

MEHUL D. PATEL, PHD**Mailing Address:** 170 Manning Dr., CB# 7594, Chapel Hill, NC 27599-7594**Phone:** (919) 843-7307 | **Email:** mehul_patel@med.unc.edu**EDUCATION**

Postdoctoral Fellow	Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC	Cardiovascular Epidemiology	9/2013-9/2014
PhD	Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC	Epidemiology (Biostatistics minor)	8/2013
Predocctoral Fellow	Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC	Cardiovascular Epidemiology	1/2009-1/2012
MSPH	Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA	Epidemiology	5/2005
BA, BS	College of Arts & Sciences, University of South Carolina, Columbia, SC	Sociology, Chemistry	5/2003

PROFESSIONAL EXPERIENCE

Assistant Professor (tenure track) Department of Emergency Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC	2019-
Research Assistant Professor Department of Emergency Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC	2016-2019
Associate Director of Healthcare Informatics Clinical Data & Analytics, Symphony Health Solutions, Conshohocken, PA	2016
Associate Director of Data, Analytics & Scientific Methodology Center for Observational and Real World Evidence, Merck & Co., Inc., North Wales, PA	2014-2016
Epidemiologist Social & Scientific Systems, Inc., Durham, NC	2012-2013
Graduate Research Assistant Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC	2007-2011
Chronic Disease Epidemiologist Division of Public Health, Georgia Department of Human Resources, Atlanta, GA	2005-2007

HONORS

Career Development (KL2) Award North Carolina Translational and Clinical Sciences Institute, University of North Carolina at Chapel Hill	2020-2023
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2020 Top Peer Reviewers <i>Annals of Emergency Medicine</i>	2021
Completion with Distinction NINDS Clinical Trials Methodology Course (R25NS088249) University of Michigan, University of Iowa, and Los Angeles BioMed	2018
Junior Faculty Development Award Office of the Executive Vice Chancellor and Provost, University of North Carolina at Chapel Hill	2017
Delta Omega Honorary Society in Public Health (Theta Chapter) Gillings School of Global Public Health, University of North Carolina at Chapel Hill	2014
Student Research Paper Contest Winner Preventing Chronic Disease, Centers for Disease Control and Prevention	2013
Graduate Education Advancement Board Impact Award The Graduate School, University of North Carolina at Chapel Hill	2012
Phi Beta Kappa Honor Society University of South Carolina	2003
Magna Cum Laude University of South Carolina	2003

PUBLICATIONS (* indicates student/mentee first author)

Refereed Journal Articles

44. Biddell CB, Johnson KT, **Patel MD**, Smith RL, Hecht HK, Swann JL, Mayorga ME, Hassmiller Lich K. Cross-sector decision landscape in response to COVID-19: A qualitative network mapping analysis of North Carolina decision-makers. *Frontiers in Public Health*. 2022;10:906602.
43. *Johnson K, Biddell CB, Hassmiller Lich K, Swann J, Delamater P, Mayorga M, Ivy J, Smith RL, **Patel MD**. Use of Modeling to Inform Decision Making in North Carolina during the COVID-19 Pandemic: A Qualitative Study. *MDM Policy & Practice*. 2022 Jul-Dec;7(2):23814683221116362. PMID: PMC9340948.
42. Rosenstrom ET, Mele J, Ivy JS, Mayorga ME, **Patel MD**, Lich KH, Delamater P, Smith RL, Swann JL. Vaccinating Children against COVID-19 is Crucial to Protect Schools and Communities. *PNAS Nexus*. 2022 Jul;1(3):pgac081.
41. Melnick ER, Nath B, Dziura JD, Casey MF, Jeffery MM, Paek H, Soares WE 3rd, Hoppe JA, Rajeevan H, Li F, Skains RM, Walter LA, **Patel MD**, Chari SV, Platts-Mills TF, Hess EP, D'Onofrio G. User centered clinical decision support to implement initiation of buprenorphine for opioid use disorder in the emergency department: EMBED pragmatic cluster randomized controlled trial. *BMJ*. 2022 Jun 27;377:e069271. PMID: PMC9231533.
40. Pozner J, Winslow J, Schinde S, **Patel MD**, Grover JM. EMS Involvement in COVID-19 Vaccination Efforts - Results of a North Carolina Statewide Survey. *Prehospital Emergency Care*. Available online 2022 Apr 12. PMID: 35333663.
39. **Patel MD**, Thompson J, Cabañas JG, Williams JG, Lewis E, Bachman M, Al Masry M, LaVigne C,

