## Keith B. Naylor, MD

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# **Education and Training**

09/1994-04/1999	Bachelor of Science in Engineering. School of Chemical Engineering, University of
	Michigan, Ann Arbor, MI
06/1999-06/2001	Post-baccalaureate. Patient-Oriented Research Program, Mayo Graduate School,
	Rochester, MN
08/2001-05/2005	Doctor of Medicine. University of Michigan Medical School, Ann Arbor, MI
06/2005-06/2008	Intern and Resident. Internal Medicine Residency Program, University of Chicago,
	Chicago, IL
01/2009-12/2009	Chief Medical Resident. Internal Medicine Residency Program, University of Chicago,
	Chicago, IL
07/2008-12/2012	Clinical Fellow. Gastroenterology Fellowship Program, University of Chicago,
	Chicago, IL
07/2012-06/2013	Research Fellow. Gastroenterology Fellowship Program, University of Chicago,
	Chicago, IL

# **Research Training**

07/1997-01/1998	Research Assistant. Department of Medicine, University of Michigan, Ann Arbor, MI
	PI: Benjamin Lucchesi
12/1998-06/1999	Research Internship. Department of Immunopathology, Parke-Davis Pharmaceuticals,
	Ann Arbor, MI
	PI: Kenneth Kilgore
01/2010-12/2011	NIH/NIDDK T32 Postdoctoral Research Fellow, University of Chicago, Chicago, IL
	PI: Eugene Chang
12/2013-11/2015	NIH/National Cancer Institute Diversity Supplement Scholar, University of Chicago,
	Chicago, IL
	PI: Karen Kim

# **Certification and Licensure**

10/2008	American Board of Internal Medicine (ABIM ID: 288681)
11/2013	American Board of Gastroenterology
05/2008-Current	Illinois, Licensed Physician and Surgeon (License Number: 036120827, Active)
05/2017-Current	Michigan, Licensed Physician and Surgeon (License Number: 4301112226, Active)

# Academic, Administrative, and Clinical Appointments

01/2009-12/2009	Chief Medical Resident. Department of Medicine, University of Chicago, Chicago, IL
07/2013-07/2017	Clinical Instructor. Section of Gastroenterology, University of Chicago, Chicago, IL
07/2017-07/2019	Clinical Lecturer, Division of Gastroenterology, University of Michigan, Ann Arbor, MI
07/2019-Current	Assistant Professor, Division of Gastroenterology, University of Illinois at Chicago
08/2019-Current	Member, University of Illinois Cancer Center

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#### **Clinical Interest**

I am a practicing Gastroenterologist with a clinical focus in hereditary and familial gastrointestinal cancers. I have an abiding interest and expertise in colorectal cancer screening, with a specific focus on increasing the utilization of screening among racial and ethnic minority patient populations.

#### **Research Interest**

I am a health services researcher. My major areas of interest include using administrative health data to investigate small-area variation in the utilization of endoscopic and non-endoscopic forms of colorectal cancer screening. My current research interests include defining colonoscopy related geographic service areas using administrative data and examining the relationship between spatial proximity to colonoscopy infrastructure and the utilization of endoscopic and non-endoscopic screening modalities. I am particularly interested in exploring these factors among urban communities and within racial and ethnic minority population subgroups. My long-term career goal is to develop geospatially tailored interventions to increase colorectal cancer screening utilization within under-resourced geographic areas and to thereby improve screening related healthcare equity.

#### Grants

Grants	
Previous Grants	
01/2010-12/2011	NIDDK Institutional Training Grant (5T32DK007074-36, 2T32DK007074-37)
	University of Chicago Institutional training grant, PI: Eugene Chang
	Role: Postdoctoral Research Fellow
03/2013-02/2014	University of Chicago CTSA Pilot Award, PI: Bruce Bissonnette
	Vitamin D biomarker intervention trial in African Americans with a history of colonic
	neoplasia. A randomized control trial studying the use of vitamin D supplementation in
	African Americans to assess cellular, transcriptional, and microbial changes in the colon.
	Role: Co-Investigator
12/2013-11/2015	NCI Feasibility Study for Collaborative Interaction for Minority Institution/Cancer
	Center Partnership (P20 CA165582-01A1)
	The Chicago Southside Cancer Disparities Initiative, PI: Karen Kim
	The goal of this study was to develop a partnership between the University of Chicago
	Comprehensive Cancer Center and Chicago State University School of Health Sciences
	for cancer-related disparities education, training, and outreach.
	Role: Diversity Supplement Scholar
09/2017-07/2019	University of Michigan Rogel Comprehensive Cancer Center Development Award,
	Examining spatial accessibility to colonoscopy and equity in colorectal cancer screening.
	The goal of this study is to examine the effect of the spatial distribution of colonoscopy
	sites on utilization of endoscopic and non-endoscopic colorectal cancer screening.
	Role: Primary Investigator

