

Philip Cyr, M.P.H.

SENIOR VICE PRESIDENT, PHARMA COMMERCIALIZATION PRACTICE

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Mr. Philip Cyr is Senior Vice President of the Pharmaceutical Commercialization Practice for HEORStrategies, a Division of ToxStrategies LLC. Mr. Cyr has over 30 years of experience developing and commercializing therapies. This experience encompasses research and development, clinical trials, health economics and outcomes research (HEOR), health policy and health technology assessments, pricing and market access, and medical affairs.

Mr. Cyr possesses a comprehensive understanding of global HEOR, market access, and commercialization environments, with deep and broad therapeutic knowledge that includes neurology and psychiatry, cardiology, infectious disease, metabolic disorders, gastrointestinal issues, oncology, immunology, and rare diseases. In addition, Mr. Cyr specializes in cell and gene therapy. Mr. Cyr has been involved in building the health economic evidence and value demonstration strategies for over 25 cell and gene therapies, and was instrumental in launching the therapies ZOLGENSMA, LUXTURNA, LENMELDY, and YESCARTA.

In addition to his consulting work, Mr. Cyr serves as a guest lecturer in cell and gene therapy at Georgetown University. He has previously been research faculty at University of North Carolina at Charlotte College of Health and Human Services, and an adjunct professor at George Mason University School of Management.

EDUCATION AND DEGREES EARNED

- 1994 Master of Public Health (M.P.H.), concentrations in Epidemiology and Biostatistics
School of Public Health
Boston University
- 1991 Bachelor of Arts (A.B.), Biology and History
Kenyon College

PROFESSIONAL HONORS/AWARDS

- 1991 Kenyon College Biology Department Award for Excellence and Outstanding Contribution

PROFESSIONAL ASSOCIATIONS/MEMBERSHIPS

- Alliance for Regenerative Medicine, Value Working Group (Charter Member)
- Alliance for mRNA Medicine, Patient Engagement, Access, and Reimbursement Working Group (Charter Member)

PEER REVIEWER

- American Journal of Managed Care
- International Society of Pharmacoeconomics and Outcomes Research (ISPOR)
- Orphanet Journal of Rare Disease

ACADEMIC APPOINTMENTS

- 2023-Present Guest Lecturer — Georgetown University Master's in Biotechnology Program, Cell and Gene Therapy (non-appointment)
- 2016–2020 Research Faculty — University of North Carolina at Charlotte, College of Health and Human Services
- 2005–2008 Adjunct Professor — George Mason University School of Management

SELECTED PROFESSIONAL EXPERIENCE

Therapeutic Areas

- **Cell and Gene Therapy:** Spinal Muscular Atrophy, Inherited Retinal Disease, X-linked Myotubular Myopathy, ADA-SCID, Metachromatic Leukodystrophy, DLBCL, ALL, Solid Organ Transplant, Giant Axonal Neuropathy, Batten Disease, Galactosemia, Duchenne Muscular Dystrophy, Hunter Syndrome, Epidermolysis Bullosa (EB), Adrenomyeloneuropathy (AMN), Choroideremia, Gaucher Disease, Hemophilia A and B
- **Neurology/Psychiatry:** Parkinson's Disease, Alzheimer's Disease, Schizophrenia, Major Depressive Disorders, Multiple Sclerosis, ADHD, Status Epilepticus

- **Cardiology:** Interventional, Heart Failure, Familial Amyloid Cardiomyopathy, Paroxysmal Supraventricular Tachycardia
- **Infectious Disease:** Bacteremia, HIV, ABSSSI, CRBSI
- **Metabolic Disorders:** Diabetes, Hyponatremia, Insulin Resistance
- **Gastrointestinal:** GERD, Celiac Disease, Gastroparesis, H. pylori, IBS-C
- **Hem/Oncology:** CUP, NSCLC, AML, CLL, Breast, Glioblastoma, Multiple Myeloma, Castrate-Resistant Prostate Cancer
- **Immunology:** Crohn's Disease, Rheumatoid Arthritis, Psoriasis
- **Rare Disease (Non-Cell or Gene Therapy):** Vascular Ehlers-Danlos Syndrome, Thyroid Eye Disease, Niemann-Pick Disease; Cystic Fibrosis, Hemophilia
- **Other:** Molecular Diagnostics, Deep Brain Stimulation, Dry Eye Syndrome, Spinal Cord Stimulation

Leadership and Business Development in Cell and Gene Therapy

Served as head of cell and gene therapy business development for a life sciences company providing services focused on developing and commercializing precision medicines. Responsible for driving coordinated, multi-service business development across biospecimens, translational laboratory science, clinical research, regulatory consulting, manufacturing consulting, scientific and medical communications, pricing and market access consulting, HEOR and payer and patient marketing

