OMB No. 0925-0001 and 0925-0002 (Rev. 09/17 Approved Through 03/31/2020)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Niharika Khanna, MBBS, MD, DGO

eRA COMMONS USER NAME (credential, e.g., agency login): nkhanna

POSITION TITLE: Professor, Department of Family and Community Medicine, University of Maryland School of Medicine

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| Miranda House, University of Delhi, Delhi India | B.Sc. 1st Year  | 05/1976 | Zoology |
| Lady Hardinge Medical College, New Delhi, India | MBBS | 03/1982 | Medicine |
| Lady Hardinge Medical College, New Delhi, India | DGO | 04/1984 | Obstetrics and Gynecology |
| King George Medical College, Lucknow India | MD  | 05/1986 | Obstetrics and Gynecology |
| Cook County Hospital, Chicago, Illinois | Internship | 06/1989 | Obstetrics and Gynecology |
| Bronx Lebanon Hospital, New York, New York | Internship | 07/1990 | Family Medicine |
| University of Maryland Baltimore, Maryland  | Residency | 07/1992 | Family Medicine |

1. **Personal Statement**

**Niharika Khanna** is Professor of Family and Community Medicine at the University of Maryland, School of Medicine (UMSOM) and a member of the Tumor Immunology Program at the Greenebaum Cancer Center. Dr Khanna is the Director of the Maryland Learning Collaborative for the Garden Practice Transformation Network, funded by the Centers for Medicare and Medicaid Transforming Clinical Practice Initiative, and previously director of the Maryland Health Care Commission's Multi-Payer Program for Patient Centered Medical Homes (MMPP) to provide clinical implementation of health care reform policies and primary care workforce training in the advanced payment models. Funded by the Maryland Department of Health Center for Tobacco Prevention and Control, Dr Khanna has developed an Electronic Health Record solution in EPIC to electronically connect the Maryland Tobacco Quit Line to reach 123 practices in the University of Maryland Medical System to serve 3,912,403 Marylanders. Dr. Khanna is a recent NICHD “Building Interdisciplinary Research Careers in Women’s Health (BIRCWH)” scholar. Dr. Khanna is the past Director of Somatic Services for the Walter P. Carter Center until 2009, and was clinical principal investigator for a NIDA/BSAS grant to explore primary care office methadone prescribing and community pharmacy dispensing of methadone. Dr. Khanna was the PI for a CDC 1305 grant to the state of Maryland provide dissemination of quality improvement strategies for chronic disease from 2014-2016. Dr. Khanna’s interests are in clinical translational research to translate research into community programs and specifically in the systems change in primary care. Dr. Khanna is a breast cancer survivor diagnosed in 2009.

**B. Positions and Honors
Faculty Positions**

1997-2009 **Director of Somatic Services**, Walter P Carter Center, Baltimore, Maryland

2002-2007 **Somatic Physician**, Methadone Clinic, UMSOM

2005-2011 **Associate Residency Director**, Family and Community Medicine, UMSOM

2014-2015 **Fixed Term** **Graduate Faculty**, Health Policy and Management, University of North Carolina Graduate School

2017-present **Family Physician,** University Immediate Care

1999-present **Member**, Greenebaum Cancer Center, Tumor Immunology Program, University of Maryland, Baltimore

2005-2019 **Associate Professor**, Family and Community Medicine, UMSOM

2005-2019 **Associate Professor** (Secondary appointments), Departments of Psychiatry and Pediatrics, UMSOM

2019-present **Professor,** Family and Community Medicine, UMSOM

**Selected Board Memberships**

2006-2012 **Editorial Board** **Member**, Society of Teachers of Family Medicine, Family Medicine Journal

2000-present **Member**, Board of Directors of Shareholders in the Department of Family Medicine, UMSOM

2013-2016 **Member**, B-HIPP (Behavioral Health Integration into Pediatric Primary Care) Community Advisory Board

2014-present **Member**, CRISP Reporting and Analytics Advisory Board

2015-2019 **Member**, Board of Directors, Health Care for the Homeless

2017-2019 **Vice-President,** Maryland Academy of Family Physicians Board of Directors