#### Grants Not Awarded

06/2016 NCI Mentored Clinical Scientist Development Award (K08 CA214943)

Effects of Physician Social Networks on Racial Disparities in Colorectal Cancer

Screening.

Role: Primary Investigator

## **Honors and Awards**

05/1997	Summer Student Research Fellowship, American Heart Association
04/1998	Charles Ross Fellowship, University of Michigan Medical School, Ann Arbor, MI
09/2002	Ainger Scholarship, University of Michigan Medical School, Ann Arbor, MI
11/2006	Inductee into the Alpha Omega Alpha Honor Society

05/2008	Student Teaching Recognition, Internal Medicine Residency Program, University of
	Chicago, Chicago, IL
10/2008	Nominated Chief Resident, Internal Medicine Residency Program, University of Chicago,
	Chicago, IL
12/2009	Grand Rounds Speaker, "Social Determinants of Colorectal Cancer Disparities"
	Department of Medicine Grand Rounds, University of Chicago, Chicago, IL
11/2014	American Association for Cancer Research Scholars-in-Training Travel Award
01/2017	Grand Rounds Speaker, "Race vs. Place: Disentangling colorectal cancer related healthcare
	disparities" Department of Medicine Grand Rounds, University of Chicago, Chicago, IL

## **Memberships in Professional Societies**

## Elected or invited membership:

2006- Alpha Omega Alpha Honor Society, Beta Chapter, University of Chicago, Chicago, IL

Other:
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2017-	American Public Health Association
2015-	American Federation for Medical Research
2013-	American Association for Cancer Research
2008-	American Gastroenterological Association
2008-	American College of Gastroenterology

# **Teaching**

My teaching activities include providing clinical teaching and oversight of medical students, Internal Medicine Residents, and Gastroenterology Fellows at sites including outpatient clinics, inpatient wards, and in the medical procedures unit. In addition, I am currently acting as a primary research mentor for UIC School of Medicine MS1 student, Tajanna Stinn, as well as UIC Internal Medicine PGY 3, Gabriel Marrero-Rivera.

#### School of Medicine:

2009-2011 Cross Cultural Communication Module, University of Chicago, Pritzker Medical School.

My activities included moderating case-based cultural competency training of 2st year

medical school trainees.

#### Graduate Medical Education:

Graduate Micarcai L	ducation.
2009-2010	Morning Report Conference. University of Chicago Department of Internal Medicine daily educational conference with case-based presentations and lectures focused on general
	internal medicine topics. As Chief Resident my responsibilities included identifying
	teaching objectives, as well as preparing and moderating the conference.
2009-2010	Clinical Case Conference Lecture Series. Holy Cross Hospital and Mercy Medical Center
	held weekly case-based resident teaching conference. As Chief Resident my
	responsibilities included identifying teaching objectives, as well as preparing and
	moderating the conference.
09/2010	On Call Emergencies Lecture Series: Abdominal Pain. The University of Chicago Internal
	Medicine Residency Program, Chicago, IL
03/2012	University of Chicago Gastroenterology Fellowship Curriculum Review and Revision. My
	activities included the review and revision of a 3 year educational curriculum for
	fellowship training in gastrointestinal endoscopy.
09/2013-06/2014	Fellowship. Medical Education Research, Innovation, Teaching and Scholarship

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Program, University of Chicago Pritzker School of Medicine, Chicago, IL.

12/2013-11/2015 Curriculum Development: Scientific Writing Skills (Course no. PUBH 5150) Chicago State

University Department of Health Studies, School of Public Health. My activities included performing a needs assessment and the development of an inter-professional curriculum for

masters of public health students.

11/2016 Black Men in Medicine Forum. University of Chicago Pritzker School of Medicine. My

activities included planning and moderating an inter-professional discussion of the challenges faced by and strategies for success among black males in academic medicine.

