

CAITLIN B. BIDDELL

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EDUCATION

PhD, Health Policy and Management, Decision Sciences and Outcomes Research Minor (2018 – *expected May 2023*)
Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Dissertation: Impact of financial barriers to care on adverse healthcare events among cancer patients and survivors.
Dissertation Chair: Dr. Stephanie Wheeler

MSPH, Health Policy and Management (2018 - 2020)
Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Master's Paper: Financial Barriers to Cervical Cancer Screening and Perceived Cost Burden:
An Analysis of Low-income, Under-screened Women in North Carolina. First Reader: Dr. Stephanie Wheeler

B.S. Biology, Minors in Chemistry and Medical Anthropology (May 2015)
University of North Carolina at Chapel Hill, Honors College, Highest Distinction
Cumulative GPA: 3.96/4.0

SKILLS

- Mixed methods
- Primary survey data collection and analysis
- Semi-structured interviewing
- Analysis of complex survey, Medicare claims, and electronic health record data
- Inverse probability of treatment weighting
- Cost-effectiveness analysis
- Subject matter expertise in cancer and patient experience
- Programming in Stata and R
- Research writing and dissemination

RESEARCH EXPERIENCE

UNC Gillings School of Global Public Health; Lineberger Comprehensive Cancer Center

Chapel Hill, NC
Aug 2018 – current

Graduate Research Assistant

Projects:

Nov 2019 - current, Addressing Cancer-Related Financial Toxicity in Rural and Non-rural Oncology Care Settings (1-R01-CA240092-01, PIs: Stephanie Wheeler, Don Rosenstein)

- Evaluated the effectiveness and feasibility of a pilot financial navigation study
- Conducted qualitative process mapping with 83 oncology stakeholders to prepare for financial navigation implementation
- Developed an automated reporting system in REDCap and Stata to monitor recruitment and implementation challenges

May - Sep 2019, Sep 2021 - current, Improving Provider Announcement Communication Training (IMPACT) - Budget impact, cost-effectiveness, and population outcomes of interventions to improve HPV vaccine communication and uptake in rural and urban communities, Project 4 (5P01CA250989-02, PI: Noel Brewer, Project 4 Co-Directors: Stephanie Wheeler, Sachiko Ozawa)

- Wrote and edited sections of the P01 grant proposal
- Developed a micro-costing strategy for a vaccine champion intervention
- Analyzed 36 qualitative interviews investigating provider perceptions of HPV vaccine communication
- Conducted a systematic review of HPV vaccine simulation models incorporating medically underserved groups

Aug 2018 - current, Effect of HPV Self-Collection on Cervical Cancer Screening in High Risk Women

(1-R01-CA183891-01A1, PI: Jennifer Smith)

- Led a secondary analysis of quantitative baseline survey data
- Examined the cost-effectiveness of at-home HPV self-collection kits in improving cervical cancer screening uptake

Oct 2020 - Aug 2022, Integrated Systems Modeling to Inform State and Local Level Planning for the COVID-19 Pandemic (UL1TR002489, NU38OT000297, PI: Kristen Hassmiller Lich)

- Used qualitative network mapping and content analysis to analyze 44 interviews with organization decision-makers to understand the local, cross-sector decision landscape and decision-making processes involved in the public health response to the COVID-19 pandemic in North Carolina
- Translated findings to inform national infectious disease modeling efforts

May 2020 - July 2021, Evaluating the financial impact of hematopoietic stem cell transplantation on pediatric patients and their families (Lineberger Developmental Research Award – No Number, PIs: Kimberly Kasow, Lisa Spees)

- Developed and implemented a caregiver survey in REDCap
- Led the qualitative analysis of 18 caregiver interviews
- Led a mixed methods analysis of survey and interview data to understand the impact of pediatric hematopoietic stem cell transplantation on caregiver employment and financial need

Jan 2019 – Aug 2020, Developing and Validating a Risk Stratification Framework for Breast Cancer Survivors (American Cancer Society Contract – No Number, PI: Stephanie Wheeler)

- Created an analytic cohort of women diagnosed with Stage 0-3 breast cancer using the Surveillance and Epidemiology End Results (SEER) registry – Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey linkage, including Medicare Fee-for-service claims
- Implemented a recurrence algorithm and frailty and comorbidity indices using Medicare claims data
- Contributed to the development and validation of a risk stratification algorithm using machine learning
- Led a literature review and commentary about developing personalized survivorship care pathways in the US

UNC Center for AIDS Research (CFAR) - Social and Behavioral Sciences Research Core
Undergraduate Research Assistant