- Morantes L, Becske T, Kass-Hout O. Performance of the vision, aphasia, neglect (VAN) assessment within a single large EMS system. *Journal of Neurointerventional Surgery*. 2022;14:341-5. PMID: PMC8787821.
38. *Stemerman R, Bunning T, Grover J, Kitzmiller R, **Patel MD**. Identifying patient phenotype cohorts using prehospital electronic health record data. *Prehospital Emergency Care*. 2022;26:78-88. PMID: 33315497
37. Rosenstrom ET, Mele J, Ivy JS, Mayorga ME, **Patel MD**, Lich KH, Johnson K, Delamater P, Keskinocak P, Boyce R, Smith R. Can vaccine prioritization reduce disparities in COVID-19 burden for historically marginalized populations?. *PNAS Nexus*. 2022;1(1):pgab004.
36. Leeper SC, **Patel MD**, Beja-Glasser A, Reddy P, Martin IB, van Hoving DJ, Myers JG. Assault-injured youth in the emergency centres of Khayelitsha, South Africa: A prospective study of recidivism and mortality. *African Journal of Emergency Medicine*. 2021;11(4):379-84. PMID: PMC8430267.
35. *Cui ER, Fernandez AR, Zegre-Hemsey JK, Grover JM, Honvoh G, Brice JH, Rossi JS, **Patel MD**. Disparities in Emergency Medical Services Time Intervals for Patients with Suspected Acute Coronary Syndrome: Findings from the North Carolina Prehospital Medical Information System. *Journal of the American Heart Association*. 2021;10(15):e019305. PMID: PMC8475668.
34. **Patel MD**, Rosenstrom E, Ivy JS, Mayorga ME, Keskinocak P, Boyce RM, Lich KH, Smith RL, Johnson KT, Delamater PD, Swann JL. Association of Simulated COVID-19 Vaccination and Nonpharmaceutical Interventions With Infections, Hospitalizations, and Mortality. *JAMA Network Open*. 2021;4(6):e2110782. PMID: PMC8170542.
33. Grover JM, Smith B, Williams J, **Patel MD**, Cabanas J, Brice J. Novel Use of Telemedicine by Hurricane Evacuation Shelters. *Prehospital Emergency Care*. 2020;24:804-12. PMID: 32011202
32. Zègre-Hemsey J, **Patel MD**, Fernandez A, Pelter M, Brice J, Rosamond W. A Statewide Assessment of Prehospital Electrocardiography Approaches of Interpretation for Acute Coronary Syndrome in North Carolina Emergency Medical Services. *Prehospital Emergency Care*. 2020;24(4):550-6. PMID: PMC7190419.
31. *Cui ER, Beja-Glasser A, Fernandez AR, Grover JM, Mann NC, **Patel MD**. Emergency Medical Services Response Times for Acute Chest Pain in the United States, 2015-2016. *Prehospital Emergency Care*. 2020;24(4):557-65. PMID: 31580176
30. Melnick ER, Nath B, Ahmed OM, Brandt C, Chartash D, Dziura JD, Hess EP, Holland WC, Hoppe JA, Jeffery MM, Katsovich L, Li F, Lu CC, Maciejewski K, Maleska M, Mao JA, Martel S, Michael S, Paek H, **Patel MD**, Platts-Mills TF, Rajeevan H, Ray JM, Skains RM, Soares WE 3rd, Deutsch A, Solad Y, D'Onofrio G. Progress Report on EMBED: A Pragmatic Trial of User-Centered Clinical Decision Support to Implement EMERGENCY Department-Initiated Buprenorphine for Opioid Use Disorder. *J Psychiatr Brain Sci*. 2020;5. PMID: PMC7164817
29. Bash LD, White K, **Patel MD**, Liu J, Mavros P, Mahaffey KW. Cardiovascular Risk Factors and Secondary Events Among Acute and Chronic Stable Myocardial Infarction Patients: Findings from a Managed Care Database. *Cardiology and Therapy*. 2019;8(2):329-43. PMID: PMC6828898.
28. Leeper S, Lahri S, Myers J, **Patel M**, Reddy P, Martin IBK, van Hoving DJ. Assault-injured youth in the emergency centres of Khayelitsha, South Africa: Baseline characteristics & opportunities for intervention. *Injury*. 2019;50(12):2220-7. PMID: 31653499
27. Chartash D, Paek H, Dziura JD, Ross BK, Noguee DP, Boccio E, Hines C, Schott AM, Jeffery MM,