Responsible for cell and gene therapy thought leadership development including peer-reviewed publications, invited publications, conference and webinar presentations, and white papers

Involved in developing marketing content including website and case studies

Served as a cell and gene therapy subject matter expert

HEOR AND Commercialization Consulting Services

Oversaw all research and consulting services spanning health economic modeling, real-world evidence generation, meta-analysis and indirect treatment comparisons, and health policy research for a consulting firm specializing in commercialization of healthcare innovations. Responsible for business development and all research content produced

Developed product offerings, data infrastructure, staff capabilities, and integration with other service offering including healthcare provider and pharmaceutical supply chain practices

Initiated and developed HEOR practices in healthcare companies, building it from the ground up, including the development of strategic focus, product offerings, data infrastructure, and integration with other functional units

MANUSCRIPTS

Bonkowsky J, Healey B, Sacks NC, McLin R, **Cyr PL**, Sawyer EK, Stephen CD, et al. 2024. Burden of illness and mortality in men with adrenomyeloneuropathy: A retrospective cohort study. *Orph J Rare Dis* 19(1):270; doi: 10.1186/s13023-024-0326-w.

Chew DS, Sacks NC, Emden MR, **Cyr PL**, Sherwood R, Pokorney SD. 2024. Catheter ablation for supraventricular tachycardia and health resource utilization and expenditures: A propensity-matched cohort study. *Int J Cardiol* 403:131831; doi: 10.1016/j.ijcard.2024.131831.

- Alexander AW, Jensen IJ, Hathaway J, Srivastava K, **Cyr PL**, Sidonio RF, Batt K. 2022. Bleeding in patients with hemophilia who have inhibitors: Modeling US medical system utilization and cost avoidance between recombinant factor VIIa products with different clinical dosing requirements. *J Manag Care Spec Pharm* 28(5):518-527; doi: 10.18553/jmcp.2022.21197.
- Jensen IS, Wu E, **Cyr PL**, Claussen M, Winkler T, Salahuddin K, Prats J, et al. 2022. Cost-consequence analysis of using cangrelor in high angiographic risk percutaneous coronary intervention patients: A US hospital perspective. *Am J Cardiovasc Drugs* 22(1):93-104; doi: 10.1007/s40256-021-00491-9.
- 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; doi: 10.1182/bloodadvances.2021004364.
- Sheshadri A, Sacks NC, Healey B, **Cyr PL**, Boerner G, Huang H. 2022. The healthcare resource utilization and costs of chronic lung allograft dysfunction following lung transplantations in patients with commercial insurance in the United States. *J Med Econ* 25(1):650-659; doi: 10.1080/13696998.2022.2071065.
- Chew DS, Sack NC, Emden MR, Preib M, **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* 233(March):132-140; doi: 10.1016/j.ahj.2020.12.012.
- Dean R, Jensen IS, **Cyr PL**, Miller B, Maru B, Sproule DM, Feltner DE, et al. 2021. An updated cost-utility model for onasemnogene abeparvovec (Zolgensma®) in spinal muscular atrophy type 1 patients and comparison with evaluation by the Institute for Clinical and Effectiveness Review (ICER). *J Mark Access Health Pol* 9(1):1889841; doi: 10.1080/20016689.2021.1889841.
- 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* 32(8):2199-2206; doi: 10.1111/jce.15109.
- Sacks NC, Healey B, **Cyr PL**, Slocomb T, James E, Beggs AH, Graham R. 2021. Costs and health resource use in patients with X-linked myotubular myopathy: Insights from US commercial claims. *J Manag Care Spec Pharm* 27(8):1019-1026; doi: 10.18553/jmcp.2021.20501.
- Jensen IS, Hathway J, **Cyr PL**, Gauden D, Gardiner P. 2020. Cost-consequence analysis of ¹⁸F-fluciclovine for the staging of recurrent prostate cancer. *J Mark Access Health Pol* 8(1):1749362; doi: 10.1080/20016689.2020.1749362.
- 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; doi: 10.1016/j.amjcard.2019.10.015.
- 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; doi: 10.1161/JAHA.120.015910.
- Brixner D, Ermakova A, Xiong Y, Sieradzan R, Sacks N, **Cyr PL**, Taylor SD. 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; doi:10.1016/j.clinthera.2018.12.014.
- Malone DC, Dean R, Arjunji R, Jensen IS, **Cyr PL**, Miller B, Maru B, et al. 2019. Cost-effectiveness analysis of using onasemnogene abeparvovec (AVXS-101) in spinal muscular atrophy type 1 patients. *J Mark Access Health Pol* 7(1):1601484; doi: 10.1080/20016689.2019.