Chapel Hill, NC
Sep 2014 - Aug 2015

UNC School of Medicine - Division of Infectious Diseases
Undergraduate Research Intern

Chapel Hill, NC
Mar 2013 - May 2014

Project: Evaluation of Behavioral Intervention for HIV Positive Prisoners in NC and TX (imPACT Trial) (PI: David Wohl)

Dr. Lindsey Smith Taillie, UNC Gillings SPH - Department of Epidemiology
Undergraduate Research Assistant

Chapel Hill, NC
Mar - Aug 2013

GRANTS, CONTRACTS, AND FELLOWSHIPS

EMOT-ECON Dissertation Research Grant

June 2022 – June 2023

UNC Cancer Care Quality Training Program Predoctoral Fellowship

August 2020 – July 2022

Cancer Prevention and Control Research Network (CPCRN) Scholars Program

January 2021 – September 2021

NIH Big Data 2 Knowledge (BD2K) Biomedical Graduate Training Program

August 2018 – July 2019

Health Policy & Management Departmental Tuition Supplement

August 2018 – May 2019

AWARDS AND HONORS

Health Policy and Management Student Travel Award, UNC Chapel Hill (November 2022)

UNC Graduate Student Transportation Award, UNC Chapel Hill (October 2022)

Cancer Outcomes Travel Award, Lineberger Comprehensive Cancer Center (October 2019, September 2022)

Jean G. Yates Outstanding Doctoral Student Award, UNC-CH Health Policy and Management (April 2022)

2022 Graduate Education Advancement Board (GEAB) Impact Award, UNC Chapel Hill (December 2021)

Passed Doctoral Qualifying Exams with Honors Distinction, UNC Chapel Hill (August 2021)

Graduate Student Recognition External Awardee, UNC Chapel Hill Graduate School (April 2019)

Guiding Principle Award, Triage Consulting Group (2016, 2017)

Phi Beta Kappa, UNC Chapel Hill (2015)

Dean's List, UNC Chapel Hill (2011-2015, 8 semesters)

PEER-REVIEWED PUBLICATIONS

Refereed journal publications

1. Spees LP, **Biddell CB**, Angove RSM, Gallagher KD, Anderson E, Christenbury A, Rocque G, Wheeler SB. Barriers to COVID-19 Vaccine Uptake Among Resource-limited Adults Diagnosed with Chronic Illness. *Frontiers in Public Health*. [In press]
2. Reeder-Hayes KE, **Biddell CB**, Manning ML, Rosenstein DL, Samuel-Ryals CA, Spencer JC, Smith S, Deal A, Gellin M, Wheeler SB. Oncology care providers' perspectives of financial support resources and barriers to accessing financial support. *JCO Oncology Practice*. [In press]
3. Caston NE, Waters AR, Williams CP, **Biddell CB**, Spees LP, Gallagher K, Angove R, Anderson E, Balch A, Wheeler S, Rocque GB. Patient-reported Discrimination Among Limited-resourced Cancer Survivors: A Brief Report. *Journal of Psychosocial Oncology*. Epub ahead of print. doi: 10.1080/07347332.2022.2154186
4. Johnson K, **Biddell CB**, Patel MD, Smith RL, Hecht HK, Swann JL, Mayorga ME, Hassmiller Lich K. Organizational Decision-Making during COVID-19: A Qualitative Analysis of the Organizational Decision-Making System in the United States during COVID-19. *Journal of Contingencies and Crisis Management*. 2022;1– 14. <https://doi.org/10.1111/1468-5973.12437>
5. Wheeler S, Birken S, Wagi C, Manning M, Gellin M, Padilla N, Rogers C, Rodriguez J, **Biddell C**, Strom C, Antonio Bell R, Rosenstein D. Core functions of a financial navigation intervention: An in-depth assessment of the Lessening the Impact of Financial Toxicity (LIFT) intervention to inform adaptation and scale-up in diverse oncology care settings. *Frontiers in Oncology*. 2022;2. doi: 10.3389/frhs.2022.958831
6. Wheeler SB, **Biddell CB**, Manning M, Gellin M, Padilla N, Spees LP, Rogers C, Rodriguez-O'Donnell J, Samuel-Ryals C, Birken SA, Reeder-Hayes K, Petermann V, Deal AM, Rosenstein DL. Lessening the Impact of Financial Toxicity (LIFT): A protocol for a multi-site, single-arm trial examining the effect of financial navigation on financial toxicity in adult patients with cancer in rural and non-rural settings. *Trials*. 2022 Oct 3;23(1):839. <https://doi.org/10.1186/s13063-022-06745-4>.
7. **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 Aug 16;10:906602. doi:10.3389/fpubh.2022.906602.