# Committee, Organizational, and Volunteer Service

Institutional:

01/2009

Intern Selection Committee. The University of Chicago Internal Medicine Residency

Program Role: Committee Member

2005-2017 University of Chicago Department of Medicine Diversity Committee. The committee

works to improve racial and ethnic diversity.

Role: Committee Member

2015-2017 Bowman Society. The University of Chicago Pritzker School of Medicine

The goals of the Bowman Society are to focus attention on scholarship that is important to the health care of minority communities and to provide support for multicultural diversity.

Role: Steering Committee Member

#### **Extramural Invited Presentations**

05/2009	Enhancing Cross-Cultural Care.	American Gastroentero	logical Association, Digestive
	D' W 1 O1' H		

Diseases Week, Chicago, IL

04/2013 Update on Colorectal Cancer. Minority Cancer Awareness Week, Malcolm X College,

Chicago, IL

09/2013 Colorectal Cancer Screening in Underserved Populations. Northwestern University,

Department of Family Medicine Guest Lecture Series, Chicago, IL

05/2014 Comparing Screening Colonoscopy Quality Measures in Navigated Uninsured and Insured

Patient Populations. Digestive Diseases Week, Chicago, IL

02/2014 Location, an Under Recognized Determinant of Colorectal Cancer Screening Disparities?

Chicago State University, Chicago, IL

03/2015 Cancer and its impact on our community. University of Chicago Center for Community

Health and Vitality, Community Grand Rounds Seminar, Chicago, IL

04/2017 Examining Spatial Access to Screening Colonoscopy and Disparities in Colorectal

Cancer Screening in Chicago. University of Illinois at Chicago, Minority Health

Conference, Chicago, IL

06/2017 Assessing Spatial Equity in Colorectal Cancer Screening. Chicago Department of Public

Health, Chicago, IL

## **Intramural Presentations**

10/1998 Sub	lytic Concentrations of the Membrane Attack Complex Induce Expression	n of
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Monocyte Chemoattractant Protein-1 in the Rabbit Myocardium. American Heart

Association, Cardiovascular Research Forum, Detroit, MI

06/2000 T-Cell Homeostasis in Healthy Elderly Humans. Mayo Foundation,

Immunology Retreat, Rochester, MN

12/2009 Social Determinants of Colorectal Cancer Disparities. University of Chicago, Department

of Medicine Grand Rounds, Chicago, IL

01/2015 Spatial Clustering of Colonoscopy Resources within Chicago. University of Chicago

Bowman Society Lecture Series, Chicago, IL

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07/2015	Disparities Research in Cancer. University of Chicago Scholars in Oncology Associated
	Research (SOAR) Lecture Series, Chicago, IL
07/2015	Residential Segregation and the Spatial Clustering of Colonoscopy Resources. University
	of Chicago Clinical and Translational Research Forum, Chicago, IL
12/2015	A Network Analytic Approach to Modeling Variation in Colorectal Cancer Screening.
	University of Chicago Gastroenterology Research Conference, Chicago, IL
01/2017	Race vs. Place: Disentangling colorectal cancer related healthcare disparities. University
	of Chicago, Department of Medicine Grand Rounds, Chicago, IL