- Jensen IS, Wu E, Sacks NC, **Cyr PL**, Chung KC. 2018. Budget impact analysis of using daunorubicin-cytarabine liposome in patients with newly diagnosed therapy-related AML or AML and myelodysplasia-related changes. *Am Health Drug Ben* 11(7):380-386; PMID: PMC6306103.
- Sacks NC, **Cyr PL**, Louie AC, Liu Y, 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; doi: 10.1016/j.clinthera.2018.03.012.
- Sacks NC, Sharma A, **Cyr PL**, Bertiger G, Dahdal DN, Brogadir SP. 2018. Real-world comparison of the effectiveness and safety of different bowel preparation agents. *Clin Exp Gastroenterol* 11(Aug 16):289-299; doi: 10.2147/CEG.S171861.
- Young LE, 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 Med* 31(5):2050312117727999; doi: 10.1177/2050312117727999.
- Jensen IS, Lodise TP, Fan W, Wu C, **Cyr PL**, Nicolau DP, DuFour S, et al. 2016. Use of oritavancin in acute bacterial skin and skin structure infection patients receiving intravenous antibiotics: A US hospital budget impact analysis. *Clin Drug Investig*. 2016 36(2):157-68; doi: 10.1007/s40261-015-0365-8.
- Jensen IS, Wu C, Fan W, Lodise T, Nicolau, DP, DuFour S, **Cyr PL**, et al. 2016. Use of oritavancin in moderate-severe ABSSSI patients requiring IV antibiotics: US hospital budget impact analysis. *J Manag Care Spec Pharm* 22(6):752-64; doi: 10.18553/jmcp.2016.22.6.752.
- Olchanski N, McInnis-Myers M, Halseth M, **Cyr PL**, Bockstedt L, Goss TF, Howland RH. 2013. The economic burden of treatment-resistant depression. *Clin Ther* 35(4):512-522; doi: 10.1016/j.clinthera.2012.09.001.
- Cyr PL**, Slawsky KL, Olchanski N, Krasa HB, Goss TF, Zimmer C, Hauptman PJ. 2011. Effect of serum sodium concentration and tolvaptan treatment on length of hospitalization in patients with heart failure. *Am J Health Syst Pharm* 68(4):328-333; doi: 10.2146/ajhp100217.
- Olchanski N, Slawsky KA, Plent S, Kado C, **Cyr PL**. 2010. Impact of switching to bivalirudin for a primary percutaneous coronary intervention in a U.S. hospital. *Hosp Prac* 38(4):138-146; doi: 10.3810/hp.2010.11.351.
- Alexander W, Berlin J, **Cyr PL**, Schofield A, Platt LA. 2004. Realities at the leading edge of research. *EMBO Rep* 5(4):324-329; doi: 10.1038/sj.embor.7400137.
- Stafford RS, **Cyr PL**. 1997. The impact of cancer on the physical function of the elderly and their utilization of health care. *Cancer* 80(10):1973-80; doi: 10.1002/(sici)1097-0142(19971115)80:10<1973::aid-cnrcr15>3.0.co;2-v.
- Cohan S, Redman D, Chen M, Wilson D, **Cyr PL**. 1993. Flunarazine blocks elevation of free cytosolic calcium in synaptosomes following sustained depolarization. *J Cereb Blood Flow Metab* 13(6):947-953; doi: 10.1038/jcbfm.1993.118.

BOOK CHAPTERS

- Cyr PL**, Malloy D. 1999. Patient satisfaction and physician profiling. In: Lynman K, Piland N (eds) *Physician Profiling: A Source Book for Health Care Administrators*. Jossey-Bass Health Series, San Francisco. pp. 121-136.

POSTER/PODIUM PRESENTATIONS

Bonkowsky J, Healey B, Sacks NC, McLin R, **Cyr PL**, Sawyer EK, Stephen CD, et al. Healthcare utilization, burden of illness, and mortality in adults with adrenomyeloneuropathy (AMN): The case for genetic therapies. American Society of Cell and Gene Therapy, Los Angeles, CA, 2023.

Bonkowsky J, Healey B, Sacks NC, McLin R, **Cyr PL**, Sawyer EK, Stephen CD, et al. The economic impact of adrenomyeloneuropathy (AMN) on direct medical costs in commercially insured US adults: A retrospective study. ISPOR 27th Annual International Meeting, Boston, MA, 2023.

Bonkowsky J, Healey B, Sacks NC, McLin R, **Cyr PL**, Sawyer EK, Stephen CD, et al. Hospitalizations, clinical characteristics and mortality in adults with adrenomyeloneuropathy (AMN): A retrospective study. ISPOR 27th Annual International Meeting, Boston, MA, 2023.

