/2008 – 12/30/2010

Agency: Centers for Disease Control and Prevention  
National Center for Public Health Informatics  
Title: NYC Center of Excellence for Public Health Informatics  
Primary Investigator: Hripcsak, George M  
Role on project: Co-Investigator  
Total Award: \$2,930,955  
Project period: 08/01/2006 – 12/31/2009

Agency: New York State Department of Health  
Title: Healthcare Efficiency and Affordability Law  
Health Information Exchange, Electronic Laboratory Interfaces  
Health Information Technology Grants – HEAL NY Phase 1  
Primary Investigator: Mostashari, Farzad  
Role on project: Co-Investigator  
Total Award: \$3,180,938  
Project period: 05/01/2006 – 04/30/2009

Agency: National Library of Medicine  
Title: IAIMS Implementation – Advancing the Academic Mission  
ID Number: 1G08LM006625-01  
Primary Investigator: Friedman, Charles P  
Role on project: Significant Personnel  
Total Award: \$2,750,000  
Project period: 05/01/1998 – 04/30/2003

## PUBLICATIONS AND SCHOLARLY WORK

### Publications

Han S, **Soulakis ND**. "Evaluation of Google Search Trends for COVID-19 Vaccination Administration Efforts within a Public Health Department." American Journal of Public Health. (In Progress)

Yu J, Wang AA, Zimmerman LP, Deng Y, Vu TT, Tedla YG, **Soulakis ND**, Ahmad FS, Kho AN. A Cohort Analysis of Statin Treatment Patterns Among Small-Sized Primary Care Practices. J Gen Intern Med. 2022 Jan 8. doi: 10.1007/s11606-021-07191-9. PMID: 34997391.

Walunas TL, Ye J, Bannon J, Wang A, Kho AN, Smith JD, **Soulakis N**. Does coaching matter? Examining the impact of specific practice facilitation strategies on implementation of quality improvement interventions in the Healthy Hearts in the Heartland study. Implement Sci. 2021 Mar 31;16(1):33. doi: 10.1186/s13012-021-01100-8. PMID: 33789696; PMCID: PMC8011080.

Grant RA, Morales-Nebreda L, Markov NS, Swaminathan S, Querrey M, Guzman ER, Abbott DA, Donnelly HK, Donayre A, Goldberg IA, Klug ZM, Borkowski N, Lu Z, Kihshen H, Politanska Y, Sichizya L, Kang M, Shilatifard A, Qi C, Lomasney JW, Argento AC, Kruser JM, Malsin ES, Pickens CO, Smith SB, Walter JM, Pawlowski AE, Schneider D, Nannapaneni P, Abdala-Valencia H, Bharat A, Gottardi CJ, Budinger GRS, Misharin AV, Singer BD, Wunderink RG; **NU SCRIPT Study**

**Investigators.** Circuits between infected macrophages and T cells in SARS-CoV-2 pneumonia. *Nature*. 2021 Feb;590(7847):635-641. doi: 10.1038/s41586-020-03148-w. Epub 2021 Jan 11. PMID: 33429418; PMCID: PMC7987233.

Nelson TA, Anderson B, Bian J, Boyd AD, Burton SV, Davis K, Guo Y, Harris BA, Hynes K, Kochendorfer KM, Liebovitz D, Martin K, Modave F, Moses J, **Soulakis ND**, Weinbrenner D, White SH, Rothrock NE, Valenta AL, Starren JB. Planning for patient-reported outcome implementation: Development of decision tools and practical experience across four clinics. *J Clin Transl Sci*. 2020 Apr 6;4(6):498-507. doi: 10.1017/cts.2020.37. PMID: 33948226; PMCID: PMC8057386.

Isichei M, Ale A, Misauno M, Brown P, and **Soulakis N**. Unpowered Scooter-Related Injuries among Adolescents and Adults in the United States 2007-2017. *Open Journal of Emergency Medicine*, 8, 13-20. doi: 10.4236/ojem.2020.81002.

Ye J, Zhang R, Bannon JE, Wang AA, Walunas TL, Kho AN, **Soulakis ND**. Identifying Practice Facilitation Delays and Barriers in Primary Care Quality Improvement. *J Am Board Fam Med*. 2020 Sep-Oct;33(5):655-664. doi: 10.3122/jabfm.2020.05.200058. PMID: 32989060.