- Patel MD**, Platts-Mills TF, Ahmed OM, Brandt CA, Couturier KC, Melnick ER. Identifying Opioid Use Disorder in the Emergency Department: Multi-System Electronic Health Record–Based Computable Phenotype Derivation and Validation Study. *Journal of Medical Internet Research*. 2019;7(4):e15794. PMID: PMC6913746
26. **Patel MD**, Honvoh G, Fernandez AR, Cadena R, Kelly ER, McDaniel P, Brice JH. Availability of Hospital Resources and Specialty Services for Stroke Care in North Carolina. *Southern Medical Journal*. 2019;112(6):331-337. PMID: PMC6640838.
25. Melnick ER, Jeffery MM, Dziura JD, Mao JA, Hess EP, Platts-Mills TF, Solad Y, Hyung Paek H, Martel S, **Patel MD**, Bankowski L, Lu CC, Brandt C, D'Onofrio G. User-Centered Clinical Decision Support to Implement Emergency Department-Initiated Buprenorphine for Opioid Use Disorder: Protocol for the Pragmatic Group Randomised EMBED Trial. *BMJ Open*. 2019;9:e028488. PMID: PMC6550013.
24. **Patel MD**, Platts-Mills TF, Grover JM, Thomas SM, Rossi JS. Feasibility of prehospital delivery of remote ischemic conditioning by emergency medical services in chest pain patients: protocol for a pilot study. *Pilot and Feasibility Studies*. 2019;5:42. PMID: PMC6415490.
23. Platts-Mills TF, Dayaa JA, Reeve BB, Krajick K, Mosqueda L, Haukoos JS, **Patel MD**, Mulford CF, McLean SA, Sloane PD, Travers D, Zimmerman S. Development of the Emergency Department Senior Abuse Identification (ED Senior AID) tool. *Journal of Elder Abuse & Neglect*. 2018;30:247-70. PMID: PMC6774613
22. Cuthbertson CC, Heiss G, Wright JD, Camplain R, **Patel MD**, Foraker RE, Matsushita K, Puccinelli-Ortega N, Shah AM, Kucharska-Newton AM. Socio-economic Status and Access to Care and the Incidence of a Heart Failure Diagnosis in the Inpatient and Outpatient Setting. *Annals of Epidemiology*. 2018;28:350-5. PMID: PMC5971162
21. Grover JM, Alabdrabalnabi T, **Patel MD**, Bachman MW, Platts-Mills TF, Cabanas JG, Williams JG. Measuring an Epidemic: Questioning the Use of Naloxone Administration as a Marker for Opioid Overdoses in a Large U.S. EMS System. *Prehospital Emergency Care*. 2018;22:281-9. PMID: 29297739
20. Williams BA, Chagin KM, Bash LD, Boden WE, Duval S, Fowkes FGR, Mahaffey KW, **Patel MD**, D'Agostino RB, Peterson ED, Kattan MW, Bhatt DL, Bonaca MP. External validation of the TIMI risk score for secondary cardiovascular events among patients with recent myocardial infarction. *Atherosclerosis*. 2018;272:80-6. PMID: 29579671
19. Namboodri BL, Rosen T, Dayaa JA, Ramadan N, **Patel MD**, Grover J, Brice JH, Platts-Mills TF. Elder Abuse Identification in the Prehospital Setting: An Examination of State EMS Protocols. *Journal of the American Geriatrics Society*. 2018;66:962-8. PMID: PMC5992078
18. Franklin JM, Donneyong MM, Desai RJ, Markson L, Girman CJ, McKay C, **Patel MD**, Mavros P, Schneeweiss S. Variation in adherence to medications across the healthcare system in two comparative effectiveness research cohorts. *Journal of Comparative Effectiveness Research*. 2017;6:613-25. PMID: 29039693
17. Evans CS, Platts-Mills TF, Fernandez AR, Grover JM, Cabanas JG, **Patel MD**, Vilke GM, Brice JH. Repeated Emergency Medical Services Use by Older Adults: Analysis of a Comprehensive Statewide Database. *Annals of Emergency Medicine*. 2017;70:506-15. PMID: PMC5614807
16. Bays HE, **Patel MD**, Mavros P, Ramey DR, Tomassini JE, Tershakovec AM, Baxter CA. Using Real-World Data to Assess Changes in Low-Density Lipoprotein Cholesterol and Predicted Cardiovascular

- Risk Following Ezetimibe Discontinuation After the ENHANCE Trial. *Journal of Clinical Lipidology*. 2017;11:929-37. PMID: 28647412
15. Vyas A, Bash LD, **Patel MD**, Simpson Jr RJ. Changes in Treatment Patterns and Incremental Healthcare Utilization Due to P2Y12–Associated Complications in Patients with Acute Coronary Syndrome. *Journal of Managed Care & Specialty Pharmacy*. 2017;23:947-56. PMID: 28854078
 14. **Patel MD**, Wu D, Reed Chase M, Mavros P, Heithoff K, Hanson ME, Simpson Jr RJ. Antiplatelet Therapy and Clinical Outcomes Following Myocardial Infarction Among Patients in an Employer-Based Insurance Database in the United States. *Journal of Managed Care & Specialty Pharmacy*. 2017;23:684-90. PMID: 28530518
 13. Kats D, **Patel MD**, Palta P, Gross AL, Meyer ML, Whitsel EA, Knopman D, Alonso A, Mosley TH, Heiss G. Social support and cognition in a community-based cohort: the Atherosclerosis Risk in Communities (ARIC) Study. *Age and Ageing*. 2016;45:475-80. PMCID: PMC5006245
 12. Meyer ML, Tanaka H, Palta P, **Patel MD**, Camplain R, Couper D, Cheng S, Al Qunaibet A, Poon AK, Heiss G. Repeatability of Central and Peripheral Pulse Wave Velocity Measures: The Atherosclerosis Risk in Communities (ARIC) Study. *American Journal of Hypertension*. 2016;29:470-5. PMCID: PMC4850900
 11. **Patel MD**, Kalbaugh CA, Chang PP, Matsushita K, Agarwal SK, Caughey MC, Ni H, Rosamond WD, Wruck LM, Loehr LR. Characteristics and Outcomes of Patients with Acute Decompensated Heart Failure Developing After Hospital Admission. *The American Journal of Cardiology*. 2014;114:1530-36. PMCID: PMC4253688
 10. Parks CG, Miller FW, Satoh M, Chan EKL, Andrushchenko Z, Birnbaum LS, Jusko TA, Kissling GE, **Patel MD**, Rose KM, Weinberg C, Zeldin DC, Sandler DP. Reproductive and hormonal risk factors for antinuclear antibodies (ANA) in a representative sample of U.S. women. *Cancer Epidemiology, Biomarkers & Prevention*. 2014;23:2492-502. PMCID: PMC4361940
 9. Gottesman RF, Rawlings A, Sharrett AR, Albert M, Alonso A, Bandeen-Roche K, Coker LH, Coresh J, Couper DJ, Griswold ME, Heiss G, Knopman DS, **Patel MD**, Penman AD, Selnes OA, Schneider ALC, Wagenknecht LE, Windham G, Wruck LM, Mosley TH. Impact of differential attrition in the association of education with cognitive change over 20 years of follow-up: The ARIC- Neurocognitive Study. *American Journal of Epidemiology*. 2014;179:956-66. PMCID: PMC3966720
 8. **Patel MD**, Brice JH, Moss C, Suchindran CM, Evenson KR, Rose KM, Rosamond WD. An Evaluation of Emergency Medical Services Stroke Protocols and Scene Times. *Prehospital Emergency Care*. 2014;18:15-21. PMCID: PMC3973028
 7. **Patel MD**, Brice JH, Evenson KR, Rose KM, Suchindran CM, Rosamond WD. Emergency Medical Services Capacity for Prehospital Stroke Care in North Carolina. *Preventing Chronic Disease*. 2013;10:130035. PMCID: PMC3767834
 6. Bang H, Chiu YL, Kaufman JS, **Patel MD**, Heiss G, Rose KM. Bias correction methods for misclassified covariates in the Cox model: comparison by simulation and application to a study with recalled childhood SES. *Journal of Statistical Theory and Practice*. 2013;7:381-400. PMCID: PMC3780447
 5. Foraker RE, **Patel MD**, Whitsel EA, Suchindran CM, Heiss G, Rose KM. Neighborhood socioeconomic disparities and 1-year case fatality after incident myocardial infarction: The Atherosclerosis Risk in Communities (ARIC) Community Surveillance (1992-2002). *American Heart Journal*. 2013;165:102-7. PMCID: PMC3523273

