

BIOGRAPHICAL SKETCH

NAME: Spector, Nancy D.

eRA COMMONS USER NAME: NDS135

POSITION TITLE: Professor of Pediatrics; Executive Director, Executive Leadership in Academic Medicine; Associate Dean of Faculty Development

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(S)	FIELD OF STUDY
Brown University, Providence, RI	B.A.	1986	Biology
University of Massachusetts Medical School, Worcester, MA	M.D.	1990	Medicine
Transitional Intern, University of Massachusetts Medical School, Worcester, MA		1990-1991	Residency
Resident in Pediatrics, St Christopher's Hospital for Children, Philadelphia, PA		1991-1994	Residency
Chief Resident in Pediatrics, St Christopher's Hospital for Children, Philadelphia, PA		1994-1995	Residency
Fellow, General Academic Pediatrics, St. Christopher's Hospital for Children, Philadelphia, PA		1995-1997	Fellowship
Fellow, Faculty Development, Michigan State University, Lansing, MI		1997-1998	Fellowship
Participant, Association of American Medical Colleges (AAMC) Mid-Career Women Faculty Development Seminar		2005	Postgraduate Training
Participant, Harvard Macy Institute Program – Leading Innovations in Health Care and Education, Boston, MA		2008	Postgraduate Training
Fellow, Executive Leadership in Academic Medicine, Drexel University College of Medicine, Philadelphia, PA		2009-2010	Postgraduate Training

A. Personal Statement

Dr. Spector is a graduate of Brown University and the University of Massachusetts Medical School. She completed her residency, Chief Residency, and General Academic Pediatrics Fellowship at St. Christopher's Hospital for Children. She was elected to *Alpha Omega Alpha*. She supplemented her educational portfolio with a Fellowship in Faculty Development at Michigan State University and course work in leadership and faculty development at the Association of American Medical Colleges and the Harvard Macy Institute. She was selected by the Dean of Drexel University College of Medicine to be a Fellow in the Executive Leadership in Academic Medicine (ELAM) program, a leadership program for women in medicine. She was the Associate Chair for Education and Faculty Development in the Department of Pediatrics at Drexel University College of Medicine (2007-2016) and the Residency Program Director at St. Christopher's Hospital for Children (2012-2016). She is a Professor of Pediatrics at Drexel University College of Medicine. In July 2016, she was named Associate Dean for Faculty Development at Drexel University College of Medicine and Executive Director of Executive Leadership in Academic Medicine (ELAM). Dr. Spector was the founding Co-Chair of the Association of Pediatric Program Directors (APPD) Grassroots Forum for Associate Program Directors, Co-Chair of the APPD Ad Hoc Committee on Professional Development, Vice Chair of the APPD Mid-Atlantic Group, Vice-Chair of the APPD Faculty and Professional Development Task Force, founding Co-Chair of the APPD Mentorship Program, and is the immediate past Chair of the APPD Faculty and Professional Development Task Force. She is also a member of the Academic Pediatric Association's (APA) Mentoring Committee. Dr. Spector was a member of the Federation of Pediatric Organization's (FOPO) Task Force on Women in Pediatrics from 2008-2011, and was the Co-Chair from 2011-2012. She was the Co-Chair of the FOPO Gender and Generations Working Group from 2012 to 2014. She was named to the American Board of Pediatrics' Education and Training Committee in 2014.

Dr. Spector's contributions to graduate medical education and academic medicine are in leadership skills development, professional development, mentoring, and curriculum development and implementation. She was the educational leader of

the I-PASS Handoff Study, Bundling Effective Resident Handoff Practices to Improve Patient Safety, and currently serves as the Chair of the I-PASS Executive Council of the I-PASS Study Group in which she plays a pivotal leadership role for the implementation and educational oversight of two grant funded studies, Bringing I-PASS to the Bedside and the Society for Hospital Medicine's Mentored Implementation Program for 32 institutions nationwide. Over the last 8 years, Dr. Spector has lead the development of the I-PASS Study group team and has provided mentorship to numerous junior team members. Additionally, she has served as a mentor for the implementation of I-PASS in multiple institutions. Currently, Dr. Spector is on the Board of Directors of the I-PASS Patient Safety Institute. Her scholarly activity includes 59 peer-reviewed articles and educational materials, 14 reviews, book chapters, and educational materials and 210 national presentations, abstracts, posters, and workshops. Dr. Spector was recognized for her prominence as an educator and as a national leader in pediatrics with election to the American Pediatric Society. She has been a mentor to 28 local and 15 national colleagues. She has been recognized for her efforts as a mentor with major institutional and national awards: the Robert S. Holm Award for her extraordinary contribution in pediatric program director leadership and mentorship from the Association of Pediatric Program Directors, the Elias Abrutyn Mentoring Award from Drexel University College of Medicine, and the Miller Sarkin Mentoring Award from the Academic Pediatric Association.