8. 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 Pract.* 2022 Jul 29;7(2):23814683221116362. doi:10.1177/23814683221116362.
9. **Biddell CB**, Spees LP, Petermann V, Rosenstein DL, Manning M, Gellin M, Padilla N, Birken S, Samuel-Ryals CA, Reeder-Hayes K, Deal AM, Cabarrus K, Bell RA, Strom C, DeAntonio PA, Young TH, King S, Leutner B, Vestal D, Wheeler SB. Financial Assistance Processes and Mechanisms in Rural and Non-rural Oncology Care Settings. *JCO Oncology Practice.* 2022 18:9, e1392-e1406. doi: 10.1200/OP.21.00894.
10. **Biddell CB**, Kasow KA, Killela MK, Page K, Wheeler SB, Drier SW, Kelly MS, Robles JM, Spees LP. Understanding the financial and psychological impact of employment disruption among caregivers of pediatric HSCT recipients: a mixed methods analysis. *Support Care Cancer.* 2022 Jun;30(6):4747-4757. doi: 10.1007/s00520-022-06883-0.
11. **Biddell CB**, Wheeler SB, Angove RSM, Gallagher KD, Anderson E, Kent EE, Spees LP. Racial and Ethnic Differences in the Financial Consequences of Cancer-related Employment Disruption. *Frontiers in Oncology.* 2021;11(3020). doi: 10.3389/fonc.2021.690454.
12. Oh NL, **Biddell C**, Rhodes B, Brewer N. A Meta-Analysis of the Effect of Provider Recommendation on HPV Vaccine Uptake. *Prev Med.* 2021 Jul;148:106554. doi: 10.1016/j.ypmed.2021.106554.
13. **Biddell CB**, Spees LP, Smith JS, Brewer NT, Des Marais AC, Sanusi BO, Hudgens MG, Barclay L, Jackson S, Kent EE, Wheeler SB. Perceived Financial Barriers to Cervical Cancer Screening and Associated Cost Burden Among Low-income, Under-screened Women. *J Womens Health (Larchmt).* 2021 Sep;30(9):1243-1252. doi: 10.1089/jwh.2020.8807.
14. **Biddell CB**, Spees LP, Mayer DK, Wheeler SB, Trogon J, Rotter J, Birken SA. Developing personalized survivorship care pathways in the United States: Existing resources and remaining challenges. *Cancer.* 2021 Apr 1;127(7):997-1004. doi: 10.1002/cncr.33355.
15. **Biddell CB**, O'leary MC, Wheeler SB, Spees LP. Variation in Cervical Cancer Screening Preferences Among Medically Underserved Individuals in the US: A Systematic Review. *Cancer Epidemiol Biomarkers Prev.* 2020 Aug;29(8):1535-1548. doi: 10.1158/1055-9965.EPI-20-0306.
16. Golin CE, Barkley BG, **Biddell C**, Wohl DA, Rosen DL. Great Expectations: HIV Risk Behaviors and Misperceptions of Low HIV Risk among Incarcerated Men. *AIDS and Behavior.* 2018 Jun;22(6):1835-1848. doi: 10.1007/s10461-017-1748-z.

Under Review

17. Semprini JT, **Biddell CB**, Seaman AT, Charlton ME, Nash SH, Eberth JM, Yeager KA, Evans D, Madhivanan P, Brandt HM, Askelson NM, Zahnd WE. Measuring and Addressing Health Equity: An Assessment of Cancer Center Endorsement Requirements. *In revisions.*
18. Spees LP, **Biddell CB**, Smith JS, Des Marais AC, Hudgens MG, Sanusi B, Jackson S, Brewer NT, Wheeler SB. Comparative cost-effectiveness of human papillomavirus (HPV) self-collection intervention on cervical cancer screening completion among underscreened US women. *In revisions.*
19. Petermann V, **Biddell CB**, Spees LP, Rosenstein DL, Manning M, Gellin M, Padilla N, Samuel-Ryals CA, Birken SA, Reeder-Hayes K, Deal AM, Cabarrus K, Bell RA, Strom C, Young TH, King S, Leutner B, Vestal D, Wheeler SB. Assessing the Pre-Implementation Context for Financial Navigation in Rural and Non-Rural Oncology Clinics. *Under review.*
20. Johnson K, **Biddell CB**, Gora Combs K, Wiesman J, Valdes Lupi M, Hassmiller Lich K. Local Health Department Values and Organizational Authorities Guiding System- Strengthening Activities during COVID-19. *Under review.*
21. Escoffery C, Petagna C, Agnone C, Perez S, Saber L, Ryan G, Dhir M, Sekar S, Yeager KA, **Biddell CB**, Madhivanan P, Lee S, English AS, Savas L, Daly E, Vu T, Fernandez ME. A Systematic Review of Interventions to promote HPV Vaccination Globally. *Under review.*
22. Killela MK, **Biddell CB**, Keim-Malpass J, Schwartz TA, Soto SH, Williams JR, Santacroce SJ. Use of medical crowdfunding to mitigate personal costs of serious chronic illness: scoping review. *Under review.*