**Honors and Awards**

1974 National Merit Scholar, Indian High School Certification Examination

1975 National Science Talent Scholarship, India

1995 Faculty Award for Outstanding Teacher,Family Medicine Residency, UMSOM

1996 Certificate of Appreciation for Commitment to Resident Education, Family Medicine Residency, UMSOM

1. Faculty Award for Outstanding Teaching in Obstetrics, Family Medicine Residency, UMSOM
2. Faculty Award for Teaching, Family Medicine Interest Group,UMSOM

1998 Certificate of Recognition as a Mentor in the Minority Initiative Program, UMSOM

1998 NIH Certificate of Recognition of Interest in Science and participation in the 1998 NCRR K12 Science Education program at UMSOM

1. Faculty Award for Outstanding Teaching in Obstetrics,Family Medicine Residency, UMSOM

1999 Certificate of Recognition as a Mentor in the Short term Research Training Program, UMSOM

1. Faculty Award for Outstanding Teaching in Obstetrics,Family Medicine Residency, UMSOM

2001 Researcher of the Month, Women’s Health Research Group, UMSOM

2001 Honorable Mention in Teaching Family Medicine, Family Medicine Residency, UMSOM

2002 Certificate of Recognition as a Mentor in the University of Maryland Summer Research Training Programs, UMSOM

2006 Special Recognition Award for dedication to Residency Program, UMSOM

2009 Faculty Preceptor Award, Family and Community Medicine, UMSOM

2013 White House Champion of Change Nominee for Public Health and Prevention

2014 Hind Rattan Award Nominee by the Non-Resident Indian Welfare Society of India

2015 Faculty Award for Commitment to Teaching, Family Medicine Residency, UMSOM

2015 Certificate of Outstanding Contribution in Reviewing awarded by the American Journal of Preventive Medicine

##### 2018 Maryland Department of Health success story about electronic referral build out in EPIC to connect 125 clinical practices in the University of Maryland Medical System to the Maryland Tobacco Quit Line using electronic referrals to increase tobacco cessation services delivery

**U.S. Patents Issued**

US2005/ (68,440648 B2) Co-Inventor ‘Tetra-*O*-Methyl NDGA- Methods and Compositions for the treatment of genital intraepithelial neoplasia’.

**Peer Reviewer for Federal and Other Grants Review Process**

2002-2004 HRSA Residency Training Grants Review/ Study Circle

2004 NCI/NIAID IIP Anti-Retrovirals Study Section

2005-2006 Komen Foundation Grants in Prevention, Early Detection and Biomarkers

2007-2008 HRSA Residency Training Grants Review/ Study Circle

2009 Canada Foundation for Innovation Grants Reviewer

2010 Academic Administrative Units Equipment Grants Study Circle

2010 HRSA Academic Administrative Units Grants Review

2012 CMS Innovation Center Bundled Payments

2014 HRSA State System Development Initiative Grant Program

1. HRSA Primary Care Training and Enhancements Awards
2. DOD Congressionally Directed Medical Research Programs (CDRMP) CCAYA-ST peer review
3. **Contributions to Science**

1. My clinical and administrative work as Somatic Director for an inpatient psychiatry hospital led to interest in depression in opioid users and in nicotine use. I was also responsible for somatic care for patients attending a Methadone clinic at the University of Maryland Department of Psychiatry for 5 years. In addition, I worked with the Psychiatry team to establish a pathway for stable Methadone users to be prescribed Methadone and followed in my Family Medicine practice under an experimental protocol with regulatory oversight by the UM Institutional Review Board from 2004-2007. I worked together with the Center for Tobacco Prevention and Control at the Maryland Department of Health to create an electronic referral from the EPIC Electronic Health record to the Maryland Tobacco Quitline to ensure tobacco cessation services access from 2013-present. 125 practices in the UMMS are now linked to the Maryland Quitline electronically.

