

# Naomi C. Sacks, Ph.D.

VICE PRESIDENT AND PRINCIPAL SCIENTIST PHARMACEUTICAL COMMERCIALIZATION PRACTICE

# CONTACT INFORMATION

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# PROFESSIONAL PROFILE

Dr. Naomi Sacks is a health economics and outcomes researcher who brings to the BlueRidge Life Sciences Pharmaceutical Commercialization Practice a three-decade career in both academia and the private sector. Dr. Sacks leads research on emerging and current therapies for pharmaceutical, biotech, and medical device clients. She works closely with clients to develop robust and innovative solutions to their challenges, and to generate evidence that demonstrates the value of their therapies. Dr. Sacks' experience with US and EU data (including claims, electronic health record [EHR], chart, survey, and registry data) enables her to work with clients to identify optimal data sets and robust methodological approaches for studies of rare, ultra-rare, and more prevalent diseases. She also uses her knowledge of the market to develop and test strategic recommendations for evidence generation. Dr. Sacks has a track record of publications and academic conference presentations on healthcare resource use and costs, treatment patterns, clinical outcomes, economic models, and prevalence and incidence in a range of therapeutic areas.

In the academic arena, Dr. Sacks is an adjunct faculty member in Public Health and Community Medicine at Tufts University (Boston), which has included service as the Course Director for the Health Economics full-semester course. She has also been an instructor and project director in the Department of Quantitative Health Sciences, University of Massachusetts (Worcester).









# EDUCATION AND DEGREES EARNED

Ph.D., Health Services Research Boston University

M.A., Social Anthropology Harvard University

B.A., Anthropology Brandeis University

## PROFESSIONAL HONORS/AWARDS

2015–2018 Member, Advisory Committee, Academy Health, Health Disparities Interest Group

- June 2016 Discussant, Academy Health Annual Research Meetings Health Disparities Interest Group research presentations, Boston, MA
- March 2016 Guest Lecturer, University of Florida College of Pharmacy. As faculty for on-site training sessions for graduate students in online master's degree programs, gave presentation on "Measuring Value and Price: New Maps for Navigating Paths to Value"
- 2008–2018 Guest Lecturer, Advanced Health Services Research Methods (HPM 821), Boston University School of Public Health
- Spring 2009 President, Boston University Academy Health Student Chapter

## PROFESSIONAL ASSOCIATIONS

2015–Present International Society for Pharmacoeconomics and Outcomes Research (ISPOR)

## JOURNAL REVIEWER

American Journal of Managed Care Clinical Therapeutics Health Economics Health Services Research Journal of General Internal Medicine Journal of Managed Care Pharmacy Medical Care Value in Health



# SELECTED PROFESSIONAL EXPERIENCE

## Health Economist and Senior Corporate Management

Led health economics and outcomes research on emerging and current therapies for pharmaceutical, biotech, and medical device, and diagnostics clients

Ensured successful implementation of robust research through study design, project management, analysis, interpretation, and dissemination of analytic results

Led evidence strategy assessments and supported multi-stakeholder advisory boards and workshops reviewing product value evidence

Worked cross-functionally with economic modeling, pricing, and market access, and with other teams, to provide strategic guidance and develop health economics and outcomes (HEOR) evidence

Worked closely with business development staff to develop proposals and provide actionable solutions to customers

Provided oversight for team finances and operations, hiring, and planning

Managed team of junior researchers and analytic programmers

Research projects included retrospective studies using multiple data sources (e.g., adjudicated claims, open-source claims, EMR, clinical trial, survey, registry), evidence gap analyses and recommendations, targeted literature reviews, and data landscape assessments

Disease areas included:

- Rare genetic diseases (AMN, EB, XLMTM, ADA-SCID, MLD, Fabry disease)
- Other rare and ultra-rare diseases (NCFB, bronchiolitis obliterans syndrome [BOS], acquired hemophilia A, clostridioides difficile)
- Other therapeutic areas (e.g., cardiac arrhythmias, diabetes, NASH/NAFLD, chronic pain, obesity, acute myeloid leukemia, oncology).

