

**BOSTON COLLEGE
WILLIAM F. CONNELL SCHOOL OF NURSING
140 Commonwealth Ave.
Chestnut Hill, MA 02467**

CURRICULUM VITAE

Patricia Crowley Underwood PhD, FNP-BC, RN

Office Phone: (617) 552-1846

Office E-Mail: underwpa@bc.edu

EDUCATION:

2010-2013	Post-Doctoral Fellow in Genetics of Hypertension/Diabetes, Mentor: Gordon Williams M.D, Brigham and Women's Hospital, Boston, MA
2010	PhD: Boston College, Chestnut Hill, MA: Nursing Science
2008	MS: Boston College, Chestnut Hill, MA: Family Nurse Practitioner
2004	BSN: University of Pennsylvania, Philadelphia, PA: Nursing
2000	BA: Lehigh University, Bethlehem, PA: Molecular Biology

LICENSURE / CERTIFICATION / REGISTRATIONS:

2014-Current	Certified Diabetes Educator: American Academy of Diabetes Educators
2010-Current	Massachusetts Controlled Substance Registration
2010-Current	Drug Enforcement Administration Registration
2008-Current	263697 Family Nurse Practitioner, Massachusetts
2005-Current	263697 Nursing, Massachusetts

PROFESSIONAL EXPERIENCE:

Academic Faculty Appointments:

2020 –Current	Clinical Assistant Professor, Wm. F. Connell School of Nursing
2019-2021	Assistant Professor of Medicine, Boston University School of Medicine
2019	Clinical Instructor of Medicine, Boston University School of Medicine
2013-2014	Instructor of Medicine, Harvard Medical School
2011-2014	Visiting Professor, Boston College Connell School of Nursing

Appointments at Hospitals / Affiliated Institution:

2014-Current	Nurse Practitioner, Endocrine Section, VA Boston Health Care System, Boston, MA
2008-2013	Nurse Practitioner, Endocrine Section, Brigham and Women's Hospital, Boston, MA
2007-2008	Nurse, Clinical Research Endocrine Section, Brigham and Women's Hospital, Boston, MA
2005-2007	Nurse, Solid Organ Transplant, Children's Hospital Boston, Boston, MA.

2004-2005 Nurse, Pediatric Intensive Care Unit, Children's Hospital of Philadelphia, Philadelphia, PA.

HONORS AND AWARDS:

2017 ICARE VA award, Boston, MA
2015 VISN1 VA Improvement Summit Award, Boston, MA
2012 NIH/NINR 25th anniversary Meeting Abstract Award: Young Investigator Award, Bethesda, MD
2011 Endocrine Society: Recipient of Presidential Poster Competition Award, Boston, MA
2011 University of Basel Nursing School: Basel Switzerland: Statistics Fellowship
2010 Boston College: Interdisciplinary Research, First Place Poster Award
2008 William F. Connell School Award, Boston College
2008 Boston College: Clinical Excellence Award
2007 NINR/NIH Summer Fellow, Bethesda, MD
2006-2010 Boston College: University Fellow

PROFESSIONAL SOCIETIES:

2021 National Organization for Nurse Practitioner Faculties
2015- Current Member, Massachusetts Coalition for Advanced Practitioners
2014- Current Member, American Academy of Diabetes Educators
2013- Current Member, American Diabetes Association
2011- Current Member, American Academy of Nurse Practitioners
2009-2012 Member, Council for the Advancement of Nursing Science
2007-2014 Member, STTI Alpha Chi Chapter Research Development Committee
2006- 2014 Member, ISONG: International Society of Nursing and Genetics
2004-2014 Member, Sigma Theta Tau International Honor Society, Alpha Chi and Xi Chapters

PUBLICATIONS:

Refereed Articles (*original research):