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

Bonkowsky J, Healey B, Sacks NC, Mclin R, **Cyr PL**, Sawyer E, Stephen CB, et al. Burden of illness and mortality in adult men with adrenomyeloneuropathy: A retrospective study of real-world data. American Academy of Neurology, Seattle, WA, 2022

Rehorn MR, Sacks NM, **Cyr PL**, Emden, MR, Sherwood R, Pokorney SD. Rates of catheter ablation for paroxysmal supraventricular tachycardia in the United States. J Am Coll Cardiol 77 (18-Sup1):330. Poster Contribution, American College of Cardiology, 2021.

Sheshadri A, Healey B, Sacks NC, Wu W, **Cyr PL**, Boerner G, Huang H. Bronchiolitis obliterans syndrome after lung transplantation: Economic burden by CLAD Stage. Oral presentation at International Society for Heart and Lung Transplantation, Toronto, ON, 2021.

Sacks NC, Healey BE, Raza S, Yanmei L, **Cyr PL**, Batt K, Boerner G, et al. A descriptive analysis of costs and healthcare resource use in patients with bronchiolitis obliterans syndrome (BOS) following lung transplantation. ISPOR 25th Annual International Meeting, Montreal, QC, 2021.

Miller B, Yao W, Dean R, Jensen I, **Cyr PL**, Slocomb T. Understanding the impact of XLMTM on parents and caregivers in the US: An analysis of survey results. ISPOR 18th Annual European Meeting, Milan, Italy, 2020.

Wallace E, Sacks NC, **Cyr PL**, Baker-Wagner M. An observational cohort analysis on the economic impact of chronic kidney disease in patients with Fabry disease. ISPOR Annual International Meeting Virtual Conference, 2021.

Dougherty C, Friedman BW, Aurora S, Bariahtaris S, Shrewsbury S, Baker-Wagner M... **Cyr PL**. INP104 reduces self-reported ED and urgent care in patients with episodic migraine. Academy of Managed Care Pharmacy (AMCP) Annual Virtual Meeting, 2021.

Dougherty C., Friedman BW, Aurora S, Bariahtaris S, Shrewsbury S, Baker-Wagner M... **Cyr PL**. Impact of INP104 on healthcare resource use among patients in STOP 301. American Academy of Neurology Annual Virtual Meeting, 2021.

Miller B, Jensen IS, Dean R, **Cyr PL**, Slocomb T, James E, Beggs AH. Health resource use in patients with x-linked myotubular myopathy (XLMTM): Data from the RECENSUS Study. ISPOR 25th Annual International Meeting, Orlando, FL, 2020.

Sacks NC, Healey B, **Cyr PL**, Batt K, Henig NR. The economic burden of bronchiolitis obliterans syndrome (BOS) in allogeneic hematopoietic stem cell transplant (alloHSCT) patients with Medicare coverage. ISPOR 25th Annual International Meeting, Orlando, FL, 2020.

Sacks NC, Healey B, **Cyr PL**, Graham R. Healthcare resource use and expenditures in patients with X-linked myotubular myopathy (XLMTM). ISPOR 25th Annual International Meeting, Orlando, FL, 2020.

Sacks NC, Healey B, **Cyr PL**, Graham R. Economic burden of X-linked myotubular myopathy (XLMTM) by ventilation status. ISPOR 25th Annual International Meeting, Orlando, FL, 2020.

Dean R, Arjunji R, Awano H, Igarashi A, Tanaka A, Jensen IS, **Cyr PL** et al. Cost-effectiveness of onasemnogene aberavocet (ZOLGENSMA) for spinal muscular atrophy type 1 against nusinersen in Japan. ISPOR 25th Annual International Meeting, Orlando, FL, 2020.

Hathway J, Jensen IS, **Cyr PL**, Koshy, TI, Parks, P, Weinstein MC. Economic analysis of colorectal cancer screening from multiple stakeholder perspectives: key components to improve practical applications in the US. ISPOR 24th Annual International Meeting, New Orleans, LA, 2019

Preib M, Pokorney SD, **Cyr PL**, Everson K, Wood D, Sacks NC. Demographics and clinical characteristics of patients newly diagnosed with paroxysmal supraventricular tachycardia (PSVT). European Heart Rhythm Society, Lisbon, Portugal, 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. European Society for Cardiology Congress, Paris, France, 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. ISPOR 24th Annual International Meeting, New Orleans, LA, 2019.