## Analytics Operations and Management

Provided leadership and project management for multiple analytic projects using PharMetrics Plus database and Health National Prescription Audit (NPA) data sources. Health plan claims output included risk assessment, generated using DxCG and other risk adjustment tools, and disease identification and episode grouping based on Symmetry Episode Treatment Groups (ETGs). Projects included:

- Cost and utilization estimates for:
  - Common and/or costly diseases and conditions (e.g., diabetes, asthma, COPD, acute myocardial infarction, stroke, cancers, multiple sclerosis, hepatitis C)
  - Medical procedures, tests, and visits
  - Patient cohorts using targeted specialty medications
- Setting level variations in specialty drug administration reimbursements
- Provider attribution methods and development of provider-level cost estimates for medical procedures and tests
- Development of disease models for multiple chronic and acute conditions



• Research proposals, analytic plans, and study implementations for private health plan and pharmaceutical customers

Other project work included:

- Evaluation of risk assessment tools (e.g., DxCG, HCC, CDS)
- Identifying and documenting measures used in quality measurement
- Identifying payer incentives intended to influence physician prescribing behavior.

# Quality Assurance

Working with multiple university researchers and NIH staff, developed plans for a database incorporating data from behavioral, neuro-imaging, and genetic trials focused on autism

Assisted with protocol, questionnaire, and measure development for multi-site clinical trials

Managed DSMB submissions for all research projects; ensured research sites' compliance with regulatory agencies, including local IRBs

Responsible for analysis of health claims and other medical data sets, including study of diabetic foot ulcers (AnVil)

Coordinated work for team of data analysts, statisticians, physicians, and life scientists; managed SBIR grant proposals; established quality control procedures for data analysis (AnVil)

Responsible for quality assurance for decision support software and life sciences content, including a proprietary taxonomy of therapeutic areas and mechanisms of action

Worked as Manager of Quality Assurance for multiple software companies, developing quality control and validation processes, working both individually and as a team and project manager; extensive experience in software, technology, and programming supported future work in health services research

## Academia

Adjunct Faculty, Tufts University School of Medicine, Public Health and Community Medicine, Boston MA. Course director for Health Economics introductory full-semester course (through 2021).

Instructor and Project Director, Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester MA.

- Directed research on trends in acute myocardial infarction (AMI) hospitalizations and outcomes in elderly Medicare beneficiaries, including trends in AMI hospitalization rates and mortality, and secular changes in coding and hospital responses to payment and quality reporting incentives.
- Examined impact of MEPS and MCBS methods on estimates of disease prevalence and expenditures.

Provided technical assistance with SAS programming during lab sessions

Reviewed and provided input into research design and research in progress

Assisted primary author with book on child health advocacy, *Child Health in America*; provided research support in child community health topics, including the prevalence of childhood diseases, and racial disparities in children's health, infant mortality, and contemporary children's health issues (travel medicine, HIV/AIDS, obesity).



Dr. Sacks conducted her dissertation research while employed by a private firm, and her use of longitudinal prescription data led to three papers:

- Effects of cost sharing in Medicare Part D benefit on adherence to branded vs. generic oral anti-diabetics
- Methods for estimating effects of cost sharing on concurrent adherence (i.e., adherence to medications prescribed for use together)
- Effects of Medicare Part D non-linear benefit design on adherence to oral anti-diabetic medications in the face of high "end-of-year" prices in the coverage gap.

# PEER-REVIEWED PUBLICATIONS

Seo S, Healey BE, McLin R, **Sacks NC**, Benson CJ, Citrome L. 2024. Impact of demographics and insurance coverage on schizophrenia treatment and healthcare resource utilization within an integrated healthcare system. Neuropsychiatr Dis Treat 20:1837–1848; doi: 10.2147/NDT.S473492.