Chandler AE, Mutharasan RK, Amelia L, Carson MB, Scholtens DM, **Soulakis ND**. Risk adjusting health care provider collaboration networks. *Methods of Information in Medicine*. 2019 Sep;58(02/03):071-8. PMID 31514208 DOI: 10.1055/s-0039-1694990

Gurvich I, Wang L, O'Leary K, **Soulakis N**, Van Mieghem J. How Digital and Physical Care Team Interaction Affect Processing Times: A Case Study of Hospitalists. 2017 Nov 08; 5(6): 606. *Journal of Case Report and Studies*, 5(6): 606, 2017. <http://dx.doi.org/10.2139/ssrn.3068175>

Carson MB, Scholtens DM, Frailey CN, Gravenor SJ, Powell ES, Wang AY, Kricke GS, Ahmad FS, Mutharasan RK, **Soulakis ND**. Characterizing Teamwork in Cardiovascular Care Outcomes: A Network Analytics Approach. *Circ Cardiovasc Qual Outcomes*. 2016 Nov;9(6):670-678. doi: 10.1161/CIRCOUTCOMES.116.003041. PMID: 28051772

Carson MB, Scholtens DM, Frailey CN, Gravenor SJ, Kricke GE, **Soulakis ND**. An Outcome-Weighted Network Model for Characterizing Collaboration. *PLoS One*. 2016 Oct 5;11(10):e0163861. doi: 10.1371/journal.pone.0163861. PMID: 27706199

Kricke GS, Carson MB, Lee YJ, Benacka C, Mutharasan RK, Ahmad FS, Kansal P, Yancy CW, Anderson AS, **Soulakis ND**. Leveraging electronic health record documentation for Failure Mode and Effects Analysis team identification. *J Am Med Inform Assoc*. 2016 Sep 1. pii: ocw083. doi: 10.1093/jamia/ocw083. PMID: 27589944

**Soulakis ND**, Carson MB, Lee YJ, Schneider DH, Skeehan CT, Scholtens DM. Visualizing collaborative electronic health record usage for hospitalized patients with heart failure. *J Am Med Inform Assoc*. 2015 Mar;22(2):299-311. doi: 10.1093/jamia/ocu017. Epub 2015 Feb 20. PMID: 25710558; PMCID: PMC4394967.

Plagianos MG, Wu WY, McCullough C, Paladini M, Lurio J, Buck MD, Calman N, **Soulakis N**. Syndromic surveillance during pandemic (H1N1) 2009 outbreak, New York, New York, USA. *Emerg Infect Dis*. 2011 Sep;17(9):1724-6. doi: 10.3201/eid1709.101357. PMID: 21888804; PMCID: PMC3322055.

Shapiro JS, Mostashari F, Hripcsak G, **Soulakis N**, Kuperman G. Using health information exchange to improve public health. Am J Public Health. 2011 Apr;101(4):616-23. doi: 10.2105/AJPH.2008.158980. Epub 2011 Feb 17. PMID: 21330598; PMCID: PMC3052326.

Kuperman GJ, Blair JS, Franck RA, Devaraj S, Low AF; **NHIN Trial Implementations Core Services Content Working Group**. Developing data content specifications for the nationwide health information network trial implementations. J Am Med Inform Assoc. 2010 Jan-Feb;17(1):6-12. doi: 10.1197/jamia.M3282. PMID: 20064795; PMCID: PMC2995626.

Hripcsak G, **Soulakis ND**, Li L, Morrison FP, Lai AM, Friedman C, Calman NS, Mostashari F. Syndromic surveillance using ambulatory electronic health records. J Am Med Inform Assoc. 2009 May-Jun;16(3):354-61. doi: 10.1197/jamia.M2922. Epub 2009 Mar 4. PMID: 19261941; PMCID: PMC2732227.

## Patents

**Soulakis ND**, Carson MB, Scholtens DM. "System and Method for Determining, Visualizing and Monitoring Coordination of Resources" Application Number 15/047,365.