4. Schneider ALC, Sharrett AR, **Patel MD**, Alonso A, Coresh J, Mosley T, Selnes O, Selvin E, Gottesman RF. Education and Cognitive Change Over 15 Years: The Atherosclerosis Risk in Communities (ARIC) Study. *Journal of the American Geriatrics Society*. 2012;60:1847-53. PMID: PMC3662980
3. O'Brien EC, Rose KM, **Patel MD**, Murphy CV, Rosamond WD. Clinical Outcomes among Stroke Patients Receiving Tissue Plasminogen Activator Therapy Beyond the 3-hour Time Window. *Journal of Stroke and Cerebrovascular Diseases*. 2012;21:541-6. PMID: 21236701
2. **Patel MD**, Rose KM, Owens CR, Bang H, Kaufman JS. Performance of Automated and Manual Coding Systems for Occupational Data: A Case Study of Historical Records. *American Journal of Industrial Medicine*. 2012;55:228-31. PMID: PMC3316486
1. **Patel MD**, Rose KM, O'Brien EC, Rosamond WD. Prehospital Notification by Emergency Medical Services Reduces Delays in Stroke Evaluation: Findings from North Carolina Stroke Care Collaborative. *Stroke*. 2011;42:2263-8. PMID: PMC3970287

Invited Commentaries, Editorials, and Letters

6. Rosamond WD, Kucharska-Newton AM, Jones SB, Psioda MA, Lutz BJ, Johnson AM, Coleman SW, Schilsky S, **Patel MD**, Duncan PW. Emergency department utilization after hospitalization discharge for acute stroke: The COMprehensive Post-Acute Stroke Services (COMPASS) study. *Academic Emergency Medicine*. 2022;29:369-71. PMID: 34657341.
5. Wong E, Rosamond W, **Patel MD**, Waller AE. Statewide declines in myocardial infarction and stroke emergency department visits during COVID-19 restrictions in North Carolina. *The American Journal of Emergency Medicine*. 2022;56:288-9. PMID: PMC8295045.
4. Wooten J, Benedyk K, **Patel M**, DeFranco M, Pettigrew E, Grover J. EMS incorporation in mass-vaccination: A feasibility study. *The American journal of emergency medicine*. 2021;49:424-5. PMID: PMC7906871.
3. **Patel MD**, Namboodri BL, Platts-Mills TF. Modernizing Informed Consent During Emergency Care. *Annals of Emergency Medicine*. 2020;76:350-2. PMID: 31959535
2. **Patel MD**. The Role of Emergency Medical Dispatch in Responding to Acute Stroke – Expanding Beyond High Priority Dispatch? *Prehospital Emergency Care*. 2018;22:99-100. PMID: 28657797
1. Meyer ML, Tanaka H, Palta P, **Patel MD**, Camplain R, Couper D, Cheng S, Qunaibet AA, Poon AK, Heiss G. Response to “Repeatability of Different Segmental Pulse Wave Velocity Measurements”. *American Journal of Hypertension*. 2016;29:890. PMID: PMC6267860

Published Abstracts

35. **Patel MD**, Brown AB, Kebede ES, North Carolina Stroke Advisory Council Survey WorkGroup. Abstract WP87: Statewide Availability Of Acute Stroke Treatment And Services In North Carolina Hospitals. *Stroke*. 2022 Feb;53(Suppl_1):AWP87.
34. Williams JG, **Patel MD**, Bachman MW, Cyr JM, Cabanas JG, Brice JH. Prehospital Fluid Administration for Suspected Sepsis in an Urban EMS System. *Prehospital Emergency Care*. 2022;26(1):129.
33. **Patel MD**, Chari SV, Cui ER, Fernandez AR, Winslow JE, Jauch EC, Brice JH. Community