B. Positions and Honors

Academic Appointments and Major Administrative Positions

Clinical Instructor of Pediatrics, Drexel University College of Medicine	1994-1997
Assistant Professor of Pediatrics, Drexel University College of Medicine	1997-2006
Associate Professor Pediatrics, Drexel University College of Medicine	2006-2011
Professor of Pediatrics, Drexel University College of Medicine	2011-
Attending Physician, Division of Ambulatory Pediatrics in the Section of General Pediatrics	1997-2016
Associate Program Director, Pediatric Residency Program, St. Christopher's Hospital for Children	2002-2012
Associate Chair, Education and Faculty Development, St. Christopher's Hospital for Children	2007-2016
Program Director, Pediatric Residency Program, St. Christopher's Hospital for Children	2012-2016
Associate Dean for Faculty Development, Drexel University College of Medicine	2016-present
Executive Director, Executive Leadership in Academic Medicine, Drexel University College of Medicine	2016-present

Other Experience and Professional Memberships

Drexel University College of Medicine, Women in Academic Medicine Committee, Member	2001-2007
Association of Pediatric Program Directors (APPD), Member	2002-2016
Academic Pediatric Association, Member	2002-present
APPD Associate Program Directors Special Interest Group, Inaugural Co-Chair	2006-2010
Drexel University College of Medicine, Women in Academic Medicine Committee, Chair	2007-2008
Drexel University College of Medicine, Appointments and Promotions Committee, Member	2008-2012
APPD Faculty and Professional Development Task Force, Vice-Chair	2009-2012
APPD Mentoring Program, Founding Co-Chair	2009-2012
Federation of Pediatric Organizations' Task Force on Women in Pediatrics, Member	2008-2011
Drexel University College of Medicine, Women in Academic Medicine Committee, Member	2010-present
Federation of Pediatric Organizations' Task Force on Women in Pediatrics, Co-Chair	2011-2013
Academic Pediatric Association, Mentoring Program Planning Committee, Member	2011-present
APPD Faculty and Professional Development, Chair	2012-2015
Federation of Pediatric Organization's Working Group on Gender and Generations, Co-Chair	2012-2014
American Pediatric Society, Elected Member	2012-present
I-PASS Executive Council, Chair	2014-present
I-PASS Institute Board of Directors, Member	2016-present

Honors and Awards

Best Doctors in America	2007-present
Alpha Omega Alpha Honor Medical Society, Drexel University College of Medicine	2008
Dean's Appointee to Executive Leadership in Academic Medicine, Drexel University College of Medicine	2009-2010
Association of Pediatric Program Directors, Robert S. Holm award for leadership and mentorship	2010
Drexel University College of Medicine, Elias Abrutyn Mentoring Award	2011

Readiness for Reform Health Care Innovation Award from the AAMC (co-recipient/honorable mention)	2012
Leading Practice Award, Accreditation Canada/ Agora for I-PASS handoff program (co-recipient)	2013
Academic Pediatric Association, Miller-Sarkin Mentoring Award	2014
"Top Articles" in Medical Education (#1 and #2) at Pediatric Hospital Medicine Annual Conference	2014
HBS-HMS Health Acceleration Cox Award Recipient for I-PASS Study	2014
Pediatric Hospital Medicine Safety and Quality (award Recipient for I-PASS Study Group)	2015
"Top 6 Research Abstract Submissions" at Pediatric Hospital Medicine Annual Conference	2016

C. Contributions to Science

I. Development of I-PASS Educational Intervention and Assessment Tools

Dr. Spector have been the educational leader of the I-PASS Study Group. In that role, she had a key educational leadership role in the I-PASS Handoff Study, Bundling Effective Resident Handoff Practices to Improve Patient Safety. She was responsible for the development of the educational intervention and assessment tools for changing and standardizing handoff practices which were associated with a **23% decrease on medical errors and a 30% reduction in preventable adverse events (harms to patients)**. The following references are selected to illustrate the broad impact of the educational intervention.