- Underwood, P., Hibben, J., Gibson, J., DiNardo, M. (2021). Virtual Visits and the Use of Continuous Glucose Monitoring for Diabetes Care in the Era of COVID-19, *Journal of the American Academy of Nurse Practitioners*, accepted- awaiting publication.
- Czarnowski, K., Silver, C., Wood, B., Underwood, P., & Patel, D. (2019). Retrospective Analysis of Liraglutide as Add-On Therapy in Type 2 Diabetes Mellitus: Quantifying the Changes in Insulin Requirements. *Fed Pract*, 36(2), 83-87.
- Garg, R., Schuman, B., Bader, A., Hurwitz, S., Turchin, A., Underwood, P., . . . Lortie, M. (2018). Effect of Preoperative Diabetes Management on Glycemic Control and Clinical Outcomes After Elective Surgery. *Ann Surg*, 267(5), 858-862.
- Garg, R., Hurwitz, S., Rein, R., Schuman, B., Underwood, P., & Bhandari, S. (2017). Effect of follow-up by a hospital diabetes care team on diabetes control at one year after discharge from the hospital. *Diabetes Res Clin Pract*, 133, 78-84.
- Garg, R., Metzger, C., Rein, R., Lortie, M., Underwood, P., Hurwitz, S., . . . Schuman, B. (2016).

- Nurse practitioner-mediated intervention for preoperative control of diabetes in elective surgery patients. *J Am Assoc Nurse Pract*, 28(10), 528-533.
- Underwood, P., Seiden, J., Carbone, K., Chamarthi, B., Turchin, A., Bader, A. M., & Garg, R. (2015). Early Identification of Individuals with Poorly Controlled Diabetes Undergoing Elective Surgery: Improving A1C Testing in the Preoperative Period. *Endocr Pract*, 21(3), 231-236.
- Baudrand, R., Goodarzi, M. O., Vaidya, A., Underwood, P. C., Williams, J. S., Jeunemaitre, X., . . . Pojoga, L. H. (2015). A prevalent caveolin-1 gene variant is associated with the metabolic syndrome in Caucasians and Hispanics. *Metabolism*, 64(12), 1674-1681.
- Wysocki, K., Underwood, P. C., & Kelly-Weeder, S. (2015). An essential piece of nursing's future: The continued development of the nurse practitioner as expert clinician and scientist. *J Am Assoc Nurse Pract*, 27(4), 178-180.
- Underwood, P., Askari, R., Hurwitz, S., Chamarthi, B., & Garg, R. (2014). Preoperative A1C and clinical outcomes in patients with diabetes undergoing major noncardiac surgical procedures. *Diabetes Care*, 37(3), 611-616. <https://doi.org/10.2337/dc13-1929>
- Brown, J. M., Underwood, P. C., Ferri, C., Hopkins, P. N., Williams, G. H., Adler, G. K., & Vaidya, A. (2014). Aldosterone dysregulation with aging predicts renal vascular function and cardiovascular risk. *Hypertension*, 63(6), 1205-1211.
- Vaidya, A., Underwood, P. C., Annes, J. P., Sun, B., Williams, G. H., Forman, J. P., & Williams, J. S. (2013). The influence of sodium- and calcium-regulatory hormone interventions on adipocytokines in obesity and diabetes. *Metabolism*, 62(4), 539-547. <https://doi.org/10.1016/j.metabol.2012.10.001>
- Vaidya, A., Underwood, P. C., Hopkins, P. N., Jeunemaitre, X., Ferri, C., Williams, G. H., & Adler, G. K. (2013). Abnormal aldosterone physiology and cardiometabolic risk factors. *Hypertension*, 61(4), 886-893.
- Underwood, P. C., & Adler, G. K. (2013). The renin angiotensin aldosterone system and insulin resistance in humans. *Curr Hypertens Rep*, 15(1), 59-70. <https://doi.org/10.1007/s11906-012-0323-2>
- Underwood, P. C., Chamarthi, B., Williams, J. S., Sun, B., Vaidya, A., Raby, B. A., . . . Williams, G. H. (2012). Replication and meta-analysis of the gene-environment interaction between body mass index and the interleukin-6 promoter polymorphism with higher insulin resistance. *Metabolism*, 61(5), 667-671. <https://doi.org/10.1016/j.metabol.2011.09.018>
- Underwood, P. C., Chamarthi, B., Williams, J. S., Vaidya, A., Garg, R., Adler, G. K., . . . Williams, G. H. (2012). Nonmodulation as the mechanism for salt sensitivity of blood pressure in individuals with hypertension and type 2 diabetes mellitus. *J Clin Endocrinol Metab*, 97(10), 3775-3782. <https://doi.org/10.1210/jc.2012-2127>
- Underwood, P. C., Sun, B., Williams, J. S., Pojoga, L. H., Raby, B., Lasky-Su, J., . . . Williams, G. H. (2011). The association of the angiotensinogen gene with insulin sensitivity in humans: a tagging single nucleotide polymorphism and haplotype approach. *Metabolism*, 60(8), 1150-1157. <https://doi.org/10.1016/j.metabol.2010.12.009>
- Vaidya, A., Forman, J. P., Underwood, P. C., Hopkins, P. N., Williams, G. H., Pojoga, L. H., & Williams, J. S. (2011). The influence of body mass index and renin-angiotensin-aldosterone system activity on the relationship between 25-hydroxyvitamin D and adiponectin in Caucasian men. *Eur J Endocrinol*, 164(6), 995-1002. <https://doi.org/10.1530/EJE-11-0025>
- Vaidya, A., Pojoga, L., Underwood, P. C., Forman, J. P., Hopkins, P. N., Williams, G. H., & Williams, J. S. (2011). The association of plasma resistin with dietary sodium manipulation, the renin-angiotensin-aldosterone system, and 25-hydroxyvitamin D3 in human hypertension. *Clin Endocrinol (Oxf)*, 74(3), 294-299.