Reports

1. Christenbury A, **Biddell C**, Gallagher K, Spees L, Angove R, Anderson E, Braccio N, Kent E, Wheeler S. Impact of the COVID-19 Pandemic on Employment and Financial Hardship Among Limited-Resourced Individuals with Chronic Illness. Published online December 1, 2022. <https://www.patientinsightinstitute.org/insights/covid-employment-impact>

CONFERENCE PRESENTATIONS

Oral Presentations (* indicates presenter)

Biddell CB*, Johnson KT, Patel MD, Smith RL, Hecht HK, Swann JL, Mayorga ME, Hassmiller Lich K. “Bringing Communities to the Table: The Translation of State Guidance into Local Decision-Making during COVID-19.” AcademyHealth State and University Partnership Learning Network, virtual (September 2021).

Johnson KT*, **Biddell CB**, Patel MD, Smith RL, Hecht HK, Swann JL, Mayorga ME, Hassmiller Lich K. “Co-Design of Decision-Support Model Analysis and Communication with Local Public Health Decision Makers during COVID-19.” AcademyHealth State and University Partnership Learning Network, virtual (September 2021).

Spees LP*, **Biddell CB**, Drier S, Page K, Kelly M, Wheeler SB, Kasow K. “Cleaning up the confetti:” The long-term financial impact of pediatric hematopoietic cell transplantation. Transplantation & Cellular Therapy Meetings of ASTCT and CIBMTR, virtual (February 2021).

Invited Presentations

Biddell CB*, Waters AR, Angove RSM, Gallagher KD, Planey AM, Kent EE, Spees LP, Rosenstein DL, Wheeler SB. “Understanding the emotional impacts of facing financial barriers to care: A qualitative analysis of adults with a history of cancer.” Emotional Well-being and Economic Burden Research Network (EMOT-ECON) Annual Research Meeting in Memphis, TN (January 2023).

Biddell CB*, Waters AR, Angove RSM, Gallagher KD, Planey AM, Kent EE, Spees LP, Rosenstein DL, Wheeler SB. “Understanding the long-term impacts of financial barriers to care: Patient-informed adaptation of a conceptual framework for adult cancer survivors.” Patient Advocate Foundation Patient Insight Congress in Washington, DC (November 2022).

Poster Presentations

Biddell CB*, Spees LP, Trogon JG, Kent EE, Rosenstein DL, Angove RSM, Wheeler SB. “Association of patient-reported financial barriers with healthcare utilization among Medicare beneficiaries with a history of cancer.” ASCO Quality Care Symposium in Chicago, IL (October 2022).

Johnson KT, **Biddell CB***, Hassmiller Lich K. “Local Health Department Values and Organizational Authorities Guiding Public Health System Strengthening during COVID-19.” AcademyHealth Annual Research Meeting in Washington, DC (May 2022).

Christenbury A*, **Biddell C**, Gallagher K, Spees L, Angove R, Anderson E, Wheeler S. “Impact of the COVID-19 Pandemic on Employment and Financial Hardship Among Limited-Resourced Individuals Facing Chronic Illness.” AcademyHealth Annual Research Meeting in Washington, DC (May 2022).

Spees L*, **Biddell C**, Angove R, Gallagher K, Anderson E, Christenbury A, Rocque G, Wheeler S. “Barriers to COVID-19 Vaccine Uptake Among Low-Resourced Adults Diagnosed with Chronic Illness.” AcademyHealth Annual Research Meeting in Washington, DC (May 2022).