## Abstracts

*\* denotes presenting author*

- 03/2022      \*Han S, **Soulakis ND**. Evaluation of Google Search Trends for COVID-19 Vaccination Administration Efforts within a Public Health Department. AMIA 2022 Informatics Summit. Chicago, IL.
- 07/2019      \***Soulakis ND**, Chandler A. Managing Complexity in Collaborative Healthcare Processes. INFORMS Healthcare 2019. Cambridge, MA.
- 07/2019      \***Soulakis ND**, Naidech A, Chandler A. A Network Model for Identifying High-performing Teams in the ICU. INFORMS Healthcare 2019. Cambridge, MA.
- 07/2019      \*Grant B, Berry Jaeker J, Jackson HA, Mutharasan RK, **Soulakis ND**, Yancy C, Van Mieghem JA. The Physician Learning Curve for Quality and Cost Outcomes for Congestive Heart Failure Patients. INFORMS Healthcare 2019. Cambridge, MA.
- 07/2019      \*Chandler A, **Soulakis ND**. Evaluating the Impact of Clinical Teams and Care Activities on Patient Health Outcomes: An Edge-Weighted Multilayer Network Approach. INFORMS Healthcare 2019. Cambridge, MA.
- 06/2019      \***Soulakis ND**. Evaluation of a Population Health Informatics Course. AMIA 2019 Informatics Educators Forum. St. Louis, MO.
- 08/2016      \*Mutharasan RK, Kansal P, Jackson HA, Benacka C, Fortman R, Navarro D, Ahmad F, Abecassis MM, Anderson AS, Davidson C, Jonnalagadda S, Noskin G, **Soulakis ND**, Yancy CW Hospitalized Heart Failure Incidence is Significantly Underestimated by Diagnosis-Related Group Codes. Heart Failure Society of America 20th Annual Scientific Meeting. Journal of Cardiac Failure. 2016 Aug 1;22(8):S133. <https://doi.org/10.1016/j.cardfail.2016.06.409>
- 10/2015      \***Soulakis ND**, Carson M, Scholtens D, Frailey C, Kricke G, Scholtens D, Benacka C, Ahmad F, Mutharasan RK, Kansal P, Anderson A, Gurvich I, Van Mieghem J, Yancy C. Complexity and Collaboration in Discharge Planning for Inpatient Cardiology. American Heart Association Council on Quality of Care and Outcomes Research. Circulation: Cardiovascular Quality and Outcomes. 2016;9:A161. [https://doi.org/10.1161/circoutcomes.9.suppl\\_2.152](https://doi.org/10.1161/circoutcomes.9.suppl_2.152)