Bonkowsky JL, Healey B, **Sacks NC**, McLin R, Cyr PL, Sawyer EK, Stephen CD, Eichler F. 2024. Burden of illness and mortality in men with adrenomyeloneuropathy: A retrospective cohort study. Orphanet J Rare Dis 19(1):270. doi: 10.1186/s13023-024-03276-w. PMID: 39020416

Suh M, Movva N, Jiang X, Reichert H, Pastula ST, **Sacks NC**, Frankenfeld C, Fryzek JP, Simões AF. 2024. Healthcare utilization among infants covered by Medicaid and newly diagnosed with respiratory syncytial virus. Open Forum Infect Dis, <u>open access</u>.

Taylor RS, Lad SP, White JL, Stauss TG, Healey BE, **Sacks NC**, McLin R, Patil S, Jaasma MJ, Caraway DL Petersen EA. 2023. Health care resource utilization and costs in patients with painful diabetic neuropathy treated with 10 kHz spinal cord stimulation therapy. J Manag Care Spec Pharm 29(9):1021-1029.

Bullano M, Cool C, Schultz BG, Durgapal S, **Sacks N**, Liu Y, Kee R, Batt K. 2023. Evaluating the financial impact of utilizing recombinant porcine factor VIII or recombinant FVIIa for patients with acquired hemophilia A. Expert Rev Phamacoecon Outcomes Res 23(2):225-230.

Cardosi L, Rau R, Emdem MR, Kemp R, Minshall M, Pontenani F, Provision S, **Sacks N**. 2022. Healthcare resource utilization in non-cystic fibrosis bronchiectasis (NCFB) patients with commercial insurance coverage in the US. Value in Health 25(12). Supplement. S1:S546.

Sheshadri A, **Sacks NC**, Healey BE, Raza S, Boerner G, Huang HJ. 2022. Lung function monitoring after lung transplantation and allogeneic hematopoietic stem cell transplantation. Clin Ther 44(5):755–765.

Sheshadri A, **Sacks NC**, Healey B, Cyr P, Boerner G, Huang HJ. 2022. The healthcare resource utilization and costs of chronic lung allograft dysfunction following lung transplantation in patients with commercial insurance in the United States. J Med Econ 25(1):650–659.

**Sacks NC**, Healey BE, Raza S, Cyr PL, Boerner G, Sheshadri A. 2022. The economic burden of NIPC and BOS following allogeneic HSCT in patients with commercial insurance in the United States. Blood Adv 6(5):1566–1576.

Sheshadri A, Healey B, **Sacks N**, Wu E, Cyr P, Boerner G, Huang H. 2021. Bronchiolitis obliterans syndrome following lung transplantation: Economic burden by chronic lung allograft dysfunction (CLAD) stage. J Heart Lung Trans 40:4;S70.

Chew D, **Sacks NC**, Emden MR, Preib MT, Cyr PL, Wood D, Pokorney SD. 2021. Trends in health care resource use and expenditures in patients with newly diagnosed paroxysmal supraventricular tachycardia in the United States. Am Heart J 132–140.



Rehorn M, **Sacks NC**, Emden MR, Healey B, Preib MT, Cyr PL, Pokorney SD. 2021. Prevalence and incidence of patients with paroxysmal supraventricular tachycardia in the United States. J Cardiovasc Electrophysiol; <u>https://doi.org/10.1111/jce.15109</u>.

**Sacks NC**, Healey BE, Cyr PL, Slocomb T, James E, Beggs AH, Graham RJ. 2021. Costs and health resource use in patients with X-linked myotubular myopathy: insights from U.S. commercial claims. J Manag Care Spec Pharm 12:1–8.

**Sacks NC**, Cyr PL, Preib MT, Everson K, Wood DR, Raza S, Pokorney SD. 2020. Healthcare resource use and expenditures in patients newly diagnosed with paroxysmal supraventricular tachycardia. Am J Cardiol 125(2):215–221.

**Sacks NC**, Everson K, Emden MR, Cyr PL, Wood DR, Raza S, Wood KA, Pokorney SD. 2020. Disparities in the management of newly diagnosed paroxysmal supraventricular tachycardia for women versus men in the United States. J Am Heart Assoc 9(19):e015910.

Brixner D, Ermakova A, Xiong Y, Sieradzan R, **Sacks NC**, Cyr PL, Taylor S. 2019. Clinical and economic outcomes of patients with type 2 diabetes on multiple daily injections of basal-bolus insulin (MDI) therapy: A retrospective cohort study. Clin Ther 41(2):303–313.

