

Sung J. Choi

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Employment

Assistant Professor (Aug 2018–Present). Department of Health Management and Informatics, University of Central Florida, Orlando, FL.

Postdoctoral Fellow (Aug 2016–Jun 2018). NSF *Trustworthy Health and Wellness*, Vanderbilt Owen Graduate School of Management, Nashville, TN.

Education

Ph.D. Health Services Research, Policy & Administration (Sep 2015). University of Minnesota School of Public Health, Minneapolis, MN. — Area of Emphasis in Health Economics.

B.A. Biology (May 2007). Grinnell College, Grinnell, IA.

Refereed Publications

11. Lee, & Choi. (2021). Hospital Productivity After Data Breaches: Difference-in-Differences Analysis. *JMIR, Forthcoming*
10. Choi, S. J., & Dewan, N. (2021). Policy Priorities for Health Information Technology. *Journal of Health Care Finance*, 47. <https://www.healthfinancejournal.com/~junland/index.php/johcf/article/view/247>
9. Choi, S. J., Johnson, M. E., & Lee, J. (2020). An event study of data breaches and hospital IT spending. *Health Policy and Technology*, 9(3), 372–378. <https://doi.org/10.1016/j.hlpt.2020.04.008>
8. Choi, S. J., & Mortensen, K. (2020). Financial Trends of Florida Hospitals Pre and Post the Affordable Care Act. *Journal of Health Care Finance*, 47(2). <http://www.healthfinancejournal.com/~junland/index.php/johcf/article/view/234>
7. Anwar, A., Khormali, A., Choi, J., Alasmay, H., Choi, S., Salem, S., Nyang, D., & Mohaisen, D. (2020). Measuring the Cost of Software Vulnerabilities. *EAI Endorsed Transactions on Security and Safety*, 7(23). <https://eudl.eu/doi/10.4108/eai.13-7-2018.164551>
6. Choi, S. J., Johnson, M. E., & Lehmann, C. U. (2019a). Data breach remediation efforts and their implications for hospital quality. *Health Services Research*, 54(5), 971–980. <https://doi.org/10.1111/1475-6773.13203>
5. Choi, S. J., & Johnson, M. E. (2019). Understanding the Relationship Between Data Breaches and Hospital Advertising Expenditures. *The American Journal of Managed Care*, 25(1), e14–e20. <https://pubmed.ncbi.nlm.nih.gov/30667613/>

4. Choi, S. (2017). Hospital Capital Investment During the Great Recession. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 54. <https://doi.org/10.1177/0046958017708399>
3. Karaca-Mandic, P., Choi-Yoo, S. J., Lee, J., & Scal, P. (2014). Family Out-of-Pocket Health Care Burden and Children's Unmet Needs or Delayed Health Care. *Academic Pediatrics*, 14(1), 101–108. <https://doi.org/10.1016/j.acap.2013.10.005>
2. Choi Yoo, S. J., Nyman, J. A., Cheville, A. L., & Kroenke, K. (2014). Cost effectiveness of telecare management for pain and depression in patients with cancer: Results from a randomized trial. *General Hospital Psychiatry*, 36(6), 599–606. <https://doi.org/10.1016/j.genhosppsych.2014.07.004>
1. Karaca-Mandic, P., Choi Yoo, S. J., & Sommers, B. D. (2013b). Recession Led To A Decline In Out-Of-Pocket Spending For Children With Special Health Care Needs. *Health Affairs*, 32(6), 1054–1062. <https://doi.org/10.1377/hlthaff.2012.1137>

Working Papers

Choi, S. J. (In progress). *Area variations in health data breaches*.

Choi, S. J., & Johnson, E. M. (Revise and Resubmit). *The Relationship between Cybersecurity Ratings and the Risk of Hospital Data Breaches*.

Non-Refereed Publications

Abraham, J. M., Karaca-Mandic, P., & Choi Yoo, S. J. (2015). The ABCs of children's health: Potential impact of the Patient Protection and Affordable Care Act. In A. J. Reynolds, A. J. Rolnick, & J. A. Temple (Eds.), *Health and Education in Early Childhood: Predictors, Interventions, and Policies* (pp. 327–345). Cambridge University Press.