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 at International Society for Pharmacoepidemiology Annual Meeting, Philadelphia, PA, 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. American Heart Association/American Stroke Association Quality of Care and Outcomes Research (QCOR) Annual Meetings, Alexandria, VA, 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. Podium presentation at American Heart Association Annual Meeting, 2019

Hathway J, Purdum AG, Lin VW, **Cyr PL**, Westin J, Jensen IS. A budget impact model of axicabtagene ciloleucil in a US population of patients with relapsed/refractory large B-cell lymphoma (RR-LBCL). European Blood and Marrow Transplantation Meeting, Lisbon, Portugal, 2018.

Hathway J, Purdum AG, Lin VW, **Cyr PL**, Westin J, Jensen IS. A budget impact model of axicabtagene ciloleucil (Axi-cel) in an US population of patients with relapsed or refractory large b-cell lymphoma (RR-LBCL). Podium presentation at ISPOR 23th Annual International Meeting, Baltimore, MD, 2018.

Jensen IS, Wu E, **Cyr PL**, Claussen M, Winkler T, Salhuddin K, Prats J, et al. Cost-consequence analysis of using cangrelor in high angiographic risk percutaneous coronary intervention (PCI) patients: A US hospital perspective. Transcatheter Cardiovascular Therapeutics (TCT), San Diego, CA, 2018.

Sacks NC, **Cyr PL**, Bariathtar S, Sharma A, Everson K, Douville P, Ruskin J. Healthcare resource use and expenditures in patients under 65 years of age and newly diagnosed with paroxysmal supraventricular tachycardia (PSVT) in the United States. World Congress on Heart Disease, Boston, MA, 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. Digestive and Disease Week 2018, Washington DC, 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 patients with inflammatory bowel disease. Digestive and Disease Week, Washington DC, 2018.

Sacks NC, **Cyr PL**, Bariathtar S, Sharma A, Everson K, Douville P, Ruskin J. 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 at World Congress on Heart Disease, Boston, MA, 2018.

Ludden T, Ermakova A, Xiong Y, **Cyr PL**, Sieradzan R, Sacks NC, Taylor SD. Comparison of healthcare resource utilization and clinical status among Type 2 diabetes patients using multiple-daily injection (MDI) insulin therapy vs. non-MDI therapy. ISPOR 23rd Annual Conference, Baltimore, MD, 2018.

Ludden T, Philips S, Taylor SD, Ermakova A, **Cyr PL**, Xiong Y, Sieradzan R, et al. Comparison of health resource utilization for multiple-daily injections (MDI) with basal and bolus insulin therapy vs. non-MDI therapy in patients with Type 2 diabetes. Academy of Managed Care Pharmacy, Boston, MA, 2018.

Ludden T, Ermakova A, Xiong Y, **Cyr PL**, 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 at Academy of Managed Care Pharmacy Annual Research Meetings, Boston, MA, 2018.

Sacks NC, Liu Y, Sanyal A, DeFronzo R, Bhatt DL, Caplan, J... **Cyr PL**, et al. The economic burden of insulin resistance, obesity, and cardiovascular disease in Medicare beneficiaries 65 years of age and older. American Heart Association Scientific Sessions, Anaheim, CA, 2017.

Jensen IS, Wu E, **Cyr PL**, Gauden D. Cost-consequence of use of Fluciclovine (F 18) for the diagnosis and staging of recurring prostate cancer. ISPOR 16th Annual European Congress, Glasgow, Scotland, 2017.

Jensen IS, Wu E, **Cyr PL**, Chung K. 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. American Society of Hematology, Atlanta, GA, 2017.