**Sacks NC**, Cyr PL, Louie AC, Liu Ym Chiarella MT, Sharma A, Chung KC. 2018. Burden of acute myeloid leukemia among older, newly diagnosed patients: Retrospective analysis of data from the 2010-2012 Medicare limited data set. Clin Ther 40(5):692–703.e2.

Jensen IS, Wu E, **Sacks NC**, Cyr PL, Chung KC. 2018. Budget impact analysis of using daunarubicin-cytarabine liposome in patients with newly diagnosed therapy-related AML or AML and myelodysplasia-related changes. Am Health Drug Benefits 11(7):380–386.

**Sacks NC**, Sharma A, Cyr PL, Bertiger G, Dahdal DN, Brogadir S. 2018. Real-world comparison of the effectiveness and safety of different bowel preparation agents. Clin Exp Gastroenterol 11:289–299.

**Sacks NC**, Sharma A, Cyr PL, Bertiger G, Dahdal DN, Brogadir S. 2018. Real-world evidence comparison of the efficacy and safety of different bowel preparation agents in a high-risk population. Gastrointest Endosc 87(6) Suppl:AB366.

Young LY, **Sacks NC**, Cyr PL, Sharma A, Dahdal DN. 2017. Comparison of claims data on hospitalization rates and repeat procedures in patients receiving a bowel preparation prior to colonoscopy. Sage Open Medicine, 2017; 5: 2050312117727999

Jensen IS, Wu E, **Sacks N**, Cyr P, Chung K. 2017. Budget impact analysis of CPX-351 in the treatment of patients with treatment-related acute myeloid leukemia (tAML) or AML with myelodysplasia-related changes (MRC) from a US payer perspective. Blood 130:5615.

**Sacks NC**, Sharma A, Cyr PL, Liu Y, Miller DJ, Chiarella MT, Louie AC. 2016. Outcomes for older patients with acute myeloid leukemia (AML): Multiple hospitalizations and high mortality rates. Value in Health 19(7):A611.

**Sacks NC**, Noone J, Cyr PL, Miller DJ, Chiarella MT, Louie AC. 2016. Hospitalizations for older patients with acute myeloid leukemia (AML): Inpatient treatment is intensive and costly. Value in Health 19(3):A246.

Sacks NC, Cyr P, Liu Y, Miller DJ, Chiarella MT, Louie AC. 2016. Burden of acute myeloid leukemia (AML) among older newly-diagnosed patients. Blood 128(22):4780.

**Sacks NC**, Cabral HJ, Pizer SD, Burgess JF. 2016. Myopic and forward looking behavior in branded oral anti-diabetic consumption: An example from Medicare Part D. Health Econ, May.

**Sacks NC**, Ash AS, Ghosh K, Rosen AK, Wong JB, Rosen AB. 2015. Trends in acute myocardial infarction hospitalizations: Are we seeing the whole picture? Am Heart J. 2015 Dec;170(6):1211-9. doi: 10.1016/j.ahj.2015.09.009. Epub 2015 Sep 21.



**Sacks NC**, Burgess JF, Cabral HJ, McDonnell ME, Pizer SD. 2015. The effects of cost sharing on adherence to medications prescribed for concurrent use: Do definitions matter? J Manag Care Pharmacy 21(8):678–687.

**Sacks NC**, Ash AS, Ghosh K, Rosen AK, Wong JB, Cutler DM, Rosen AB. 2015. Recent national trends in acute myocardial infarction hospitalizations in Medicare: Shrinking declines and growing disparities [Letter to the Editor]. Epidemiology 26(4):e46–47

**Sacks NC**, Burgess JF, Cabral HJ, Pizer SD, McDonnell, ME. 2013. Cost sharing and decreased branded oral anti-diabetic medication adherence among elderly Part D Medicare beneficiaries. J Gen Intern Med 28(7):876–885.

**Sacks NC**. 2013. Avoidable costs in U.S. healthcare: The \$200 billion opportunity from using medicines more responsibly. IMS Health, June.