- Socioeconomic and Urban-Rural Disparities in EMS Prenotification of Stroke in North Carolina. Prehospital Emergency Care. 2022;26(1):152.
32. *Chari SV, Cui ER, Fehl HE, Fernandez AR, Brice JH, **Patel MD**. Community Socioeconomic and Urban-Rural Differences in Emergency Medical Services Time Intervals for Suspected Stroke Patients in North Carolina. *Circulation*. 2021 Nov 16;144(Suppl_1):A10319.
 31. Mendoza C, Lucke A, Barletson P, Mehrotra A, Bohrmann T, **Patel M**, Seaman C. [308] Implementation of an influenza vaccination program is a feasible and effective public health tool in the emergency department. *Annals of Emergency Medicine*. 2021 Oct;78(4S):S125.
 30. Liu A, **Patel MD**, Gross AL, Mosley T, Rawlings A, Schneider AL, Kucharska-Newton A, Sharrett AR, Gottesman RF, Koton S. Retirement Age And 20-year Cognitive Decline: The Atherosclerosis Risk In Communities Neurocognitive Study. *Circulation*. 2021;143(Suppl_1):AP001.
 29. Wong E, Rosamond WD, **Patel MD**, Waller A. Declines In Acute Myocardial Infarction And Stroke Emergency Department Visits Observed During Covid-19 Restrictions In North Carolina. *Circulation*. 2021;143(Suppl_1):A045.
 28. Avoke D, Wilson SE, **Patel MD**, Burnett NM, Huang DY. Factors Contributing to The Incidence of Intracerebral Hemorrhage After Acute Ischemic Stroke Treatment in Older Adults. *Journal of the American Geriatrics Society* 2020;68:S177-S178.
 27. Kucharska-newton A, Palta P, **Patel MD**, Coker L, Meyer ML, Koton S, Mosley T, Heiss GM. Occupational Complexity and Childhood Socioeconomic Environment Influence Mid-to-Late-Life 20-year Change in Cognitive Function; The Atherosclerosis Risk in Communities (ARIC) Study. *Circulation*. 2020;141(Suppl_1):AMP65.
 26. Zègre-Hemsey JK, **Patel M**, Edwards T, Brice J, Pelter MM, Stouffer G, Rosamond W. Methods of Interpreting Prehospital Electrocardiograms in North Carolina: A Statewide Report. *Journal of Electrocardiology*. 2019;57:S117-8.
 25. *Stemerman R, Bunning T, Grover J, **Patel M**. Automated Machine Learning Classification of Eligibility Status Using EMS Clinical Notes to Identify Patients for Multi-Site Prehospital Trials. *Prehospital Emergency Care*. 2019;23(1):100.
 24. **Patel M**, Chadwick B, Lucke A, Grover J, Stemerman R, Platts-Mills T, Rossi J. Tolerability of Remote Ischemic Conditioning in Chest Pain Patients Transported by Emergency Medical Services. *Prehospital Emergency Care*. 2019;23(1):134.
 23. **Patel M**, Honvoh G, Fernandez A, Zegre-Hemsey J, Grover J, Brice J. Urban-Rural Differences in Prehospital Time Intervals for Suspected ST-Elevation Myocardial Infarction Patients in North Carolina. *Prehospital Emergency Care*. 2019;23(1):136.
 22. Leeper S, Lahri S, Myers J, **Patel M**, Martin IBK, Van Hoving DJ. Assault-Injured Youth in the Emergency Centers of Khayelitsha, South Africa: Population Characteristics and Opportunities for Intervention. *Annals of Emergency Medicine*. 2017;70(4 Suppl):S65-6.
 21. Kucharska-Newton A, **Patel M**, Palta P, Mosley TH, Heiss G. Mid-Life Neighborhood Socioeconomic Status and 20-Year Change in Cognition: The ARIC-NCS Study. *Innovation in Aging*. 2017;1(Suppl 1):802.
 20. Chagin KM, Kattan MW, Williams BA, Milinovich A, Bauman JN, **Patel MD**, Bash LD. Validation of the