## **Bibliography**

Researcher ID: F-5031-2015 ORCID: 0000-0001-9871-8317

My NCBI Bibliography

## Peer-reviewed publications in the primary literature, exclusive of abstracts:

- 1. Kilgore KS, Tanhehco EJ, Park JL, **Naylor KB**, Anderson MB, Lucchesi BR. Reduction of Myocardial infarct size in vivo by carbohydrate-based glycomimetics. Journal of Pharmacology and Experiment Therapeutics. 1998;284:472-435
- 2. Kilgore KS, **Naylor KB**, Tanhehco EJ, Park JL, Lucchesi BR. The semi-synthetic polysaccharide pentosan polysulfate prevents complement-mediated injury in the rabbit perfused heart. Journal of Pharmacology and Experiment Therapeutics. 1998;285:987-994
- 3. Park JL, Kilgore KS, **Naylor KB**, Booth EA, Murphy KL, Lucchesi BR. N-Acetylheparin Pretreatment Reduces Infarct Size in the Rabbit. Pharmacology. 1998;58:120-131
- 4. Kilgore KS, Tanhehco EJ, **Naylor KB**, Lucchesi BR. Ex vivo reversal of heparin-mediated cardioprotection by heparinase after ischemia and reperfusion. Journal of Pharmacology and Experimental Therapeutics. 1999;290:1041-1047
- 5. Tanhehco EJ, Kilgore KS, **Naylor KB**, Park JL, Booth EA, Lucchesi BR. Reduction of Myocardial Infarct Size after Ischemia and Reperfusion by the Glycosaminoglycan Pentosan Polysulfate. Journal of Cardiovascular Pharmacology. 1999;34:153-161
- 6. Patel MB, Kilgore KS, Ortolano GA, Gryboski CL, Qureshi MA, Marcovitz P, **Naylor KB**, Park JL, Wenz B, Gikakis N, Freedman RJ Jr, Lucchesi BR, O'Neill WW. Conditioned blood reperfusion during angioplasty (CoBRA) treatment of acute myocardial infarction. Perfusion. 2001;16 Suppl:39-49
- 7. Tramontini NL. Kuipers PJ. Huber CM. Murphy K. **Naylor KB**. Broady AJ. Kilgore KS. Modulation of leukocyte recruitment and IL-8 expression by the membrane attack complex of complement (C5b-9) in a rabbit model of antigen-induced arthritis. Inflammation. 26(6):311-9, 2002 Dec.
- 8. **Naylor K**, Vallejo AN, Lee WW, Koetz K, Bryl E, Witkowski J, Fulbright J, Weyand CM, Grononzy JJ. The influence of age on T cell generation and TCR diversity. J of Immunology. 174(11):7446-52, 2005 Jun.
- 9. Konda, V, Ross AS, Ferguson MK, Hart JA, Lin S, **Naylor K**, Noffsinger A, Posner MC, Dye C, Cislo B, Stearns L, Waxman I. Is the Risk of Concomitant Invasive Esophageal Cancer in High Grade Dysplasia in Barrett's Esophagus Overestimated? Clinical Gastroenterology and Hepatology. 6(2):159-164, 2008.
- 10. Laiteerapong N, Keh CE, **Naylor KB**, Yang VL, Vinci LM, Oyler JL, Arora VM. A Resident-Led Quality Improvement Initiative to Improve Obesity Screening. Am J Med Qual. 2011 Mar 29
- 11. **Naylor K\***, Ward J\*, Polite B. Interventions to Improve Care Related to Colorectal Cancer Among Racial and Ethnic Minorities: A Systematic Review. J Gen Inter Med. 27(8):1033-46, 2012 (\*indicates co-first authorship) PMID: 22798214
- 12. Fritz C, **Naylor K**, Watkins Y, Britt T, Hinton L, Curry G, Lam H, Kim K. Are We Missing the Mark? : The Implementation of Community Participation in Cancer Disparities Curriculum Development. J of Racial and Ethnic Disparities. 2(2):237-243, 2014.

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- 13. Fritz C\*, **Naylor K\***, Kim K. Knowledge of Polyp History and Recommended Follow-Up among a Primarily African American Patient Population and the Impact of Patient Navigation. J of Racial and Ethnic Health Disparities. 3(3):403-412, 2015. (\*indicates co-first authorship) PMID: 27294735
- 14. **Naylor K**, Fritz C, Polite B, Kim K. Evaluating Screening Colonoscopy Quality in an Uninsured Urban Population Following Patient Navigation. Prev Medicine Reports. 5:194-199, 2017 PMID: 28070476
- 15. **Naylor K**, Addressing Colorectal Cancer Disparities Among African American Men Beyond Traditional Practice-Based Settings. American Journal of Public Health. 107(9):1356-1358, 2017
- 16. Maratt J, **Naylor K**, Saini S. Adding value to the conversation about colorectal cancer screening: practical pearls for gastroenterologists. Clinical Gastroenterology and Hepatology. 16(10): 1545-1548, 2018.
- 17. **Naylor K,** Tootoo J, Yakusheva O, Shipman S, Bynum J, Davis M. Geographic variation in accessibility of U.S. healthcare providers. PloS one 14 (4), e0215016, 2019. PMID 30964933
- 18. Freeman V, **Naylor K**, Boylan E, Booth B, Oksana P, Barrett R, Campbell R, McLafferty S. Spatial Access to Primary Care Providers and Colorectal Cancer-Specific Survival in Cook County, Illinois. Cancer Medicine. Undergoing peer review.
- 19. Gupta A, Saini S, **Naylor K**. Driving distance to screening colonoscopy affects bowel preparation quality but not adenoma detection. Under preparation for submission to Clinical Gastroenterology and Hepatology.