- Pojoga, L. H., Underwood, P. C., Goodarzi, M. O., Williams, J. S., Adler, G. K., Jeunemaitre, X., . . . Williams, G. H. (2011). Variants of the caveolin-1 gene: a translational investigation linking insulin resistance and hypertension. *J Clin Endocrinol Metab*, 96(8), E1288-1292.
- Underwood, P. C., Sun, B., Williams, J. S., Pojoga, L. H., Chamarthi, B., Lasky-Su, J., . . . Williams, G. H. (2010). The relationship between peroxisome proliferator-activated receptor-gamma and renin: a human genetics study. *J Clin Endocrinol Metab*, 95(9), E75-79.
- Fujii, N., Boppart, M. D., Dufresne, S. D., Crowley, P. F., Jozsi, A. C., Sakamoto, K., . . . Goodyear, L. J. (2004). Overexpression or ablation of JNK in skeletal muscle has no effect on glycogen synthase activity. *Am J Physiol Cell Physiol*, 287(1), C200-208.
<https://doi.org/10.1152/ajpcell.00415.2003>
- Stanley, C. A., Thornton, P. S., Ganguly, A., MacMullen, C., Underwood, P., Bhatia, P., . . . Adzick, N. S. (2004). Preoperative evaluation of infants with focal or diffuse congenital hyperinsulinism by intravenous acute insulin response tests and selective pancreatic arterial calcium stimulation. *J Clin Endocrinol Metab*, 89(1), 288-296.
<https://doi.org/10.1210/jc.2003-030965>

Case Reports, Book Chapters, Reviews

- Underwood P.C. (2011). Type 2 diabetes, genomics, and nursing: necessary next steps to advance the science into improved, personalized care. *Annual Review of Nursing Research*, (29): 281-302
- Underwood, P.C. & Read, C. (2008). Genetic association studies in nursing practice and scholarship, *The Journal of Nursing Scholarship*, 40(3):212-8

Thesis and Dissertation

Genetic Markers Associated with an Intermediate Phenotype of the Metabolic Syndrome: Insulin Resistance and Hypertension. December 2010

RESEARCH AND SCHOLARSHIP:

My clinical research initially focused on identifying biomedical and genetic markers associated with hypertension and diabetes. Subsequent work focused on developing and evaluating nurse-led interventions to improve health outcomes for surgical patients with poorly controlled diabetes. My clinical practice focuses on veterans with diabetes and the delivery of diabetes self-management technology (insulin pumps and continuous glucose monitors) in the virtual setting.

Research Funding:

Educational Training Funding: [list most recent first]

Federal

7/2011-7/2013

F32NR013318, PI: Patricia Underwood, Title: A Translational

Investigation of the Caveolin-1 Gene as a Marker for Human Cardio-Metabolic Disease. Total Cost: \$ 110,404.
Role: Principle Investigator

7/2011-7/2013 Loan Repayment Program/National Institute of Health PI: Patricia Underwood Title: The Caveolin-1 Gene and Cardio-Metabolic Disease: Education of Nurse and Scientist. Total Cost: \$ 44,644.50.
Role: Principle Investigator

7/2010-7/2011 T32HL007609 PI: GH Williams. Title: Training Program in Hypertension.
Role: Trainee

7/2008-7/2010 F31NR011108. PI: Patricia Underwood, Title: Association of the Caveolin Gene with Insulin Resistance and Hypertension, Training Fellow. Total Cost: \$115,985.00
Role: Principle Investigator