- TRA2°P TIMI50 Risk Score for Predicting Cardiovascular Events in Real World Patients. *Circulation*. 2016;134(Suppl 1):A15025.
19. Vyas A, Bash LD, **Patel MD**, Simpson RJ. Changes in Treatment Patterns and Incremental Healthcare Utilization Due to P2Y12 Associated Disorders in Patients With Acute Coronary Syndrome. *Circulation*. 2016;134(Suppl 1):A13834.
 18. Franklin JM, Donneyong MM, Desai RJ, **Patel MD**, Mavros P, Markson L, McKay C, Schneeweiss S. Confounding by Healthcare System Characteristics in Comparative Effectiveness Research. *Pharmacoepidemiology and Drug Safety*. 2016;25(Suppl 3):24.
 17. Franklin JM, Donneyong MM, Desai R, Markson L, Girman C, McKay C, **Patel MD**, Mavros P, Schneeweiss S. Variation in Medication Adherence across the Health Care System in Comparative-Effectiveness Research Studies. *Value in Health*. 2016;19(3):A43.
 16. Bash LD, **Patel MD**, Mavros P. Real World Outcomes in Acute and Chronic Stable Myocardial Infarction Patients. *Journal of the American College of Cardiology*. 2016;67(13 Suppl):584.
 15. Palta P, **Patel M**, Griswold M, Kucharska-Newton A, Windham BG, Snyder ML, Capistrant B, Heiss G. Neighborhood Socioeconomic Status and Physical Function in Late Life: The Atherosclerosis Risk in Communities (ARIC) Study. *Circulation*. 2015;131(Suppl 1):AP279.
 14. Snyder M, Tanaka H, Palta P, **Patel M**, Camplain R, Couper D, Cheng S, Al Qunaibet A, Poon AK, Heiss G. Repeatability of Pulse Wave Velocity: The Atherosclerosis Risk in Communities (ARIC) Study. *Circulation*. 2015;131(Suppl 1):AP183.
 13. Cuthbertson C, Kucharska-Newton A, **Patel M**, Camplain R, Foraker R, Wruck L, Folsom A, Puccinelli-Ortega N, Matsushita K, Heiss G. Associations of Socio-Economic and Access to Care Factors with Inpatient and Outpatient Heart Failure. The ARIC Study. *Circulation*. 2015;131(Suppl 1):AMP60.
 12. **Patel MD**, Brice JH, Moss C, Suchindran CM, Evenson KR, Rose KM, Rosamond WD. Association of Emergency Medical Services Stroke Protocols with Minimizing On-Scene Time for Stroke Patients. *Cardiovascular Quality and Outcomes*. 2013;6(Suppl 1):A210.
 11. **Patel MD**, Gottesman R, Mosley T, Schneider ALC, Selnes O, Coresh J, Sharrett AR. Association of Midlife Occupation and Cognitive Performance: The Atherosclerosis Risk in Communities Study. *American Journal of Epidemiology*. 2012;175(Suppl 11):S92.
 10. Kucharska-Newton A, Jones S, Handler L, Kalbaugh C, O'Brien E, **Patel M**, Fares Wassim, Platts-Mills T, Rosamond W. Gender Differences in Functional Status Following Myocardial Infarction. A Systematic Review of the Literature. *Circulation: Cardiovascular Quality and Outcomes*. 2012;5(Suppl 1):A68.
 9. **Patel MD**, Brice JH, Rosamond WD. Bypass of Local Acute Care Facilities for Primary Stroke Centers in North Carolina. *Circulation: Cardiovascular Quality and Outcomes*. 2011;4(Suppl 2):AP266.
 8. **Patel MD**, Suchindran CM, Rose KM, Whitsel EA. Spatiotemporal Analysis of Incident Myocardial Infarction and Neighborhood Socioeconomic Status. *American Journal of Epidemiology*. 2010;171(Suppl):S161.
 7. O'Brien EC, Rose KM, **Patel MD**, Rosamond WD. Hospital and Patient Factors Associated with Defect-Free Care in Acute Stroke Patients: The North Carolina Stroke Care Collaborative (NCSCC).

- American Journal of Epidemiology. 2010;171(Suppl 11):S130.
6. Rose KM, Bang H, Kaufman JS, Heiss G, Owens CR, **Patel MD**. Concordance of Father's Occupation Recalled in Adulthood with that Recorded on Birth Certificates and Census Records. American Journal of Epidemiology. 2010;171(Suppl 11):S112.
 5. Owens CR, Bang H, Kaufman JS, Heiss G, **Patel MD**, O'Brien KA, Rose KM. Historical Records as a Source of Childhood Socioeconomic Status: Feasibility and Data Quality. American Journal of Epidemiology. 2010;171(Suppl 11):S54.
 4. **Patel MD**, Rose KM, Suchindran CM, Whitsel EA, Wood JL. Incorporating Spatial Autocorrelation in Models of the Association Between Neighborhood Socioeconomic Status and Incident Hospitalized Myocardial Infarction: The Atherosclerosis Risk in Communities Surveillance Study. Circulation. 2009;119(10):E351.
 3. Nelsen LM, **Patel MD**. Depressive Symptoms among Adults with Asthma and Other Respiratory Conditions, the National Health and Nutrition Examination Survey, 2005–2006. American Journal of Respiratory and Critical Care Medicine. 2009;179:A2187.
 2. Rose KM, **Patel MD**, Whitsel EA, Suchindran C, Heiss G, Ni H. Neighborhood socioeconomic status (SES) and one-year case fatality after incident myocardial infarction (MI): The Atherosclerosis Risk in Communities (ARIC) community surveillance. American Journal of Epidemiology. 2008;167(Suppl 11):S70
 1. **Patel MD**, Rose KM, Owens CR, Bang H, Kaufman JS. Evaluation of Automated Coding to Classify Occupations on Historical Records. American Journal of Epidemiology. 2008;167(Suppl 11):S127

Unpublished Oral Presentations (presenting author only)

5. **Patel MD**, Thompson J, Lewis E. Utility of the Vision, Aphasia, Neglect Assessment to Screen for Large Vessel Occlusion Stroke: Early Experiences and Lessons Learned. 2020 American Heart Association Southeast Heart & Stroke Quality Summit, Raleigh, NC, April 23, 2020 (canceled due to COVID-19)
4. **Patel MD**, Capistrant B, Palta P, Snyder M, Mosley T, Coker L, Heiss G. Lifetime Socioeconomic Position and Cognitive Decline: The ARIC Neurocognitive Study. The 47th Annual Society for Epidemiologic Research Meeting, Seattle, WA, June 25, 2014.
3. **Patel MD**, Rose KM, O'Brien EC, Rosamond WD. Hospital Pre-notification by Emergency Medical Services May Reduce Delays in Stroke Evaluation. National Heart, Lung and Blood Institute Trainee Session on Epidemiology, Biostatistics, and Prevention, San Francisco, CA, March 3, 2010.
2. **Patel MD**, Thompson S, Gearing J. Using the Georgia Behavioral Risk Factor Surveillance System (BRFSS) to help Achieve Arthritis Program Goals. The 7th Annual Arthritis Grantees Meeting and Conference, San Diego, CA, April 5, 2006.
1. **Patel MD**, Kanny D. Georgia's Progress toward Healthy People 2010 Goals. The 76th Georgia Public Health Association Annual Meeting and Conference, Savannah, GA, December 14, 2005.