Blewett, L., Karaca-Mandic, P., Ricards, J., Choi, S. J., & Huang, T. Y. (2014). *Using insurer filings to monitor the private health insurance market*. SHADAC.

Conference Proceedings

Choi, S. J., & Johnson, M. E. (2017). Do Hospital Data Breaches Reduce Patient Care Quality? *Proceedings of the Sixteenth Workshop on the Economics of Information Security*.

Presentations

Choi, S. J. (2020a). *An Event Study of Data Breaches and Hospital IT Spending* (Poster). American Society of Health Economists, St. Louis, MO (In-Person meeting canceled due to COVID-19).

Choi, S. J. (2020b). *Financial Trends of Florida Hospitals Pre and Post the Affordable Care Act* (Poster). AcademyHealth, Boston, MA (In-Person meeting canceled due to COVID-19).

Choi, S. J. (2020c). *The Impact of Health Care Data Breaches on Hospital Finances: Evidence from Florida* (Poster). AcademyHealth, Boston, MA (In-Person meeting canceled due to COVID-19).

- Choi, S. J. (2020d). *The relationship between hospital data breaches and cyber security ratings* (Panel). European Health Economics Association, Oslo, Norway (In-Person meeting canceled due to COVID-19).
- Choi, S. J. (2020e). *The Relationship between Hospital Data Breaches and Cyber Security Ratings* (Panel). AcademyHealth, Boston, MA (In-Person meeting canceled due to COVID-19).
- Choi, S. J. (2019a, November). *Event study of data breaches and hospital IT spending* (Panel). Conference on Health IT and Analytics, Washington, DC.
- Choi, S. J. (2019c, June). *Understanding the relationship between data breaches and hospital advertising expenditures* (Poster). American Society of Health Economists, Washington, DC.
- Choi, S. J. (2018a, April). *Are Data Breach Remediation Efforts Impacting Care Quality?* (Panel). Digital Information Policy Scholars Conference George Mason University, Fairfax, VA.
- Choi, S. J. (2018b, October). *Data Breaches and Hospital Advertising* (Panel). Conference on Health IT and Analytics, Washington, DC.
- Choi, S. J. (2018c, March). *Do Some Hospital Data Breaches Lead to Increased Mortality Rates?* (Panel). 4A Data Security & Privacy Symposium, Philadelphia, PA.
- Choi, S. J. (2017a, June). *Do hospital data breaches reduce patient care quality?* (Panel). Workshop on the Economics of Information Security, La Jolla, CA.
- Choi, S. J. (2017b, July). *Do hospital data breaches reduce patient care quality?* (Panel). International Health Economics Association World Congress, Boston, MA.
- Choi, S. J. (2017c, November). *Do hospital data breaches reduce patient care quality?* (Panel). Conference on Health IT and Analytics, Washington, DC.
- Choi, S. J. (2017d, September). *Hospital data breaches and care delays* (Panel). Trustworthy Health and Wellness workshop, Urbana IL.
- Choi, S. J. (2016, December). *Do hospital data breaches reduce patient care quality?* (Panel). Indiana University – Vanderbilt University Health Economics & Policy Conference, Bloomington, IN.
- Choi, S. J. (2015, April). *The great recession and hospital capital investment* (Seminar). University of Minnesota School of Public Health, Minneapolis, MN.
- Choi, S. J. (2014a, March). *Cost effectiveness of telecare management for pain and depression in patients with cancer* (Panel). Minnesota Health Services Research Conference, St. Paul, MN.
- Choi, S. J. (2014b, June). *Impact of financial reserves and liquidity constraints on hospital capital investment* (Panel). American Society of Health Economists, Los Angeles, CA.
- Choi, S. J. (2012a, July). *Analyzing US demographic data for health research* (Invited Talk). Catholic University of Korea School of Medicine, Seoul, South Korea.
- Choi, S. J. (2012b, June). *Out-of-pocket financial burden experienced by children with private health insurance, 2001-2009* (Poster). AcademyHealth, Orlando, FL.
- Choi, S. J. (2011a, March). *Family out-of-pocket health care burden and children's access to health care* (Panel). Minnesota Health Services Research Conference, St. Paul, MN.
- Choi, S. J. (2011b, June). *Family out-of-pocket health care burden and children's access to health care* (Poster). AcademyHealth, Seattle, WA.