Other

7/2011-7/2012 American Academy of Nurse Practitioner Foundation: PI: Patricia Underwood. Title: The Caveolin-1 Gene as a Marker for Type 2 Diabetes Mellitus. Total Cost: \$10,000
Role: Principle Investigator

9/2009-9/2010 International Society of Nursing and Genetics (ISONG) Research Grant. PI Patricia Underwood, Title: Genotyping Funds to Study the Association of the Caveolin Gene with Insulin Resistance and Hypertension. Total Cost: \$1,500.00.
Role: Principle Investigator

PRESENTATIONS (Invited and *Refereed):

International:

October 9, 2009 “Genetic Markers for the Metabolic Syndrome”. International Conference of Nutritionists, Bangkok, Thailand.

National:

June 20, 2019 “Using Technology to Improve Diabetes Care”. American Academy of Nurse Practitioners, Indianapolis, ID.

Regional:

March 9, 2016 “Preventing Cardiovascular Disease in Adults with Type 2 Diabetes Mellitus: Review of Scientific Statements from American Heart and Diabetes Associations”. Massachusetts Chapter of the American Academy of Diabetes Educators Annual Meeting, Sturbridge, MA.

July 25, 2019 “Improving Diabetes Care through Clinical Research and Nurse Interventions”, Nursing and Evidence Based Practice Symposium, VA Health Care System, West Roxbury, MA

Local:

November 20, 2019 “Using Technology to Improve Diabetes Care” Medical Grand Rounds, VA Health Care System, West Roxbury, MA

September 20, 2021 “Introduction to Diabetes Treatment Goals, Medications, and Technology” MIT/HMS Scholar Program, VA Health Care System, West Roxbury, MA

TEACHING ACTIVITIES:

Boston University Medical School

2019 – Current Clinical Preceptor for 2nd Year Family Medicine Residents
Clinical Preceptor for Endocrine Fellows and 4th year Medical Students
Lecture on Inpatient Glycemic Control, Current Diabetes Management, and Use of Diabetes Technologies

MIT Harvard Sciences & Technology

2018 – Current HST.201 Introduction to Clinical Medicine.
Introduction to Diabetes Treatment Goals, Medications, and Technology

9/2004-12/2004 University of Pennsylvania School of Nursing, Taught BSN undergraduate nursing skills lab: tracheostomy care, ostomy care, IV fluids administration, blood products and other nursing skills

Boston College

5/2009-Current Boston College Connell School of Nursing: lecture master’s level nurse practitioner guest lecturer, precept nurse practitioner students in clinic (2-3 per semester)

Graduate Courses

Fall 2020 NU 7463 Primary Care Families/Advanced Practice Nursing I
Spring 2021 NU 7473 Primary Care Families/Advanced Practice Nursing II
Spring 2021 NU 9825 Family Primary Care Advanced Practice Nursing I

Graduate Guest Lecture:

Spring 2021 NU 7420 Pharmacotherapeutics in Advanced Practice Nursing

Advisory Responsibilities

2020 – Current Keys to Inclusive Leadership in Nursing Program, Undergraduate Students
2020– Current 10-20 DNP/Family Nurse Practitioner Students

University of Pennsylvania

2004 University of Pennsylvania School of Nursing, Taught BSN undergraduate nursing skills lab: tracheostomy care, ostomy care, IV fluids administration, blood products and other nursing skills

PROFESSIONAL ACTIVITIES AND SERVICE:

Academic Major Committee Assignments:

University Committees

Boston College

2021 Member, Masters Committee
20xx – 20xx Chair, name of committee

Hospital or Affiliated Institution Major Committee Assignments:

American Academy of Diabetes Educators

2018- 2021 Board Member, Massachusetts Chapter of American Academy of Diabetes Educators

Veteran’s Health Administration: Central Nurses Office

2020-Current Member, VHA National Committee on Cardio-metabolic Nursing

Brigham and Women’s Hospital

2010– 2012 Nurse Scientist, Department of Nursing

Editorial Activities:

7/2010-7/2013 Reviewer, Journal of Nursing Scholarship
7/2010 -Current Reviewer, Journal of Clinical Endocrinology and Metabolism
1/2014 -Current Reviewer, Metabolism
1/2018- Current Reviewer, Nursing Research
12/2018- Current Reviewer, Diabetes Spectrum

C. V.
P.C. Underwood

-8-

CV Underwood
09/2021