- 10/2015 RK Mutharasan, P Kansal, C Benacka, D Navarro, MM Abecassis, H Alphas Jackson, AS Anderson, J Berry-Jaeker, C Davidson, I Gurvich, G Noskin, C Schaeffer-Pettigrew, **ND Soulakis**, J Van Mieghem, CW Yancy. Enterprise Data Warehouse-Supported Early Identification of Acute Decompensated Heart Failure Admissions for Efficient and Multidisciplinary Transitional Care Team Interventions. American Heart Association Council on Quality of Care and Outcomes Research. [https://doi.org/10.1161/circoutcomes.9.suppl\\_2.152](https://doi.org/10.1161/circoutcomes.9.suppl_2.152)
- 10/2015 RK Mutharasan, P Kansal, MM Abecassis, H Alphas-Jackson, AS Anderson, C Benacka, J Berry-Jaeker, C Davidson, I Gurvich, D Navarro, G Noskin, C Schaeffer-Pettigrew, **N Soulakis**, J Van Mieghem, CW Yancy. Heart Failure Care Transitions: A Queuing Theory Approach to Match Variable Hospital Discharge Rate with Outpatient Clinic Capacity. American Heart Association Council on Quality of Care and Outcomes Research. Circulation: Cardiovascular Quality and Outcomes. 2016;9:A152. [https://doi.org/10.1161/circoutcomes.9.suppl\\_2.161](https://doi.org/10.1161/circoutcomes.9.suppl_2.161)
- 10/2015 Kricke G, Carson M, Lee YJ, Benacka C, Ahmad F, Mutharasan RK, Kansal P, Anderson A, Yancy C, **\*Soulakis N**. Leveraging Electronic Health Record Documentation for Failure Mode and Effects Analysis Team Identification on an Inpatient Cardiology Unit American Heart Association Council on Quality of Care and Outcomes Research. Circulation: Cardiovascular Quality and Outcomes. 2016;9:A215
- 03/2015 \*YJ Lee, C Benacka, MB Carson, G Kricke, P Kansal, **ND Soulakis**. Quantifying the Complexity of Discharge Planning in the Inpatient Cardiology Unit. American Medical Informatics Association Annual Symposium.
- 03/2015 G Kricke, MB Carson, YJ Lee, **\*ND Soulakis**. Improving Failure Mode and Effects Analysis through Electronic Health Record-Assisted Team Identification. American Medical Informatics Association Annual Symposium.
- 03/2015 MB Carson, \*SJ Gravenor, YJ Lee, DM Scholtens, C Frailey, **ND Soulakis**. A Graph Data Model Facilitates Analysis of Collaboration in an Emergency Department. American Medical Informatics Association Annual Symposium. San Francisco, CA.
- 12/2014 **\*Soulakis ND**, Carson MB, Gravenor SJ, Dresden SM, Lee YJ, Courtney DM. An Outcome-weighted Collaborative Network for Modeling Patient Satisfaction in the Emergency Department. Society for Academic Emergency Medicine. Academic Emergency Medicine. 22():S69–S70, May 2015
- 08/2014 \*Lee YJ, Carson MB, Skeehan CT, **Soulakis ND**. Identifying and Evaluating Care Team Composition for Heart Failure Hospitalizations. Science of Team Science. SciTS Conference in Austin, Texas.
- 08/2014 **\*Soulakis ND**. A Novel Network Architecture for Ascertaining and Monitoring Care Coordination. Science of Team Science. SciTS Conference in Austin, Texas.
- 08/2014 \*Carson MB, Lee YJ, Skeehan CT, **Soulakis ND**. Analysis of Care Coordination Networks For Deceased Heart Failure Patients. Science of Team Science. SciTS Conference in Austin, Texas.
- 11/2010 Buck M, Wu WY, **Soulakis ND**, Kukafka R. Achieving Excellence in Public Health Informatics: The New York City Experience. American Medical Informatics Association Annual Symposium. Washington, D.C.

- 04/2010 Al-Samarrai T, **Soulakis ND**, Plagianos M, Greene C, Thorpe L, Begier E, Lurio J, Briesse T, Lipkin I, Wu W. To Test or Not To Test: Influenza-Like Illness Case Definition Versus Antigen Testing for 2009 Pandemic Influenza A (H1N1) in a Pilot Respiratory Virus Surveillance System — New York City, May–June 2009. 59th Annual Epidemic Intelligence Service Conference. Atlanta, GA.
- 12/2009 Plagianos M, **Soulakis ND**. Comparison of Forecasting Methods for Influenza-Like Illness Surveillance. Proceedings of the International Society for Disease Surveillance Conference. Miami, FL.
- 12/2009 Plagianos M, **Soulakis ND**. H1N1 in New York City: Where Did Patients Seek Treatment? In Emergency Departments or Ambulatory Clinics?. Proceedings of the International Society for Disease Surveillance Conference. Miami, FL.
- 12/2009 \***Soulakis ND**. Clinical Characteristics of H1N1 Ambulatory Patients. Proceedings of the International Society for Disease Surveillance Conference. Miami, FL.
- 09/2009 Lober WB, Magruder C, Grannis S, **Soulakis ND**. Sharing a Summarized Public Health Surveillance Data Set (SPHSDS). Public Health Informatics Network (PHIN) Conference. Atlanta, GA.
- 08/2008 Le LH, Gotham IJ, Evans LM, Mostashari F, Morse D, **Soulakis ND**, Brady J, Ciampa M. Universal Public Health Node: An Evolution of Health Information Exchange for Public Health in New York. Public Health Informatics Network (PHIN) Conference. Atlanta, GA.
- 10/2007 \***Soulakis ND**, Mostashari F. Comparison of Ambulatory Electronic Health Record and Emergency Department Visit Log Data for Respiratory, Fever, and GI Syndromes. *Advances in Disease Surveillance* 2007; 2:168.
- 10/2007 \***Soulakis ND**, Harrison L. Characterization of Patients with Clinical Features Consistent with Inhalational Anthrax in an Emergency Department Population. *Advances in Disease Surveillance* 2007; 4:267.
- 10/2007 \***Soulakis ND**, Mostashari F, Hripcsak G. Syndromic Surveillance Case Definition Development Using Recursive Partitioning Techniques for Highly Dimensional Databases. *Advances in Disease Surveillance* 2007; 4:114.
- 10/2007 \*De Leon SF, **Soulakis ND**, Mostashari F. Exploring Syndrome Definition by Applying Clustering Methods to Electronic Health Records Data. *Advances in Disease Surveillance* 2007; 4:87.
- 10/2007 Mostashari F, **Soulakis ND**, Calman N, Buckeridge D. A Controlled Vocabulary for ‘Reason for Visit’ in Ambulatory Encounters. *Advances in Disease Surveillance*. 4:57, 2007.
- 09/2005 \***Soulakis ND**, Mostashari F. Advantages of an Electronic Health Record for Syndromic Surveillance. Proceedings of Syndromic Surveillance Conference. Seattle, WA.