Wu E, Jensen IS, **Cyr PL**, Kisner H. Economic model shows that guideline recommended testing of patients with early symptoms of myeloma results in improved patient outcomes and decreased hospital costs. American Society of Hematology, Atlanta, GA, 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. World Congress of Gastroenterology ACG, 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. 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, Sharma A, et al. Outcomes for older patients with Acute Myeloid Leukemia (AML): Multiple hospitalizations and high mortality rates. ISPOR 18th Annual European Congress, Vienna, Austria, 2016.
- Sacks NC, **Cyr PL**, Noone J, Miller DJ, Louie AC. Hospitalizations for older patients with Acute Myeloid Leukemia (AML): Inpatient treatment is intensive and costly. ISPOR 21st Annual International Meeting, Washington DC, 2016.
- 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. Academy Health Annual Research Meetings, Boston, MA, 2016.
- Lancet JE, Sacks NC, **Cyr PL**, Chiarella MT, Louie AC, Cortes JE. VYXEOS™ (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. Academy of 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. Bronze Medal Winner.
- 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. American Society of Hematology Annual Meeting, San Diego, CA, 2015.
- Wu E, Jensen IS, **Cyr PL**, Fan W, Mitchell M, Sulham K, Nathwani D. Use of oritavancin for the treatment of skin and soft tissue infections: A UK hospital budget impact analysis. ISPOR 20th Annual International Meeting, Philadelphia, PA, 2015.
- Bay C, **Cyr PL**, Jensen IS. Estimating the value of cangrelor from eliminating preloading in coronary artery bypass graft (CABG) patients. ISPOR 16th Annual European Congress, Amsterdam, Netherlands, 2014.
- Wu C, Fortier K, Fan WJ, LePensse K, Bay CB, **Cyr PL**, Jensen IS. A U.S. hospital budget impact model for oritavancin in ABSSSI patients with risk of MRSA infections. ISPOR 16th Annual European Congress, Amsterdam, Netherlands, 2014.
- Jensen IS, Wu C, Bay CB, **Cyr PL**. Estimating the clinical value of cangrelor in patients undergoing PCI. International Academy of Cardiology, 19th World Congress on Heart Disease, Boston, MA, 2014.
- Pinto DS, Nicholson G, Harrington RA, **Cyr PL**, Bhatt DL. CHAMPION PHOENIX Study economic results: Direct hospitalization costs of patients receiving clopidogrel or cangrelor during percutaneous coronary intervention. American Heart Association QCOR conference, Baltimore, MD, 2014.
- Jensen IS, Bay C, **Cyr PL**. Estimating the impact of combining cangrelor and bivalirudin to a U.S. hospital performing PCI procedures. ISPOR 18th Annual International Meeting, New Montreal, Quebec, 2014.
- Jensen IS, Wu C, **Cyr PL**, White RE. Budget impact of metastatic castrate-resistant prostate cancer to German payers. ISPOR 15th Annual European Congress, Dublin, Ireland, 2013.
- Cyr PL**, Sidhu M, Hussaun R, Hromin T, Pike I. Dual-acting osmotic and stimulant laxative for bowel cleansing: An U.S. payer budget impact analysis. Digestive Disease Week (ASGE), Orlando, FL, 2013.
- Cyr PL**, Sidhu M, Hussaun R, Hromin T, Jensen IS, Kuan R. Dual-acting osmotic and stimulant laxative for bowel cleansing in an elderly population. ISPOR 18th Annual International Meeting, New Orleans, LA, 2012.
- Nicholson G, **Cyr PL**. Cost of failed labor induction: An U.S. hospital perspective. ISPOR 18th Annual International Meeting, New Orleans, LA, 2012.

Jensen IS, Ogborne R, **Cyr PL**. A German hospital budget impact model comparing antibiotic therapies in complicated skin and skin structure infections and bacteremia. ISPOR 17th Annual International Meeting, Washington DC, 2012.

Jensen IS, Helm T, **Cyr PL**. Impact of complications in solid organ transplants on hospital charges and length of stay. ISPOR 17th Annual International Meeting, Washington DC, 2012.

Helm T, Jensen IS, **Cyr PL**. Impact of dysphagia on U.S. hospital charges in patients with comorbid conditions. ISPOR 13th Annual European Congress, Madrid, Spain, 2011.

Jensen IS, Helm T, **Cyr PL**. Impact of complications from dysphagia on U.S. hospital charges. ISPOR 13th Annual European Congress, Madrid, Spain, 2011. Finalist-Best Poster.

Olchanski N, McInnis M, Hasleth MJ, **Cyr PL**, Bockstedt L, Goss TF, Howland RH. Patterns of use and cost associated with the use of non-pharmacologic interventions in patients with major depressive disorders. American Psychiatric Association Annual Meeting, Honolulu, HI, 2010.

Slawsky K, Olchanski N, **Cyr PL**, Howden CW. Cost-effectiveness of diagnostic strategies for H. pylori infection in a high prevalence population. Digestive Disease Week, Chicago, IL 2010.

McInnis MM, Hasleth MJ, **Cyr PL**, Howland RH, Bockstedt L, Goss TF. Burden of illness of treatment-resistant depression. ISPOR 12th Annual European Congress, Prague, Czech Republic, 2010.

Olchanski N, Slawsky K, **Cyr PL**, Schwenkglens M. Budget impact of bivalirudin in STEMI patients undergoing primary percutaneous coronary interventions (PPCI) in Italian hospitals. ISPOR 15th Annual International Meeting, Atlanta, GA, 2010.

Olchanski N, Slawsky K, **Cyr PL**, Schwenkglens M, Zeymer U. Budget impact of bivalirudin in STEMI patients undergoing primary percutaneous coronary interventions (PPCI) in German hospitals. ISPOR 15th Annual International Meeting, Atlanta, GA, 2010.