TEACHING ACTIVITIES

Courses

Mentor, Science of Medicine (MTEC 405) – 2 students

Spring 2021

School of Medicine, University of North Carolina at Chapel Hill

Mentor, Undergraduate Research Consulting Team (IDST 195) – 3 students, University of North Carolina at Chapel Hill Fall 2019-Spring 2020

Mentor, Research Topics in Emergency Medicine (ERMD 405) – 1 student School of Medicine, University of North Carolina at Chapel Hill Summer 2018

Co-Instructor, Clinical Epidemiology and Evidence-Based Medicine (MEDI 220), Department of Social Medicine, University of North Carolina at Chapel Hill Fall 2011

Teaching Assistant, Theory and Quantitative Methods in Epidemiology (EPID 715), Department of Epidemiology, University of North Carolina at Chapel Hill Spring 2010

Invited Seminars and Lectures

“Randomized Controlled Trials: Principles of Design and Analysis”
UNC EMS Fellowship Didactics, Chapel Hill, NC – 8/18/2020, 7/13/2021, 8/9/2022

“Overview of Statistics”
UNC Pediatric Emergency Medicine Fellowship Conference, Chapel Hill, NC – 3/12/2020, 5/12/2022

“Regionalization of Acute Stroke Care: A Systems Modeling Approach”
Vanderbilt Biostatistics Seminar Series (virtual) – 5/11/2022

“The Joint Impact of COVID-19 Vaccination and Non-Pharmaceutical Interventions on Infections, Hospitalizations, and Mortality: An Agent-Based Simulation”
NC COVID Surveillance Network Meeting (virtual) – 2/1/2021

“Ethics in Research: Principles of Research with Human Subjects”
UNC Pediatric Emergency Medicine Fellowship Conference, Chapel Hill, NC – 8/13/2020

“Introduction to Research”
UNC EMS Fellowship Didactics, Chapel Hill, NC – 8/8/2017, 9/4/2018, 9/9/2019

“Ethics in Research”
UNC EMS Fellowship Didactics, Raleigh, NC – 12/18/2018

“Regionalization of Acute Stroke Care: Time for Redesign?”
Cardiovascular Disease Seminar, Department of Epidemiology, Chapel Hill, NC – 11/7/2017

“Introduction to Statistical Analysis”
UNC EMS Fellowship Didactics, Chapel Hill, NC – 2/28/2017

“Confounding by health system characteristics in comparative effectiveness research”
Merck-UNC-GSK Methods Workshop, North Wales, PA – 10/28/2015

“Accounting for bias due to differential attrition in longitudinal aging studies: an example of socioeconomic position and cognitive decline in the ARIC Neurocognitive Study”
Cardiovascular Disease Seminar, Department of Epidemiology, Chapel Hill, NC – 3/25/2014

“Brain Reserve and Cognitive Decline in Older Adults”
Cardiovascular Disease Seminar, Department of Epidemiology, Chapel Hill, NC – 2/14/2011

Other

Preceptor, MPH Practicum, Gillings School of Global Public Health, UNC-Chapel Hill

Mahesh Pinapaka
Austin Lucke
Benjamin Quigley

Summer 2022
Spring 2021
Spring 2018

Preceptor, MPH Practicum, University of Rochester Medical Center
Srihari Chari

Fall 2021

Reader, Master's Paper, Gillings School of Global Public Health, UNC-Chapel Hill

Austin Lucke
Benjamin Quigley

July 2021
July 2018

Supervisor, Federal Work Study/Institutional Research Initiative for Students, UNC-Chapel Hill

Esther Mun, Krishna Patel
Alexandra Beja-Glasser, Krishna Patel

Fall 2019-Spring 2020
Fall 2018-Spring 2019

Mentor, Carolina Medical Student Research Program, UNC-Chapel Hill

Benjamin Gold
Bryan Chadwick, Austin Lucke

Summer 2019
Summer 2018

GRANT SUPPORT**Active**

R03HS029078

PI: Patel

8/1/2022-7/31/2023

AHRQ

"Understanding and Addressing Disparities in Triage and Disposition Decisions in the Emergency Department"

This pilot project uses existing electronic health record data from multiple diverse EDs and advanced statistical and machine learning methods to investigate gender, racial, and ethnic disparities in ED triage and hospital admission decisions. This Learning Health System embedded research integrates scientific evidence, internal data, and stakeholder engagement to improve equity of healthcare delivery in the ED.

Project Support

PI: Patel

8/1/2021-7/31/2023

Laerdal Foundation

"Improving Acute Stroke Care Workflows Across the Chain of Survival"

This pilot project will employ qualitative research methods to obtain stakeholder input on acute stroke workflows and potential interventions to improve the timeliness of care. This research will contribute generalizable knowledge on comprehensive strategies for advancing acute stroke care across the chain of survival.

KL2TR002490

PI: Weinberger

5/1/2020-6/30/2023

NIH/NCATS

North Carolina Translational and Clinical Science Institute (NC TraCS)

"Computer Simulation Modeling to Optimize Regional Stroke Systems of Care"

The overall goal of the KL2 Program is to train junior faculty to compete successfully as leaders in translational research. The KL2 program has two overarching goals: (1) Train KL2 Scholars to apply their disciplinary expertise to translational science and equip them with the strategic thinking and management skills needed to create and sustain transformative interdisciplinary research programs in a rapidly changing

environment and (2) provide KL2 Scholars with the skills to mentor members of their own research teams, their peers, as well as the next generation of translational scientists.