#### SELECTED INVITED LECTURES

- 06/21/2022 “Public Health Informatics in Practice.” Avetis Informatics Fellowship Program. Republic of Armenia Ministry of Health in collaboration with University of Southern California Keck School of Medicine. Virtual.

04/19/2021 "Healthcare Innovation During the Pandemic." 4th Annual Health Informatics Innovation Conference. New York Academy of Medicine. Virtual.  
<https://www.nyam.org/events/event/4th-annual-health-informatics-innovation-conference-healthcare-innovation-during-pandemic/>

01/15/2021 "Public Health Informatics in the Time of COVID-19." Powertalk Seminar Series. Informatics Institute Heersink School of Medicine. The University of Alabama at Birmingham. Virtual.

01/13/2021 "Public Health Informatics: Practice in the time of COVID-19." University of Chicago Professional Education. Chicago, IL.

10/15/2020 "Public Health Practice in the Time of COVID-19." Inaugural NUCATS/IPHAM Translational Applications in Public Health. Northwestern University Clinical and Translational Sciences Institute – Institute for Public Health and Medicine. Chicago, IL.

09/15/2020 "Update on COVID-19." McHenry County Medical Society. Virtual.

10/25/2019 "Identifying High-performing Healthcare Teams." Keynote address, 9th Annual Northwestern University School of Professional Studies Symposium for Graduate Programs. Chicago, IL.

01/31/2019 "Data Science Strategies for Managing Complexity in Healthcare Operations." AI4 Healthcare. Virtual.

08/03/2018 "Improving Teamwork in Heart Failure Discharge Planning." American Medical Association. Chicago, IL.

01/11/2017 "The Signal and the Noise: Public Health, Terrorism, and Medicine." Northwestern University One Book Lecture. Evanston, IL.

12/03/2016 "How Do We Touch Our Patients as a Team?" Northwestern Memorial Hospital 12th Annual Heart Failure Holiday Symposium. Chicago, IL.

06/27/2016 "Career Transitions." NLM Informatics Training Conference. Columbus, OH.

03/11/2016 "Putting the Team in Team-based Care: Graph Theory and Network Analysis for Care Coordination." University of Michigan Department of Healthcare Infrastructure and Learning Systems. Ann Arbor, Michigan.

02/26/2016 "Putting the Team in Team-based Care." Cardiovascular Epidemiology Seminar Series. Chicago, IL.

01/28/2015 "Coalescing Value in Healthcare Networks: The Challenge of Care Coordination." Northwestern Institute on Complex Systems. Evanston, IL.

10/17/2015 "Visualizing collaborative electronic health record usage for hospitalized heart failure patients." Joint Biostatistics / Outcomes / Bioinformatics (BOB) Seminar. Chicago, IL.

09/09/2015 "Informatics Research Opportunities in Emergency Medicine." Northwestern Emergency Medicine Residency Program Administrators College. Chicago, IL.

- 09/24/2014 "A Novel Graph Processing Architecture to Ascertain and Monitor Care Coordination." Center for Behavior and Health Seminar. Chicago, IL.
- 04/30/2014 "A Novel Network Architecture for Ascertaining and Monitoring Care Coordination." HSIP Doctoral Colloquium. Chicago, IL.