Sacks NC. 2009. Healthcare spending among privately insured individuals under age 65. IMS Health, February.

**Sacks NC**, Cabral HJ, Kazis LE, Richmond R, Vetter D, Moore TM. 2009. A web-based nutrition program reduces health care costs in employees with cardiac risk factors: Before and after cost analysis. J Med Internet Res 23:11(4):e43.

Rose AJ, **Sacks NC**, Deshpande AP, Griffin SY, Cabral HJ, Kazis LE. 2008. Single-change items do not measure change in quality of life. J Clin Epidemiol 61(6):603–608.

# ABSTRACTS AND PRESENTATIONS

Kelsh M, Bylsma LC, Jiang X, Movva N, **Sacks NC**. To be an orphan disease or not to be: An evaluation of prevalence estimates for cancers near the orphan status threshold and implications for orphan drug planning. International Society for Pharmacoepidemiology, 40<sup>th</sup> Annual Meeting, Berlin, Germany, August 2024.

Franklin M, Emden MR, Kautz S, Nguyen AT, **Sacks NC**, Ju S, Mitrani-Gold FS, Joshi AV, Preib MT. Cost burden of patients with oral antibiotic treatment failure for uncomplicated urinary tract infection in the United States. Poster presentation, IDWeek, October 2023.

Franklin M, Emden MR, Bauer E, Nguyen AT, **Sacks N**, Kawamatsu S, Kawano Y, Mitrani-Gold FS, Joshi AV, Ju S, Preib MT. Prevalence of acute uncomplicated cystitis in Japan. Poster presentation, IDWeek, October 2023.

Bonkowsky J, Healey B, **Sacks NC**, McLin R, Cyr PL, Sawyer EK, Stephen CD, Eichler F. Point of care analysis for men with adrenomyeloneuropathy: A retrospective study of real world data. Poster presentation, European Academy of Neurology, July 2023.

Seo S, Healey B, McLin R, **Sacks N**, Benson C, Citrome L. Health disparities among patients with schizophrenia in an integrated healthcare system. Poster presentation, Psych Congress Elevate 2023, May 30-June 2, 2023.

Bonkowsky J, Healey B, **Sacks NC**, McLin R, Cyr PL, Sawyer EK, Stephen CD, Eichler F. Healthcare utilization, burden of illness, and mortality in adults with adrenomyeloneuropathy (AMN): The case for genetic therapies. Poster presentation, American Society of Cell and Gene Therapy meeting, May 2023.

Eichler F, Bonkowsky J, Healey B, **Sacks NC**, McLin R, Cyr P, Sawyer E, Stephen C. Hospitalizations, clinical characteristics and mortality in adults with adrenomyeloneuropathy (AMN): A retrospective study. Poster presentation, ISPOR, April 2023.

Eichler F, Bonkowsky J, Healey B, **Sacks NC**, McLin R, Cyr P, Sawyer E, Stephen C. The economic impact of adrenomyeloneuropathy (AMN) on direct medical costs in commercially insured US adults: A retrospective study. Poster presentation, ISPOR, April 2023.



Minshall M, Emden M, McLin R, Kemp P, Pontenani F, Cardosi L, **Sacks N**. The cost of non-cystic fibrosis bronchiectasis (NCFB) in patients with commercial insurance or Medicare coverage in the US. Poster presentation, ISPOR, April 2023.

Bonkowsky J, Healey B, **Sacks NC**, McLin R, Cyr PL, Sawyer E, Stephen CB, Eichler F. Burden of illness and mortality in adult men with adrenomyeloneuropathy: a retrospective study of real-world data. Poster presentation at American Academy of Neurology meeting, April 2023.

**Sacks NC**. Healthcare resource utilization in non-cystic fibrosis bronchiectasis (NCFB) patients with commercial insurance coverage in the US. Poster presentation, International Society for Pharmacoeconomics and Outcomes Research (ISPOR)Europe, November 2022.

Habib A, **Sacks NC**, Cool C, Durgapal S, Hughes T, Hernandez J, Phillips G. Trends in hospital admissions and readmissions for patients with MG from U.S. national research databases. Poster presentation, American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM) annual meeting, September 2022.