#### Abstracts:

- 1. Tanhehco EJ, Kilgore KS, **Naylor KB**, Lucchesi BR. Ex-Vivo Reversal of Heparin-Mediated Cardioprotection by Heparinase After Ischemia and Reperfusion. Experimental Biology. 1997
- 2. Kilgore KS, Tanhehco EJ, **Naylor KB**, Park JL, Booth EA, Lucchesi BR. Reduction of Myocardial Infarct Size After Ischemia and Reperfusion by the Glycosaminoglycan Pentosan Polysulfate. International Society for Heart Research, Ann Arbor, MI, 1998.
- 3. Kilgore KS, McGeer PL, Yasojima K, Washington RA, **Naylor KB**, Lucchesi BR. Myocardial Expression of Complement Proteins C3 and C9 After Ex Vivo Ischemia/Reperfusion. Experimental Biology, San Francisco, CA, 1998.
- 4. **Naylor KB**, Bryl E, Witkowski J, Weyand CM, Goronzy JJ. T Cell Homeostasis in Healthy Elderly Humans. Mayo Foundation, Mayo Research Forum, Rochester, MN, 2000.
- 5. **Naylor KB**, Bryl E, Witkowski J, Weyand CM, Goronzy JJ. T Cell Homeostasis in Healthy Elderly Humans. Experimental Biology, Orlando, FL, 2001.
- 6. **Naylor K**, Fritz C, Kim K. Comparing Screening Colonoscopy Quality Measures in Navigated Uninsured and Insured Patient Populations. Gastroenterology 146 (5), S-70, 2014
- 7. **Naylor K**, Fritz C, Lam H, Hinton L, Watkins Y, Britt T, Kim K. Can opposites attract? Developing a multi-institutional, interprofessional, cancer-related disparities curriculum for health professional students. Cancer Epidemiology Biomarkers and Prevention 23, S-11, A55-A55, 2014
- 8. **Naylor K**, Fritz C, Lam H, Kim K. Comparing Screening Colonoscopy Attendance and Quality Among Open Access Endoscopy and Navigated Uninsured Patient Populations. Cancer Epidemiology Biomarkers & Prevention 23, S-11, B88-B88, 2014
- 9. **Naylor K**, Fritz C, Watkins Y, Randal F, Hinton L, Lam H, Britt T, Kim K. Chicago South Side Cancer Disparities Initiative (CSCDI) A Minority Institution/Cancer Center Partnership. NCI Partnerships to Advance Cancer Health Equity (PACHE) Funded Investigators Workshop, Rockville, MD, 2014
- 10. **Naylor K**, Kassim O, Fritz C, Hinton L, Lam H, Kim K. Use of geographic information systems to identify geographic clustering of screening colonoscopy resources within the City of Chicago. Cancer Epidemiology Biomarkers & Prevention 24, S-10, A52-A52, 2015
- Naylor K, Kassim O, Fritz C, Hinton L, Lam H, Kim K. Residential Segregation and Spatial Clustering of Colonoscopy Resources within the City of Chicago. Journal of Investigative Medicine 64 (4), 936-937, 2016

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- 12. **Naylor K**, Kassim O, Schneider J, Kim K. Use of geographic information systems to visualize the screening colonoscopy referral network of the University of Chicago Medical Center. Cancer Epidemiology Biomarkers & Prevention 25, S-3, B80, 2016
- 13. **Naylor K**, Kim K, Schneider J. Use of Social Network Analysis to Examine Racial Disparities in Screening Colonoscopy Referral. Cancer Epidemiology Biomarkers & Prevention 26, S-2, C79, 2017
- 14. **Naylor K**, Kassim O, Kim K. Examining spatial access to screening colonoscopy and disparities in colorectal cancer screening in Chicago. American Public Health Association Annual Conference, Atlanta, GA, November 2017
- 15. **Naylor K**, Gupta A. Distance of travel to the site of screening colonoscopy does not impact bowel preparation quality or adenoma detection. Digestive Diseases Week, San Diego, CA, May 2019

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