1. **Khanna N**, Arnold S, Sadaphal S, Joshi A, Stewart D, Gandhi D. Nicotine Dependence and Depression Among Women Smokers on Methadone Maintenance. European Journal of General Practice 2010;00:1-7.

 b. Abstract: Rao VS, Wolfe S, Stone A, Klyushnenkova E, **Khanna N**. Your patient Wants to Quit, What Now? Implementation of Tobacco Cessation E-Referral Work-Flow in Primary Care Settings. Society for Research on Nicotine and Tobacco. San Francisco February 20-23, 2019.

2. I have focused my career on health care reform implementation specifically as it applies to primary care. I have established an academic-state partnership to develop learning structures for the implementation of new models of primary care under the Affordable Care Act (ACA). This learning structure is known as the Maryland Learning Collaborative, and has been established and lead by me, supported by the Maryland Department of Health, to a create a forum for primary care practices to collaborate, share evidence based practices, support quality improvement, disseminate the state’s advanced primary care model, and optimize the use of electronic health records and link to the state designated health information exchange. The methodology utilized to support practices included academic detailing and within practice coaching. The learning collaborative led the dissemination for Maryland Million Hearts and was selected as one of two national programs for Enhanced Evaluability Assessment by the Centers for Disease Control and Prevention to identify and spread successful elements to other states seeking for implementation of new models of primary care delivery. The Maryland Learning Collaborative under my leadership, leads the Garden Practice Transformation Network in Maryland for 835 practitioners under the CMS Transforming Clinical Practice Initiative since 2016.

1. **Khanna N**, Shaya F, Chirikov V, Steffen B, Sharp D. Dissemination and Adoption of the Advanced Primary Care Model in the Maryland Multi-Payer Patient Centered Medical Home Program. J Health Care Poor Underserved 2014;25(1 Suppl):122-138.
2. **Khanna N**, Shaya F, Chirikov V, Steffen B, Sharp D. Case Mix Severity in a Patient Centered Medical Home and Impact on Quality Improvement in the Maryland Multi-Payer Program. Journal of the American Board of Family Medicine. Jan-Feb 2016;29(1):116-125.
3. **Khanna N**, Shaya F, Gaitonde P, Steffen B, Sharp D. Evaluation of PCMH Model Adoption on Teamwork and Impact on Patient Access and Safety. Journal of Primary Care and Community Medicine. 2016;8(2):77-82.
4. Marsteller JA, Hsu YJ, Fakeye OA, Engineer LD, Franey C, Kiptanui Z, **Khanna N**, Rattinger G, Bartnyska L, Nichols D, Harris I. Maryland Multi-Payor Patient-Centered Medical Home Program: A 4 Year Quasi-Experimental Evaluation of Quality, Utilization, Patient Satisfaction, and Provider Perceptions. Medical Care. 2018 Apr;56(4):308-320.

3. My early work as the Assistant Professor at the University of Maryland School of Medicine was in Human Papillomavirus and cervical cancer prevention and clinical trials. My most significant contribution is the development of methodology to self-collect vaginal specimens for virological testing, funded by the NIAID through the SBIR N44-AI-85335 mechanism. My methodology for self-collection has been widely disseminated worldwide by the PATH organization.

1. **Khanna N**, Mishra S, Tian G, Tan M, Arnold S, Lee C, Ramachandran S, Bell L, Baquet CR, Lorincz A. HPV Detection in Self-Collected Vaginal Specimens and Matched Physician-Collected Cervical Specimens. Int Journal of Gynecological Cancer 2007;17:615-622.
2. **Khanna N**, Phillips M. Adherence to care plan in women with abnormal Papanicolaou smears: Barriers and interventions. Journal of the American Board of Family Practice 2001;14(2):123-130.
3. **Khanna N**, Brooks SE, Chen TT, Simsir A, Gordon N, Taylor G. Atypical and low grade squamous intraepithelial (ASCUS/LSIL) lesions on Papanicolaou smear: Association of Human Papillomavirus (HPV) and age with cervical dysplasia. Journal of Human Virology 2001;4(5):283-287.
4. **Khanna N,** Ramasheshan A, Arnold S, Panigrahi K, Macek M, Padhi BK, Samanta D, Senapati SN, Panigrahi P. Community Awareness of HPV Screening and Vaccination in Odisha. Obstetrics and Gynecology International epub 2015 Dec 29. doi:10.1155/2015/694560

4. With a team of collaborators, I worked on Human Papillomavirus in women living with Human Immunodeficiency Virus, which lead to a better understanding of the impact of anti-retroviral therapies on the existence and progression of Human Papillomavirus associated cervical dysplasia.