Panattoni L, Hernandez J, Liu Y, **Sacks NC**, Higham R, Stephenson B, Armstrong A. Initial treatment patterns for newly diagnosed, commercially insured patients with psoriasis. Poster presentation, ISPOR, April 2021.

**Sacks NC**, Healey B, Cyr PL, Slocomb T, James E, Beggs A, Graham RJ. Healthcare resource use and expenditures in patients with x-linked myotubular myopathy (XLMTM). Poster presentation, ISPOR, April 2021.

Wallace E, **Sacks NC**, Cyr P, Baker-Wagner M. An observational cohort analysis on the economic impact of chronic kidney disease in patients with fabry disease. Poster presentation, ISPOR, May 2021.

Sheshadri A, **Sacks NC**, Healey B, Raza S, Boerner G, Huang HJ. A descriptive analysis of costs and healthcare resource use in patients with bronchiolitis obliterans syndrome (BOS) following LUNG transplantation. Poster presentation, ISPOR, May 2021.

Dougherty C, Friedman BW, Aurora S, Bariahtaris S, Shrewsbury S, Baker-Wagner M, **Sacks N**, Kautz S, Cyr P. INP104 reduces self-reported ED and urgent care in patients with episodic migraine. Presentation at Academy of Managed Care Pharmacy (AMCP) annual meeting [held virtually], April 2021.

Dougherty C, Friedman BW, Aurora S, Bariahtaris S, Shrewsbury S, Baker-Wagner M, **Sacks N**, Kautz S, Cyr P. Impact of INP104 on healthcare resource use among patients in STOP 301. Presentation at American Academy of Neurology annual meeting [held virtually], April 2021.

**Sacks NC**, Healey B, Cyr PL, Batt K, Henig NR. The economic burden of bronchiolitis obliterans syndrome (BOS) in allogenic hematopoietic stem cell transplant (alloHSCT) patients with Medicare coverage. Poster presentation, ISPOR, May 2020.

**Sacks NC**, Everson K, Cyr PL, Preib M, Wood D, Pokorney S. Healthcare resource use and expenditures in patients newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. Podium presentation, International Society for Pharmacoepidemiology annual meetings, Philadelphia, August 2019.

**Sacks NC**, Cyr PL, Green S, Healey B, Preib M, Wood D, Pokorney S. Prevalence of patients with paroxysmal supraventricular tachycardia (PSVT) in the United States. Poster presentation, European Society for Cardiology congress, Paris, France, September 2019.

Stong L, Nelson WW, Feuerstadt P, Boules M, **Sacks NC**, Portelli A, Healey B, Lang K, Dahdal DN. Clinical burden of recurrent clostridioides difficile Infection: A real-world data analysis. American College of Gastroenterology annual meeting, San Antonio, TX, October 2019.

**Sacks NC**, Everson K, Cyr PL, Wood DR, Pokorney SD. Variations in healthcare resource use and expenditures in younger women and men newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. Poster presentation, American Heart Association annual meeting. Best of AHA Specialty Conferences, Philadelphia, November 2019.



**Sacks NC**, Everson K, Cyr PL, Emden M, Preib M, Wood D, Pokorney S. Variations in healthcare resource use and expenditures by age in patients under age 65 newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. Podium presentation, International Society for Pharmacoeconomics and Outcomes Research. International Society for Pharmacoeconomics and Outcomes, May 2019.

**Sacks NC**, Cyr PL, Green S, Wood D, Pokorney S. Healthcare resource use and costs following catheter ablation in paroxysmal supraventricular tachycardia (PSVT) patients age <65. Podium presentation, International Society for Pharmacoeconomics and Outcomes Research. International Society for Pharmacoeconomics and Outcomes Research (ISPOR) annual meeting, New Orleans, May 2019.

**Sacks NC**, Sharma A, Cyr PL, Stong L, Dahdal DN. Real-world evidence comparison of colorectal cancer screening outcomes with different colorectal cancer preparation agents in adults 65 years and older. Digestive Disease Week annual meeting, San Diego, May 2019.