Olchanski N, Slawsky K, **Cyr PL**, Schwenkglens M, Steinhubl S. Clinical and economic impact of bivalirudin on bleeding events in high-risk unstable angina (UA)/Non-ST-elevation myocardial infarction (NSTEMI) in patients undergoing percutaneous coronary intervention (PCI) in France. ISPOR 15th Annual International Meeting. Atlanta, GA, 2010.

Olchanski N, Slawsky K, **Cyr PL**, Schwenkglens M, Steinhubl S. A French hospital budget impact model comparing anticoagulation strategies in primary percutaneous coronary interventions (PPCI). ISPOR 15th Annual International Meeting, Atlanta, GA, 2010. Best Poster Finalist.

Cyr PL, Slawsky K, Krasa H, Zimmer C, Ouyang J, Goss TF, Udelson J, et al. Evaluation of the association between serum sodium and length of stay in patients hospitalized for heart failure. ISPOR 12th Annual European Congress, Paris, France, 2009.

Cyr PL, Slawsky K, Krasa H, Zimmer C, Ouyang J, Goss TF, Udelson J, et al. Effect of tolvaptan on hospital length of stay within hyponatremic patients hospitalized for heart failure. ISPOR 12th Annual European Congress, Paris, France, 2009.

Cyr PL, McInnis M, Slawsky K, Krasa H, Czerwiec F, Ouyang J, Goss TF, et al. Effect of tolvaptan on self-reported utility scores in hyponatremic patients. ISPOR 12th Annual European Congress, Paris, France, 2009.

Schwenkglenks M, Szucs TD, Brazier J, Blackman D, **Cyr PL**, Olchanski N, Stone GW. Cost-effectiveness of bivalirudin versus heparin plus glycoprotein IIb/IIIa inhibitor in the treatment of acute ST-segment elevation myocardial infarction – A HORIZONS trial analysis using UK valuations. ISPOR 12th Annual European Congress, Paris, France, 2009.

Cyr PL, Halseth M, Olchanski N, Bockstedt L, Partlow K, Lineke C, Handke B, et al. A systematic evaluation of published literature to assess burden of treatment-resistant depression. ISPOR 14th Annual International Meeting, Orlando, FL, 2009

Cyr PL, Lenhart G. SF-12 as a predictor of healthcare expenditures in individuals over 65 years of age. Annual Meeting of Society of Medical Decision Making, Cambridge, MA, 1998

Halm EA, Causino NA, **Cyr PL**, Blumenthal D. Physician ratings of the of gatekeeping on cost and quality of care. Annual Society of General Internal Medicine, Chicago, IL, 1998.

Cyr PL, Stafford RS. Chronic disease, quality-of-life and healthcare utilization in the elderly. Annual Conference of Investigative Medicine, Boston, MA, 1996.

MEDIA MENTIONS AND INVITED PAPERS

Media Mentions

Understanding gene therapy coverage for sickle cell disease. Life Sciences Intelligence, 2024.

Meeting on the Mesa: How to bring cell and gene therapies to market. Genetic Engineering and Biotechnology News, 2023.

A critical examination of time, cost, and payment considerations. BenefitsPRO, 2022.

Rare disease on payer's minds. PharmaLive.com, 2022.

Invited Papers

Phippard D, McLean R, **Cyr PL**. Immunogenicity assays offer significant opportunities for GT developers: More than just a sunk cost. Biospace, 2024.

Bouchard M, **Cyr PL**. Lopata E, Foster J. Improving patient access to cell therapy through decentralized manufacturing. GCTLive, 2024.

Bouchard M, **Cyr PL**. Lopata E, Foster J. Payer challenges and access for autologous cell and gene therapy. GCTLive, 2024.

Cyr PL, McLean R, Roth R. The opportunity for pharma to reduce the use of redundant health technologies. PharmaLive, 2024.

Lopato E, **Cyr PL**, Depinto J. Will the CMS CGT model support patient access to sickle cell disease CGTs? GCTLive, 2024.

Cyr PL. How can patients and caregivers be the catalyst for rare disease innovation? American J Manage Care, 2023.

Maclean R, **Cyr PL**, Roth R. The opportunity cost of the continued use of superseded health technologies. Med Ad News, 2023.

Cyr PL. Innovation in gene therapies. Med Ad News, 2023.

Cyr PL, Guennel T, Neal J, Zsambok K, Brown AS, Velazquez S, Bloomberg M. Rarified thinking in rare disease research. Precision White Paper, 2023.

Turner L, **Cyr PL**, Maclean R. What does game theory teach us about cell and gene therapy coverage? Med Aid News, 2023.