Invited Talks

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- Choi, S. J. (2019b, December). *Hospital Data Breaches Reduce Patient Care Quality*. MITRE HealthLab, Baltimore, MD.
- Choi, S. J. (2014c, August). *Impact of financial reserves and liquidity constraints on hospital capital investment*. Sungkyunkwan University, Seoul, South Korea.

Research Grants

Proposals Awarded

Office of Research Mentoring Program Award. (2020).

PI: Chisholm, L., Co-PI: Emrich, C., Co-PI: Neuberger, L., & Co-PI: Choi, S. J. (2020, January–May). *Chronic Conditions Among Older Adults: The Role of Social and Physical Determinants. Downtown Interdisciplinary Research Initiative University of Central Florida. Buyout award: \$2,500.*

PI: Choi, S. J. (2020, May–2021, April). *Understanding the Interplay Between Privacy Policies and Security of Healthcare Firms. University of Central Florida Seed Funding ER1 Exploratory Research Award. Total Award: \$26,166.*

Proposals Submitted

PI: Chisholm, L., Co-PI: Pritchett, C., & Co-PI: Choi, S. J. (2022, January–December). *Racial/Ethnic Disparities in Cochlear Implants among Children: The Role of Family and Social Determinants of Health. Downtown Interdisciplinary Research Initiative University of Central Florida.*

PI: Choi, S. J., Co-PI: Mohaisen, D., & Co-PI: Noblin, A. (2021, October–2024, October). *Collaborative Research: SCH: Understanding the interplay between privacy policies and security of healthcare firms to improve the quality of care. National Science Foundation. Total requested: \$608,499; Choi's credit split: 40%, Choi's effort 11.111%, Choi's personnel budget requested: \$31,050.*

Teaching

PHC6164 0M78: Health Care Finance II, Masters, Mixed Video mode (Spring). (2021).

PHC6164 0M79: Health Care Finance II, Masters, Mixed Video mode (Spring). (2021).

HSA3170 0M77: Health Care Finance, Undergraduate, Mixed Video mode. (Fall). (2020).

PHC6160 0M77: Health Care Finance I, Masters, Mixed Video mode (Fall). (2020).

PHC6164 0M77: Health Care Finance II, Masters, Mixed Video mode (Spring). (2020).

HSA5198 0M01: Health Care Decision Sciences and Knowledge Management, Masters, Mixed mode (Spring). (2019).

HSA5198 0M03: Health Care Decision Sciences and Knowledge Management, Masters, Mixed mode (Spring). (2019).

PHC6160 0M78: Health Care Finance I, Masters, Mixed mode (Fall). (2019).

PHC6160 0M79: Health Care Finance I, Masters, Mixed mode (Fall). (2019).

HSA3170 0M01: Health Care Finance, Undergraduate, Mixed mode (Fall). (2018).

HSA3170 0W61: Health Care Finance, Undergraduate, Web mode (Fall). (2018).

Honors and Distinctions

Doctoral Dissertation Fellowship. (2014). University of Minnesota. Minneapolis, MN.

Student Research Day Delta Omega (Pi Chapter) Premier Poster: Family out-of-pocket health care burden and children's access to health care. (2011). University of Minnesota. Minneapolis, MN.

Graduate School Block Grant. (2008). University of Minnesota. Minneapolis, MN.

John Krlewski Family Fellowship. (2008). University of Minnesota. Minneapolis, MN.

School of Public Health Dean's Scholarship. (2008). University of Minnesota. Minneapolis, MN.

Service

Department

Public Affairs Admissions Committee. (2018-present). Department of Health Management and Informatics, University of Central Florida. Orlando, FL.

HMI Instructor/Lecturer Promotion & Tenure Committee. (2020–2021). Department of Health Management and Informatics, University of Central Florida. Orlando, FL.