**Sacks NC**, Everson K, Cyr PL, Wood DR, Pokorney SD. Variations in healthcare resource use and expenditures in younger women and men newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. Poster presentation, American Heart Association/American Stroke Association Quality of Care and Outcomes Research (QCOR) annual meeting, Washington DC, April 2019.

Preib M, Pokorney SD, Cyr PL, Everson K, Wood Dr; **Sacks NC**. Demographics and clinical characteristics of patients newly diagnosed with paroxysmal supraventricular tachycardia (PSVT). Poster presentation at European Heart Rhythm Society, Lisbon, Portugal, March 2019.

**Sacks NC**. Evaluating clinical and economic burden of paroxysmal supraventricular tachycardia (PSVT) using real world evidence. Podium presentation, Real World Data and Life Science Analytics Congress. Boston, MA, October 2018.

**Sacks NC**, Cyr PL, Bariahtaris SL, Sharma A, Green SG, Douville P, Ruskin JM. Prevalence of paroxysmal supraventricular tachycardia (PSVT) in the United States in patients under 65 years of age. Podium presentation, International Academy of Cardiology, 23rd World Congress on Heart Disease, Boston, MA, July 2018.

**Sacks NC**, Sharma A, Cyr PL, Bertiger G, Dahdal DN, Brogadir S. Real-world evidence comparison of the efficacy and safety of different bowel preparation agents in a high-risk population. Poster presentation, Digestive and Disease Week 2018, Washington DC, June 2018.

Ludden T, Ermakova A, Xiong Y, Cyr P, Sieradzan R, **Sacks NC**, Taylor SD. Comparison of healthcare resource utilization for multiple-daily injections (MDI) with basal and bolus insulin therapy versus non-MDI therapy in patients with type 2 diabetes. Poster presentation, Academy of Managed Care Pharmacy Annual Research Meeting, Boston, MA, April 2018.

**Sacks NC**, Cyr PL, Bariahtaris SL, Sharma A, Everson K, Douville P, Ruskin JM. Healthcare resource use and expenditures in patients under 65 years of age and newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. Podium presentation, International Academy of Cardiology, 23rd World Congress on Heart Disease, Boston, MA, July 2018.

**Sacks NC**, Liu Y, Sanyal A, DeFronzo R, Bhatt DL, Caplan, J, Rajagopalan H, Cyr PL, Jena AB. The economic burden of insulin resistance, obesity, and cardiovascular disease in medicare beneficiaries 65 years of age and older. Poster presentation, American Heart Association Scientific Sessions, Anaheim CA, November 2017.

Young LE, **Sacks NC**, Cyr PL, Sharma A, Dahdal DH, Brogadir S. Rates of incomplete and repeat screens in patients receiving sodium picosulfate/magnesium citrate bowel preparation prior to colonoscopy versus other low volume bowel preparations. Poster presentation, World Congress of Gastroenterology ACG 2017, Orlando, FL, October 2017.

Frausto SF, **Sacks NC**, Cyr PL, Sharma A, Dahdal DH, Brogadir S. Hospitalization for hyponatremia and dehydration in patients receiving sodium picosulfate/magnesium citrate bowel preparation prior to colonoscopy. Poster presentation, World Congress of Gastroenterology ACG 2017, Orlando, FL, October 2017.



Young LE, **Sacks NC**, Cyr PL, Sharma A, Dahdal DH. Rates of hospitalization and repeat procedures in patients receiving sodium picosulfate/magnesium citrate bowel preparation prior to colonoscopy. Society of Gastroenterology Nurses and Associates, New Orleans, LA, 2017.

**Sacks NC**, Noone J, Cyr PL, Miller DJ, Chiarella MT, Louie AC. Hospitalizations for older patients with acute myeloid leukemia (AML): High costs and long stays, with and without chemotherapy. Poster presentation, Academy Health Annual Research Meetings, Boston, MA, June 2016.