Role: Scholar

UG3DA047003/UH3DA047003
NIH NIDA

PIs: Melnick,
D'Onofrio

4/1/2018-3/31/2023

“EMBED: Pragmatic trial of user-centered clinical decision support to implement EEmergency department-initiated BuprenorphinE for opioid use Disorder”

The goal of this multicenter project is to develop a user-centered clinical decision support tool for emergency department-initiated buprenorphine treatment. Then we will implement and test its effectiveness in a pragmatic trial.

Role: Co-I

The LifeFlow Resuscitation Research Grant
Emergency Medicine Foundation/410 Medical

PI: Brice

5/1/2021-10/31/2022

“Early fluid resuscitation by emergency medical services in patients with sepsis: a comparative effectiveness and implementation study of the LifeFlow device”

This project aims to evaluate the effectiveness of the LifeFlow fluid delivery device and to assess its implementation into routine prehospital care for septic patients.

Role: Co-I

Completed

NU38OT000297-02
CDC/CSTE

PI: Swann

10/1/2020-12/31/2021

“Integrated Systems Model to Inform State and Local Planning for the COVID-19 Pandemic”

This project was awarded for participation in the Development of Forecasts and Mathematical Models for COVID-19 to Inform Public Health Decision Making through a cooperative agreement with the CDC and Council for State and Territorial Epidemiologists.

Role: Co-I

COVID-19 Pilot Grant

PIs: Patel, Mayorga

8/1/2020-7/31/2021

North Carolina Translational and Clinical Sciences Institute (NC TraCS)

“Integrated Systems Model to Inform State and Local Planning for the COVID-19 Pandemic”

This funding will support the development of an integrated simulation model that captures both COVID-19 spread at the North Carolina census tract-level and the resulting load on the healthcare system and that can be used to inform high-priority policy and operational decisions at the local and state levels.

University Research Council Research Grant
UNC Office of Research Development

PI: Patel

7/1/2018-12/31/2020

“A Mixed Methods Study of Remote Ischemic Conditioning Delivered by Emergency Medical Services in the Prehospital Setting”

Funding from this small grant will supplement funds from the \$5k-\$50k pilot grant to assess the feasibility of prehospital remote ischemic conditioning

\$5k-\$50k Pilot Grant

PI: Patel

2/1/2018-7/31/2019

The North Carolina Translational and Clinical Sciences (NC TraCS) Institute

“A Mixed Methods Study of Remote Ischemic Conditioning Delivered by Emergency Medical Services in the Prehospital Setting”

This funding supported a mixed-methods study of the feasibility of delivery remote ischemic conditioning in the prehospital setting.

Junior Faculty Development Award

PI: Patel

1/1/2017-12/31/2017

UNC Office of the Executive Vice Chancellor and Provost

“Feasibility of Remote Ischemic Conditioning in the Prehospital Setting During Acute Myocardial Infarction”
This funding supported the collection of pilot data on the feasibility of administering remote ischemic conditioning in the prehospital setting.

5 T32 HL 7055 PI: Rosamond 9/9/2013-9/7/2014
NIH NHLBI

Cardiovascular Disease Epidemiology and Biostatistics Training Program

This training grant provided opportunities to develop manuscripts in the fields of cardiovascular and cognitive health as an independent investigator and collaborator, prepare an R01 submission on the role of lifetime socioeconomic position in cognitive aging, and participate in related research and teaching activities.
Role: Postdoctoral trainee

5 T32 HL 7055 PI: Heiss 1/12/2009-1/11/2012
NIH NHLBI

Cardiovascular Disease Epidemiology and Biostatistics Training Program

This training grant provided opportunities to develop manuscripts in the field of cardiovascular epidemiology in collaboration with faculty and other investigators. My dissertation work during this traineeship investigated emergency medical services capacity for prehospital stroke care in North Carolina.
Role: Predoctoral trainee

PROFESSIONAL SERVICE

To Discipline

Ad Hoc Reviewer

Journals: American Heart Journal, American Journal of Cardiology, American Journal of Epidemiology, Annals of Emergency Medicine, BMC Emergency Medicine, BMJ Open, Cerebrovascular Diseases, Circulation, Diabetic Medicine, International Journal of Stroke, JAMA Network Open, Journal of Clinical Trials, Journal of the Royal Statistical Society, PCORI, Prehospital Emergency Care, Preventing Chronic Disease, Quality of Life Research, Traffic Injury Prevention, Wellcome Open Research

Conference Abstracts: American College of Emergency Physicians Research Forum (2017-2020), International Society for Pharmacoeconomics and Outcomes Research Annual European Congress (2015), National Association of EMS Physicians (2021-2022), Society for Epidemiologic Research Annual Meeting (2014, 2017)

Professional Memberships

American Heart Association (2008 – present)

National Association of EMS Physicians, Research Committee member (2019 – present)

Society for Medical Decision Making (2022 – present)

Within UNC-Chapel Hill

Full Board member, Institutional Review Board Committee (3/2018-3/2020)

Study section member, Carolina Medical Student Research Program (2018, 2019)

Within Department

Core faculty, Department of Emergency Medicine EMS Fellowship (8/2019 – present)

Member, Department of Emergency Medicine Research Committee (9/2016 – present)