## **MEDIA COVERAGE AND APPEARANCES**

- 08/12/2021 Rebuilding Public Health in the Age of COVID. NUCATS Institute.  
<https://www.nucats.northwestern.edu/news/2021/soulakis-cdph.html>
- 05/05/2021 Public Testimony. Legal and Policy Issues: Current Status and Future Needs. HHS Office of the National Coordinator Health IT Advisory Committee.  
[https://www.healthit.gov/sites/default/files/facas/2021-05-13\\_Nicholas\\_Soulakis\\_Testimony\\_508.pdf](https://www.healthit.gov/sites/default/files/facas/2021-05-13_Nicholas_Soulakis_Testimony_508.pdf)
- 12/30/2020 Big Data Analytics Platform Helps Chicago Track COVID-19 Cases. IT Analytics.  
<https://healthitanalytics.com/news/big-data-analytics-platform-helps-chicago-track-covid-19-cases>
- 12/04/2020 City of Chicago Launches New Data Analytics Tool in Fight Against COVID-19. City of Chicago Press Release.  
[https://www.chicago.gov/city/en/depts/cdph/provdrs/health\\_protection\\_and\\_response/news/2020/december/city-of-chicago-launches-new-data-analytics-tool-in-fight-against.html](https://www.chicago.gov/city/en/depts/cdph/provdrs/health_protection_and_response/news/2020/december/city-of-chicago-launches-new-data-analytics-tool-in-fight-against.html)
- 10/23/2020 Soulakis discusses COVID-19 contact tracing efforts with IDPH. Northwestern Medicine Breakthroughs for Physicians.  
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- 09/02/2020 Pritzker 'Very Concerned' About COVID-19 Spread During Upcoming Labor Day Weekend. WTTW News.  
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- 05/05/2020 Contact Tracing. Computationally Yours Podcast – Episode 02.  
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- 03/30/2020 Soulakis Joins IDPH to Fight COVID-19. Northwestern University Feinberg School of Medicine.  
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- 02/25/2020 FARE Expands Partnership with Northwestern University, Announces Data Commons. SnackSafely.com

<https://snacksafely.com/2020/02/fare-expands-partnership-with-northwestern-university-announces-data-commons/>


- 02/24/2020 Record Turnout for Northwestern’s Biomedical Data Science Data. Northwestern Medicine News Center.  
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- 02/06/2019 Academic Medical Center Chief Data Scientists: Pathways of the Pioneers. Academy Health Blog.  
<https://www.academyhealth.org/blog/2019-02/academic-medical-center-chief-data-scientists-pathways-pioneers>
- 11/01/2017 Faculty Spotlight: Dr. Nicholas Soulakis – Translating Health Knowledge to Practice. Northwestern Public Health Review. <https://nphr.wordpress.com/2017/01/11/faculty-spotlight-dr-nicholas-soulaki-translating-health-knowledge-to-practice/>
- 10/20/2016 Using Big Data to Offer Insights on Healthcare Fragmentation. Office of Research News.  
<https://research.northwestern.edu/news/using-big-data-offer-insights-healthcare-fragmentation>
- 09/20/2016 Leveraging Big Data to Improve Patient Care in Cardiology. Northwestern Medicine. Clinical Breakthroughs. <https://news.feinberg.northwestern.edu/2016/09/leveraging-big-data-to-improve-patient-care-in-cardiology/>
- 01/20/2016 Northwestern University Professor Creates Startup to Help Primary Care Practices Thrive Using Data Science. Huffington Post. [https://www.huffpost.com/entry/post\\_b\\_9016730](https://www.huffpost.com/entry/post_b_9016730)

## TEACHING

*‘Course Director’ indicates 30 classroom hours, over 10-lecture quarter; ‘Lecturer’ indicates single lecture.*

- 04/27 – 06/04/2022 University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
- 03/09/2022 Feinberg School of Medicine Master of Public Health. Introduction to Epidemiology (304-0-20, Lecturer) “Public Health Informatics”
- 03/03/2022 Northwestern Medicine Disaster Management and Community Emergency Preparedness Initiative. Intro to Disaster Preparedness, Response, and Management (EMERG-3950, Lecturer) “Fundamentals of Establishing a Surveillance System”
- 01/03 – 03/25/2022 DePaul University College of Computing and Digital Media, Program in Health Informatics (HIT590, Course Director) – Public Health Informatics
- 09/27 – 12/11/2021 University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
- 09/24 – 12/05/2021 Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I