Lancet JE, **Sacks NC**, Cyr PL, Chiarella MT, Louie AC, Cortes JE. VYXEOS<sup>™</sup> (CPX-351) increases event-free survival and time spent out of the hospital in acute myeloid leukemia patients, compared with 7+3 standard of care. Poster presentation at Managed Care & Specialty Pharmacy Annual Meeting, San Francisco, CA, April 2016.

Young L, **Sacks N**, Cyr PL, Sharma A, Dahdal DN. Rates of hospitalization and repeat procedures in patients receiving sodium picosulfate/magnesium citrate bowel preparation prior to colonoscopy. Academy Managed Care Pharmacy Annual Meeting, San Francisco, CA, 2016.

Lancet JE, Cyr PL, **Sacks NC**, Chiarella MT, Louie AC, Cortes JE. CPX-351 enables administration of consolidation treatment in the outpatient setting and increases the time spent out of the hospital after completion of AML treatment compared with 7+3. Blood 126(23):4507, December, 2015.

**Sacks NC**, Ash AS, Ghosh K, Rosen AK, Wong J, Rosen AB. Trends in acute myocardial infarction hospitalizations and inhospital mortality: Do race, sex and age matter? Presentation at Academy Health Annual Research Meetings Health Disparities Interest Group, Minneapolis, MN, June 2015.

**Sacks NC**, Cabral HJ, Pizer SD, Burgess JF. Myopic and forward looking behavior in branded oral anti-diabetic consumption: An example from Medicare Part D. Presentation at American Society of Health Economists, Los Angeles, CA, June 2014.

**Sacks NC**, Ash AS, Ghosh K, Rosen AK, Wong JB, Rosen AB. Looking at the whole Picture: Revisiting trends in acute myocardial infarction (AMI) hospitalizations and mortality 2002-2011. Presentation at American Society of Health Economists, Los Angeles, CA, June 2014.

**Sacks NC**, Ash AS, Ghosh K, Rosen AK, Rosen AB. Trends in AMI hospitalizations overall and by race: Findings change with different claims-based definitions. Presentation to Disparities Interest Group, Academy Health Annual Research Meetings, San Diego, CA, June 2014.

**Sacks NC**, Cabral HJ, Pizer SD, Burgess JF. Is there evidence of forward looking behavior in response to non-linear benefit design? An example from Medicare Part D. Poster presentation at Health Economics Interest Group, Academy Health Annual Meetings, Baltimore, MD, June 2014.

**Sacks NC.** Healthcare spending and utilization among privately insured individuals under age 65: Disease cohorts, high spending consistency and churn. Poster presentation at Academy Health Annual Meetings, Baltimore, MD, June 2014.

**Sacks NC**, Burgess JF, Cabral HJ, Pizer SD. The effects of the Medicare Part D benefit structure, including the coverage gap, on oral anti-diabetic medication use among elderly medicare beneficiaries. Presentation at American Society of Health Economists Biennial Conference (ASHEcon), Minneapolis, MN, June 2012.

**Sacks NC**, et al. Healthcare cost and use among privately insured individuals with conditions treated with specialty medications. Poster presentation, Academy Health Annual Research Meetings, Orlando, Fl, June 2012.

**Sacks NC**, Burgess JF, Cabral HJ, Pizer SD. The effects of the Medicare Part D benefit structure, including the coverage gap, on oral anti-diabetic medication use among elderly medicare beneficiaries. Presentation at American Society of Health Economists Biennial Conference (ASHEcon), Minneapolis, MN, June 2012.



**Sacks NC**, Burgess JF, Cabral HJ, Pizer SD. The effects of the Medicare Part D benefit, including the coverage gap, on branded and generic oral anti-diabetic use among elderly medicare beneficiaries. Poster presentation, Academy Health Annual Research Meetings, Orlando, Fl, June 2012.

**Sacks NC**, et al. Healthcare cost and use among privately insured individuals with conditions treated with specialty medications. Poster presentation, Academy Health Annual Research Meetings, Orlando, Fl, June 2012.

**Sacks NC**, et al. Bending the cost curve: Variations in cost components among patients with chronic conditions in a commercially insured population. Podium presentation, Academy Health Annual Research Meetings, Seattle, WA, June 2011.