1. Taylor G, Wolff T, **Khanna N**, Furth PA, Langenberg P. Genital dysplasia in women infected with Human Immunodeficiency Virus. Journal of the American Board of Family Practice 2004;17:108-113.
2. **Khanna N.** HAART use in women with HIV and influence on cervical intraepithelial neoplasia: A clinical opinion. J Lower Gen Tract Dis 2002;6:111-115.

5. My interests in clinical trials lead to my work on a novel molecule ‘Terameprocol,’ on which I have worked since 2003. This work is funded by Erimos Biotech and NIAID under N01 AI30045. I hold a US patent 8440,648 B2 for this application (cited above) for which I have designed and conducted two Phase 1 trials.

* 1. **Khanna N,** Dalby R, Tan M, Arnold S, Stern J, Frazer N. Phase I clinical trial of Terameprocol Vaginal Ointment in HPV associated Cervical Intraepithelial Neoplasia. Gynecologic Oncology 2007;107(3):554-562.
	2. **Khanna N**, Dalby R, Conner A, Church A, Stern J, Frazer N. Phase I Clinical Trial of Repeat Dose Terameprocol Vaginal Ointment in Healthy Female Volunteers. Sexually Transmitted Disease 2008;35(6):577-582.

My Bibliography:

[https://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/45601469/.%3Freload=addSuccess?reload=addSuccess](https://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/45601469/.%3Freload%3DaddSuccess?reload=addSuccess)

 **D. Additional Information: Research Support and/or Scholastic Performance**

**Active Grant Support**

**CMMI/CMS Sub Contract**

Title: Maryland Learning Collaborative affiliation with the Garden Practice Transformation Network: Collaboration with the New Jersey Institute for Innovations under the CMS Transforming Clinical Practice Initiative.

Goal: To develop a Practice Transformation Network in the state of Maryland.

Total Direct Costs 2016-2019: $2,448,679

05/05/16-09/28/19 (PI: 40%)

**Center for Tobacco Prevention and Control, DHMH grant**:

Title: Maryland Tobacco Quitline E-Referral Pilot Project

Goal: To develop an intervention to connect electronic health records to the Maryland Tobacco Quitline and enhance practitioner use of this innovation.

Role: PI (20%) 12/01/2014-09/28/19

Annual Direct Costs: $167,658 Total Direct Costs: $ 823,720

**Completed Grant Support**

**Centers for Disease Control 1305 grant: ‘**Maryland Million Hearts and State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health’ enhanced grant to Center for Chronic Disease Prevention, Maryland Department of Health and Mental Hygiene

Title: The Maryland Learning Collaborative 1305 project.

Goal: To provide dissemination for Maryland Million Hearts program and develop an intervention to promote reduction of Blood Pressure and improvement in quality metrics for blood pressure and diabetes in Primary Care Personnel in Patient Centered Medical Homes. Includes representing the State of Maryland and participation in the ASTHO (association for State and Territorial Health Officials) National Learning Collaborative with 10 states.

Role:PI 03/15/14-06/29/16

Total Direct Costs:$378,350

**Centers for Disease Control 1305 grant: ‘**State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health’ enhanced grant to Center for Chronic Disease Prevention, Maryland Department of Health and Mental Hygiene

Title: The Maryland Health Care Innovations Collaborative 1305 supplement

Goal: Enhanced quality improvement in hypertension and diabetes, Medication Adherence and Care plan implementation, Team based care with Patient Centered Medical Homes and primary care practices.

Role:PI 12/01/14-06/29/16

Total Direct Costs: $300,000 (Altogether $678,350 from CDC 1305 grants)