Spees LP*, **Biddell CB**, Smith JS, Des Marais AC, Hudgens MG, Sanusi B, Jackson S, Brewer NT, Wheeler SB. “Comparative Cost-Effectiveness of Mailed Human Papillomavirus (HPV) Self-Collection Intervention on Subsequent Cervical Cancer Screening Completion Among Under-Screened US Women.” AcademyHealth Annual Research Meeting in Washington, DC (May 2022).

Biddell CB*, Petermann VP, Spees LP, Rosenstein D, Manning M, Gellin M, Padilla N, Birken S, Samuel-Ryals C, Reeder-Hayes K, Cabarrus K, Wheeler SB. “Use of process mapping to inform the implementation of financial navigation in rural and non-rural oncology care settings.” AcademyHealth 14th Annual Conference on the Science of Dissemination and Implementation in Health, virtual (December 2021).

Petermann VM*, **Biddell CB**, Spees LP, Rosenstein D, Manning M, Gellin M, Padilla N, Birken S, Samuel-Ryals C, Reeder-Hayes K, Cabarrus K, Wheeler SB. “Using the Organizational Readiness for Implementing Change scale and perceptions of barriers and facilitators to implementation success as tools for stakeholder engagement.” AcademyHealth 14th Annual Conference on the Science of Dissemination and Implementation in Health, virtual (December 2021).

Biddell CB*, Wheeler SB, Angove RSM, Gallagher KD, Anderson E, Kent EE, Spees LP. “Racial/Ethnic Differences in the Financial Consequences of Cancer-related Employment Disruption.” AcademyHealth Annual Research Meeting, virtual (June 2021).

Wheeler SB*, Spees LP, **Biddell CB**, Rotter J, Trogdon JG, Birken SA, Mayer DK. “Development of a personalized follow-up care algorithm for Medicare breast cancer survivors.” ASCO Quality Care Symposium, virtual (October 2020).

Biddell C*, Stover A. “Assessment of Financial Toxicity in Cancer Patients and Survivors: A Review of Patient-Reported Outcome Measures.” International Society for Quality of Life Research 26th Annual Conference in San Diego, CA (October 2019).

Atkeson A, **Biddell C**, Huber K*, Muntis F, Sibley A. “The Risk of Release: Substance Use Disorder and Opioid Overdose Death In North Carolina’s Justice-Involved Population.” North Carolina Opioid Prevention Summit in Raleigh, NC (June 2019).

TEACHING

Fall 2022 “Techniques for the Economic Evaluation of Health Care” (3 credits), Graduate Teaching Assistant, Department of Health Policy and Management, UNC-CH, Chapel Hill, NC

PROFESSIONAL EXPERIENCE

Triage Consulting Group Atlanta, GA
Senior Associate Consultant June 2017 – July 2018

- Oversaw a team of associates in comprehensive payment review engagements for multiple, large hospital systems, delivered suggestions for process improvement strategies and offered support on implementing strategic changes

Associate Consultant Sep 2015 – May 2017

- Audited and researched hospital claims data and institutional health insurance contracts to identify missed revenue opportunity

NC Department of Health and Human Services - Tobacco Prevention and Control Branch Raleigh, NC
Local Policy Intern May, Jul - Aug 2014

- Manipulated a local policy database in the creation of data visualization dashboards

PROFESSIONAL SERVICE AND MEMBERSHIP

Ad hoc reviewer 2020 – Present
Journal of Clinical Oncology, JCO Oncology Practice, Supportive Care in Cancer, Breast Cancer Research and Treatment

Health Policy and Management Student Equity Collective 2020 – Present

Student Member, American Society of Clinical Oncology 2021 – Present

Caitlin B. Biddell January 2023

PhD Advisory Committee Student Representative , UNC Health Policy & Management	2019 – Present
Member , AcademyHealth	2018 – Present
UNC Chapter Secretary , International Society for Pharmacoeconomics and Outcomes Research (ISPOR)	2018 – 2019
Poster Presentations Committee Member , UNC Minority Health Conference	2018 – 2019
Volunteer Certified Affordable Care Act Navigator , Legal Aid of North Carolina	2018

TRAININGS & SHORT COURSES

ResearchTalk Qualitative Summer Research Intensive	Aug 2022
Gillings School of Global Public Health Inclusive Excellence Summer Teaching Symposium	Jul 2022
NC TraCS (Translational and Clinical Sciences) Institute: Responsible Conduct of Research	Jul 2022
ACCC Financial Advocacy Bootcamp	Jan 2021
Quantifying and Valuing Health Inequality Impacts in Economic Evaluation (SMDM Short Course)	Oct 2020
Racial Equity Institute Groundwater Approach Training	June 2020