06/23 – 08/25/2021	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 32900, Course Director) – Evaluation Methods in Health Informatics
03/31 – 06/02/2021	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
09/01 – 12/01/2020	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
06/23 – 08/28/2020	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
01/07 – 03/20/2020	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 32900, Course Director) – Evaluation Methods in Health Informatics
09/26 – 12/13/2019	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
10/02 – 12/13/2019	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
04/02 – 06/07/2019	Feinberg School of Medicine, MS in Biostatistics (EB 445, Course Director) Data Science for Clinical, Translational, and Population Researchers
04/02 – 06/07/2019	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
10/02 – 12/14/2018	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
09/27 – 12/14/2018	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
06/18 – 08/22/2018	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 32900, Course Director) – Evaluation Methods in Health Informatics
03/27 – 06/07/2018	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
09/21 – 12/07/2017	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
09/26 – 12/05/2017	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 33100, Course Director) – Population Health Informatics
06/20 – 08/25/2017	University of Chicago Graham School of Continuing Liberal and Professional Studies, MSc in Biomedical Informatics (MSBI 32900, Course Director) – Evaluation Methods in Health Informatics



12/15/2016	Feinberg School of Medicine (M1 CV Module, Lecturer) Health and Society – “Health Informatics to Evaluate and Improve Cardiovascular Care”
11/22/2016	Feinberg School of Medicine (IGP 485, Lecturer) Data Science for Biomedical Researchers – “Population Health Analytics”
10/17/2016	DePaul University College of Computing and Digital Media (HIT 412, Lecturer) Health Informatics – “Public Health Informatics”
09/22– 11/30/2016	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
04/25/2016	Feinberg School of Medicine (HSIP 445, Lecturer) Data Science for Clinical, Translational, and Population Researchers – “Analyzing Population Data”
03/08/2016	Feinberg School of Medicine (IGP 485, Lecturer) Data Science for Biomedical Researchers – “Population Health Analytics”
01/12/2016	Feinberg School of Medicine (M1 CV Module, Lecturer) Health and Society – “Health Informatics to Evaluate and Improve Cardiovascular Care”
09/24– 12/03/2015	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
01/12/2015	Feinberg School of Medicine (M1 CV Module, Lecturer) Health and Society – “Health Informatics to Evaluate and Improve Cardiovascular Care”
09/25– 12/04/2014	Feinberg School of Medicine (HSIP 441, Course Director) – Health and Biomedical Informatics Methods I
07/01/2014	Feinberg School of Medicine (Lecturer) – Seminar in Healthcare Quality & Patient Safety
08/15/2013	Feinberg School of Medicine (HSIP 441, Lecturer) Health and Biomedical Informatics Methods I

## DOCTORAL TRAINEES

*Selected Academic Outcomes in Italics. Updated 07/2022*

*\*Indicates co-authorship of publication, \*\* multiple publications*

09/2020 – Present	Sae Han*, PhD Student Health Science Integrated Program, Health and Biomedical Informatics Track AHRQ T32 Predoctoral Fellow Doctoral Advisor
07/2019 – Present	Julianne Murphy, PhD Candidate Health Science Integrated Program, Health and Biomedical Informatics Track NIH Big Data to Knowledge (BD2K) Fellowship Advisor
03/2018 – 03/2020	JianCheng Ye**, PhD Candidate Health Science Integrated Program, Healthcare Quality and Patient Safety Track Lab Rotation Advisor



03/2018 – 03/2020	Jingzhi (Kevin) Yu*, PhD Student Health Science Integrated Program, Health and Biomedical Informatics Track Lab Rotation Advisor
05/2017 – 12/2019	Ariel Chandler*, PhD Health Science Integrated Program, Health and Biomedical Informatics Track Dissertation Advisor and Committee Chair <i>Senior Healthcare Technology Consultant at Protiviti</i> <i>Instructor, Data Literacy &amp; Analytics in Healthcare. Northwestern School of Professional Studies</i>
09/2017 – 09/2018	Iva Terwilliger, PhD candidate Health Science Integrated Program, Healthcare Quality and Patient Safety Track Lab Rotation Advisor <i>Author of “Healthcare that Works: The Power of Systems and People in Improving Healthcare”</i>
06/2015 – 06/2018	Vanessa Welten, MD, MPH Capstone Project Advisor <i>Clinical Fellow in Surgery, Brigham and Women's Hospital</i>
01/2015 – 06/2017	Gayle Kricke*, MSW PhD Health Science Integrated Program, Healthcare Quality and Patient Safety Track Lab Rotation Advisor <i>Assistant Professor of Medicine (General Internal Medicine)</i> <i>Director of Operations, Primary Care at Northwestern Medicine</i>
01/2015 – 05/2016	Lu Wang*, PhD Kellogg School of Management, Operations Management Research Advisor <i>Data Science Manager at Facebook</i>
08/2013 – 12/2016	Matthew Carson** PhD Postdoctoral Fellowship Advisor <i>Head, Digital Systems Department. Galter Health Sciences Library, Northwestern University</i>
03/2013 – 04/2015	Young Ji Lee RN, PhD Postdoctoral Fellowship Advisor <i>Assistant Professor, Department of Health and Community Systems, University of Pittsburgh School of Nursing</i>