Cyr PL, Kinley A, Macauley R. The future of gene therapies: Three trends to watch for. Life Science Voice, 2023.

Phippard D, **Cyr PL**. The FDA and AAV-based gene therapy safety: What you should know. Life Science Voice, 2023.

Jensen IJ, **Cyr PL**. Early health economic models in GCT to inform clinical trial design and optimize commercialization efforts. PharmaLive.com, 2022.

Mangal A, **Cyr PL**. A shared opportunity: The future of cell and gene therapy.

Preib M, **Cyr PL**, Honcz, J, Findling RL. Beyond the current standard of care for pediatric ADHD. First Reports Managed Care, 2019, 25-27.

Cyr PL, Blandford L. Economic assessment of novel gene and cellular therapies: Beyond traditional modeling. J Clin Pathways 5:35-36, 2018.

Maclean R, **Cyr PL**. How prescribers affect launch success. PM360, 2018.

SELECTED PANEL PRESENTATIONS

Evidence trends in cell and gene therapy: 3 things you can do to impact market access. Managed Markets & Account Management Strategies Conference, New Orleans, LA, 2024.

Cell and gene therapy: Update on the science and development. Association for Value-Based Cancer Care, New York, New York, 2024

The clinical development roadmap for cell and gene therapy. Cell and Gene Day. Endpoints News, 2024.

A forecast on the 2024 cell and gene therapy landscape. Alliance for Regenerative Medicine, Meeting on the Med, Rome, Italy, 2024

Cell and gene therapy and the future impact on cancer care. Association for Value-Based Cancer Care Annual Conference, New York, New York, 2023.

A deep dive into the future of advanced therapies. Alliance for Regenerative Medicine, Meeting on the Mesa, Carlsbad, CA, 2023.

The future of cell therapy development and delivery. Endpoints News, 2023.

The price is right: Approvals & market access in 2023. Cell and Gene Day. Endpoints News, Virtual, 2023.

Extraordinary science: Navigating CGTx development in 2023. Alliance for Regenerative Medicine, Meeting on the Med, Barcelona, Spain, 2023.

State of the union for advanced medicines. Endpoints Webinar, 2022.

Predictions for CAR-T therapeutic development. CAR-TCR, Boston, MA, 2022.

Selling the cell: Cost-benefit considerations for complex therapeutics. Association of Value-Based Cancer Care, New York, New York. 2022.

Pricing & reimbursement: Unlocking the potential for ATMPs. Endpoints News Webinar, 2022.

A patient-centric approach to the development of advanced therapies. Gene Therapy for Rare Disorders, Boston MA, 2022.

Planning for the commercialization of advanced therapies. Endpoint Webinar Series, Virtual, 2022.

What's next for advanced therapies. Alliance for Regenerative Medicine, Meeting on the Mesa, Carlsbad, CA, 2021.

Pricing strategies for advanced therapies. Endpoints Webinar, 2021.

Overcoming unique challenges in evidence development and assessment for access and reimbursement/coverage of cell and gene therapies. Academy of Managed Care Pharmacy Educational Program, 2021.

Considerations for early-stage gene therapy start-ups. Gene Therapy for Rare Disorders, Boston, MA, 2021.

Considerations for the clinical development of a gene therapy. America Society of Gene and Cell Therapy, Virtual, 2021.

Addressing challenges in retrospective studies of rare and ultra-rare diseases. ISPOR Annual European Congress, 2021.

The future of reimbursement for cell and gene therapies. Precision for Medicine Webinar, Virtual, 2021.

Value-based health and how to fund gene therapies – An international perspective. Brazil Farma Conference, 2020.

Recognizing better outcomes in stem cell transplantation. Association of Value-Based Cancer Care, New York, New York, 2020.

Real world strategies to address multiple stakeholder evidence requirements, Real World Evidence Virtual Summit, HEXPO-healthconomics.com, 2014.

Optimizing market access using health economics: Strategies that can be effectively implemented. PBRIG Annual Conference, San Antonio, TX, 2011.

How to maximize your reimbursement value through pharmacoeconomics and outcomes research. F-D-C Reports Webinar, 2008.

Formulary and reimbursement strategies for effective product planning, King of Prussia, PA, 2006.

The business of life sciences: Future of global innovation. Annual Technology Management Workshop, Massachusetts Institute of Technology Sloan School of Management, Cambridge, MA, 2001.

Biotech and consumer partnering: Building synergy for enhanced research outcomes. BIO, San Diego, CA, 2001.

Research compliance; Managing multi-site research projects. The Medical Research Summit, Washington DC, 2001.

Institutional Review Board operations: Using central and commercial IRBs. The Medical Research Summit, Washington DC, 2001.