

## RISHI J. DESAI, MS, PhD

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Boston, MA 02120

## Academic appointments

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**Assistant Professor of Medicine**

2019 - Present

**Instructor in Medicine**

2015 - 2019

Division of Pharmacoepidemiology and Pharmacoeconomics,  
Harvard Medical School/Brigham & Women's Hospital, Boston, MA

## Education & Training

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**Postdoctoral Fellowship**

2013 - 2015

Division of Pharmacoepidemiology and Pharmacoeconomics,  
Harvard Medical School/Brigham & Women's Hospital, Boston, MA

**PhD, Pharmaceutical Sciences**

2009 - 2013

University of North Carolina, Chapel Hill, NC

**MS, Pharmacy Administration**

2007 - 2009

University of Houston, Houston, TX

**BS, Pharmacy**

2003 - 2007

Sardar Patel University, Vidhyanagar, India

## Publications (Selected from >130)

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### Evaluations of medication safety and effectiveness

1. Spoendlin J, Paik JM, Tsacogianis T, Kim SC, Schneeweiss S, **Desai RJ**. Cardiovascular Outcomes of Calcium-Free vs Calcium-Based Phosphate Binders in Patients 65 Years or Older With End-stage Renal Disease Requiring Hemodialysis. *JAMA Intern Med*. 2019 May 06. PMID: 31058913.
2. Khosrow-Khavar F, Kim SC, Lee H, Lee SB, **Desai RJ**. Tofacitinib and risk of cardiovascular outcomes: results from the Safety of Tofacitinib in Routine care patients with Rheumatoid Arthritis (STAR-RA) study. *Ann Rheum Dis*. 2022. 81(6):798-804. PMID: 35027405.
3. **Desai RJ**, Patorno E, Vaduganathan M, Mahesri M, Chin K, Levin R, Solomon SD, Schneeweiss S. Effectiveness of angiotensin-neprilysin inhibitor treatment versus renin-angiotensin system blockade in older adults with heart failure in clinical care. *Heart*. 2021. 107(17):1407-1416. PMID: 34088766.

### Assessments of medication use in routine clinical care

1. **Desai RJ**, Sarpatwari A, Gautam N, Lii J, Fischer MA, Gagne JJ. Changes in Utilization of Generic Angiotensin Receptor Blockers Following Product Recalls in the United States. *JAMA*. 2020 01 07; 323(1):87-89. PMID: 31910271.
2. Zhuo M, Paik JM, Tsacogianis TN, **Desai RJ**. Use of Anticoagulants and Dosing Appropriateness of Apixaban for New-Onset Atrial Fibrillation Among Hemodialysis Patients. *Am J Kidney Dis*. 2022 Jun; 79(6):909-912. PMID: 34571068.
3. **Desai RJ**, Hernandez-Diaz S, Bateman BT, Huybrechts KF. Increase in prescription opioid use during pregnancy among Medicaid-enrolled women. *Obstet Gynecol*. 2014 May; 123(5):997-1002. PMID: 24785852.

### Epidemiologic methods

1. **Desai RJ**, Rothman KJ, Bateman BT, Hernández-Diaz S, Huybrechts KH. A Propensity-score-based Fine Stratification Approach for Confounding Adjustment When Exposure Is Infrequent. *Epidemiology*. 2017 Mar;28(2):249-257. PubMed PMID: 27922533.

2. **Desai RJ**, Glynn RJ, Wang S, Gagne JJ. Performance of Disease Risk Score Matching in Nested Case-Control Studies: A Simulation Study. *Am J Epidemiol*. 2016 May;183(10):949-957. PubMed PMID: 27189330.
3. **Desai RJ**, Levin R, Lin KJ, Patorno E. Bias Implications of Outcome Misclassification in Observational Studies Evaluating Association Between Treatments and All-Cause or Cardiovascular Mortality Using Administrative Claims. *J Am Heart Assoc*. 2020 09; 9(17):e016906. PMID: 32844711.

#### Applied machine learning and predictive analytics

1. **Desai RJ**, Wang SV, Vaduganathan M, Evers T, Schneeweiss S. Comparison of Machine Learning Methods With Traditional Models for Use of Administrative Claims With Electronic Medical Records to Predict Heart Failure Outcomes. *JAMA Netw Open*. 2020 01 03; 3(1):e1918962. PMID: 31922560.
2. **Desai RJ**, Lin KJ, Patorno E, Barberio J, Lee M, Levin R, Evers T, Wang SV, Schneeweiss S. Development and Preliminary Validation of a Medicare Claims-Based Model to Predict Left Ventricular Ejection Fraction Class in Patients With Heart Failure. *Circ Cardiovasc Qual Outcomes*. 2018 12; 11(12):e004700. PMID: 30562067.
3. Cheng F,\* **Desai RJ**,\* Handy DE, Wang R, Schneeweiss S, Barabási AL, Loscalzo J. Network-based approach to prediction and population-based validation of in silico drug repurposing. *Nat Commun*. 2018 07 12; 9(1):2691. PMID: 30002366 (\*Cheng and Desai- joint first authors).

## Teaching

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#### Harvard TH Chan School of Public Health

EPI235 Epidemiologic Methods for Health Services Research (Co-instructor)

EPI253 Effectiveness Research with Longitudinal Healthcare Databases (Primary instructor)

#### Boston University School of Public Health

EP748 Drug Epidemiology (Primary instructor)

## Selected Research Funding

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National Institute on Aging, Drug Repurposing for Effective Alzheimer's Medicines (DREAM) Study 2019-2023  
Role: Principal Investigator

Food and Drug Administration, Sentinel Innovation Center 2019-2023  
Role: Operations Chief

## Professional activities

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**Journal peer reviewer (Selected out of >30):** Annals of Internal Medicine, Arthritis & Rheumatology, British Medical Journal, Epidemiology, JAMA Cardiology, New England Journal of Medicine, JAMA Network Open (Statistical Reviewer)

**Journal Editorial Board:** BMC Medical Research Methodology

## Selected Awards and Honors

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NHLBI Big Data Analysis Challenge Award 2020  
Chair's Research Award, Department of Medicine, Brigham & Women's Hospital 2015  
Graduate Education Advancement Board Impact Award, UNC Chapel Hill 2013