#### **CAPSTONES ADVISED @ UNIVERSITY OF CHICAGO MASTER OF SCIENCE IN BIOMEDICAL INFORMATICS**

*(Selected Professional Outcomes in Italics. Updated 07/2022; \* indicates publication co-authorship)*

08/2019	“Patient Registry Development for Transitional Care Patient Referral Model” R Carpenter & B Bunker ( <i>Senior Data Scientist at Intelligent Medical Objects</i> )
08/2019	“Hacking Open Data: Practical Machine Learning and Artificial Intelligence” B Tomlin
03/2020	“SCRIPT Study: Clinical Workflow Development” M Howard ( <i>Informatics Nurse Specialist at University of Chicago Medicine</i> )



S Marszalek (*Director Nursing Informatics & Decision Support at UI Health*)

- 03/2020 "E-PRO Integration into EHRs at Academic Medical Centers: Stakeholder's Perspectives"  
\*B Anderson (*Founder and Principal Orange Vista LLC*)
- 03/2020 "The Analysis of Regularity in Emergency Department Utilization Patterns: Patient Registry Development for Transitional Care Patient Referral Mode"  
D Michael (*Senior Associate at PwC Health Industries Advisory, Advanced Analytics*)  
A Pandya (*Senior Associate at PwC - Health Industries Advisory Cloud & Digital*)
- 08/2020 "Northwestern SCRIPT Study - Using EMR Data to Build a Neo4j Graph Database"  
HN Cho & F Cooper (*MS-3 at Howard University College of Medicine*)
- 03/2021 "Reevaluating State-wide Adaptive Pause Thresholds Considering Vulnerable Populations Through Cluster Analysis of Elementary School Data"  
E Heckinger
- 03/2021 "Creating a Framework for Driving Change & Enablement Through Data Visualization"  
A Beard & S Crosby (*Cloud Engineer at Chicago Department of Public Health*)

#### **DATA SCIENCES INSTITUTE (CHINA SUMMER EXCHANGE PROGRAM)**

*Founding Director of immersive Chicago-based program for Shanghai and Hefei (Anhui Province) high school students on international track pursuing US undergraduate education in analytical fields. Selected admissions in italics.*

- 10/02 – 12/04/2021 Pandemic Data Science (Institute Director – Virtual due to COVID restrictions)  
8 Students (*Carnegie Mellon University, University of Virginia, University of Southern California, Imperial College, Boston University*)
- 10/04 – 12/05/2020 Pandemic Data Science (Institute Director – Virtual due to COVID restrictions)  
6 Students (*University of North Carolina – Chapel Hill, University of California - San Diego, University of California – Los Angeles, University of Virginia, Wake Forest University*)
- 06/30 – 07/29/2019 Public Health Data Science (Institute Director – Chicago, IL)  
4 Students (*Emory University, Hamilton College, Johns Hopkins University*)
- 07/01 – 07/28/2018 Public Health Data Science (Institute Director – Chicago, IL)  
3 Students (*New York University, Cornell University, University of Illinois – Urbana Champaign*)

#### **INTERNATIONAL VOLUNTEER SERVICE**

- 06/1996 – 08/1996 Mission Team Member, Orthodox Christian Mission Center; Chavogere, Kenya  
*Construction of a maternity ward addition for Chavogere village clinic. Conducted mobile ambulatory clinics for acute illnesses in Kenyan Western Highlands.*