Library Committee Liaison. (2018–2019). Department of Health Management and Informatics, University of Central Florida. Orlando, FL.

University

Florida-Canada Linkage Institute Out-of-State Tuition Fee Exemption Awards Committee. (2021).

Professional Society

Member: AcademyHealth. (2011-present).

Member: American Society of Health Economists. (2014-present).

Member: HIMSS. (2021-present).

Reviewer: Information Systems Research. (2021, March).

Reviewer: Journal of Healthcare Management. (2021, February).

Reviewer: Medical Care Research and Review. (2021, February).

Reviewer: Quality Management in Healthcare. (2021, March).

Reviewer: American Society of Health Economists. (2020, December).

Reviewer: BMC Public Health. (2019, April).

Reviewer: Forum for Health Economics and Policy. (2018).

Reviewer: International Journal of Environmental Research and Public Health. (2018).

Advising

Dissertation Committees Served

Muhammad, S. (2021). *Dissertation Defended: Analyzing The Blockchain Attack Surface: A Top-Down Approach.* Computer Science, University of Central Florida.

Abuhamad, M. (2020, June). *Dissertation Defended: Large-Scale and Language-Oblivious Code Authorship Identification, Computer Science.* Computer Science, University of Central Florida.

Choi, J. (2020, June). *Dissertation Defended: Evaluating the DNS Centralized Zone Data Service.* Computer Science, University of Central Florida.

Jang, R. (2020, June). *Dissertation Defended: Rogue Access Point Detection Using Intentional Channel Interference.* Computer Science, University of Central Florida.

Park, J. (2020, June). *Dissertation Defended: Realistic Evaluation of the Very Short Intermittent DDoS Attacks.* Computer Science, University of Central Florida.

Graduate Assistants

Dewan, N. (2020-present). *Doctoral student in Public Affairs.* University of Central Florida.

Anjarwalla, A. (2019–2020). *Doctoral student in Public Affairs.* University of Central Florida.

Media

- Playing with Lives: Cyberattacks on Healthcare are Attacks on People* - CyberPeace Institute. (2021, March 9). <https://cyberpeaceinstitute.org/event/playing-with-lives-cyberattacks-on-healthcare-are-attacks-on-people>
- Crothers. (2020, September 24). *Ransomware attack results in death at German hospital* — Fox News. <https://www.foxnews.com/tech/ransomware-attack-results-in-death-at-german-hospital>
- Cyber Operations Against Medical Facilities During Peacetime*. (2020, May 1). <https://www.lawfareblog.com/cyber-operations-against-medical-facilities-during-peacetime>
- CyberPeace Institute. (2020, December 15). *Securing Healthcare to Achieve Cyberpeace*. <https://www.youtube.com/watch?v=B6uUmFbQv2I>
- Renault, M., & Ring, W. (2020, December 4). *As hospitals cope with a COVID-19 surge, cyber threats loom*. <https://apnews.com/article/us-news-vermont-coronavirus-pandemic-burlington-hacking-28af71f3861d245df052f06e12475c2d>
- Tong, S. (2020, May 14). *Hacking hospitals: Ransom notes and dark web chatter from health-care extortionists*. <https://www.marketplace.org/2020/05/14/hacking-hospitals-ransom-notes-and-dark-web-chatter-from-health-care-extortionists/>
- Akpan, N. (2019, October 24). *Ransomware and data breaches linked to uptick in fatal heart attacks*. <https://www.pbs.org/newshour/science/ransomware-and-other-data-breaches-linked-to-uptick-in-fatal-heart-attacks>
- Wetsman, N. (2019, April 4). *Health care's huge cybersecurity problem*. <https://www.theverge.com/2019/4/4/18293817/cybersecurity-hospitals-health-care-scan-simulation>
- Dark Reading - Fixing Hacks Has Deadly Impact on Hospitals*. (2018, March 28). <https://www.darkreading.com/endpoint/privacy/fixing-hacks-has-deadly-impact-on-hospitals/d/d-id/1331386?print=yes>