1. Sectish TC, Starmer AJ, Landrigan CP, **Spector ND**. Establishing a multisite education and research project requires leadership, expertise, collaboration, and an important aim. *Pediatrics* 2010; 126(4): 619-622. PMID: 20876168
2. Starmer AJ, **Spector ND**, Srivastava R, Allen AD, Landrigan CL. I-PASS, a mnemonic to standardize verbal handoffs. *Pediatrics* 2012; 192(2): 201-204. PMID: 22232313
3. Starmer AJ, O'Toole JK, Rosenbluth G, Calaman S, Balmer D, West DC, Bale JF, Yu CE, Noble EL, Tse LL, Srivastava R, Landrigan CP, Sectish TC, **Spector ND**; and members of the I-PASS Study Group. Development, Implementation, and Dissemination of the I-PASS Handoff Curriculum: A Multi-Site Educational Intervention to Improve Patient Handoffs. *Academic Medicine* 2014; 89(6): 876-884. PMID: 24871238
4. Starmer AJ, **Spector ND**, Srivastava R, West DC, Rosenbluth G, Allen AD, Noble EL, Tse LL, Dalal AK, Keohane CA, Lipsitz SR, Rothschild JM, Wien MF, Yoon CS, Zigmont KR, O'Toole JK, Wilson KM, Bismilla Z, Coffey M, Mahant S, Blankenburg RL, Destino LA, Everhart JL, Patel SJ, Bale JF, Spackman JB, Stevenson AT, Calaman S, Cole FS, Hepps JH, Lopreiato JO, Yu CE, Sectish TC, Landrigan CP, and the I-PASS Study Group. The I-PASS Handoff Study: Effects of Implementing a Multi-site Handoff Bundle on Rates of Medical Errors, Preventable Adverse Events, and Miscommunications. *NEJM* 2014; 371: 1803-1812. PMID: 25372088

II. Dissemination of I-PASS Educational Materials

Dr. Spector has led the efforts to disseminate the educational materials from the I-PASS Handoff Study by establishing a website to house the educational materials and by posting the materials on the AAMC repository of peer-reviewed educational materials, MedEdPORTAL. Through November 6, 2016, **there were 3535 individual requests from over 500 unique institutions in 50 states and the District of Columbia and 58 countries**. In addition, the I-PASS Core Resident Workshop has been a **Top Ten of the most downloaded** set of materials on the MedEdPORTAL website.

1. **Spector ND** (co-first) Starmer A (co-first), Yu C, O'Toole J, Allen A, Tse L, Bale J, Bismilla Z, Calaman S, Coffey M, Cole F, Destino L, Everhart J, Hepps J, Kahana M, Lopreiato J, McGregor R, Patel S, Rosenbluth G, Srivastava R, Stevenson A, West D, Landrigan C (co-last), Sectish T C (co-last) I-PASS handoff curriculum: Core resident workshop. MedEdPORTAL; 2012. Available from: www.mededportal.org/publication/9311<<http://www.mededportal.org/publication/9311>>.
2. **Spector ND**, Rosenbluth G, Patel S, Destino L, O'Toole J, Everhart J, Stevenson A, Yu C, Calaman S, Allen A, Starmer A, Landrigan C, Sectish TC. I-PASS handoff curriculum: Campaign toolkit. MedEdPORTAL; 2013. Available from: www.mededportal.org/publication/9397
3. Calaman S (co-first), Hepps JH (co-first), **Spector ND**, Sectish TC, Landrigan CP, Srivastava R, Starmer AJ, Yu CE (co-last), Lopreiato JO (co-last), and the I-PASS Educational Executive Committee. I-PASS handoff curriculum: Handoff simulation exercises. MedEdPORTAL; 2013. Available from: www.mededportal.org/publication/9402
4. O'Toole JK, Sectish TC, Starmer AJ, Rosenbluth G, West DC, Landrigan CP, Allen AD, Noble EL, Srivastava R, Tse LL, Hepps J, Lopreiato JO, Calaman S, Yu CE, **Spector ND**, and the I-PASS Educational Executive Committee. I-PASS

handoff curriculum: Faculty development resources. MedEdPORTAL; 2013. Available from: <https://www.mededportal.org/publication/9540>

III. Development of I-PASS Assessment Tools

Dr. Spector provided oversight for the development of unique and valid assessment tools for standardizing handoff practices and creating standard setting videos to assess handoff practice using the new approach with Entrustable Professional Activities (EPA). The following references illustrate the range of educational strategies used to develop these robust assessment tools.

1. Starmer AJ, Landrigan CP, Srivastava R, Wilson K, Allen AD, Mahant S, Blank J, Sectish TC, **Spector ND**, West DC. I-PASS handoff curriculum: Faculty observation tools. MedEdPORTAL; 2013. Available from: www.mededportal.org/publication/9570
2. Rosenbluth G, Bale JF, Starmer AJ, **Spector ND**, Srivastava R, West DC, Sectish TC, Landrigan CP. A Needs Assessment for the Printed Handoff Document: Variation in Practice and Recommended Best Practices. Journal of Hospital Medicine 2015; 10(8): 517-524. PMID: 26014471
3. Calaman S, Hepps JH, Bismilla Z, Carraccio C, Englander R, Feraco A, Landrigan CP, Lopreiato JO, Sectish TC, Starmer AJ, Yu CE, **Spector ND**, West DC, and the I-PASS Study Education Executive Committee. Creation of Standard Setting Videos to Support Faculty Observations of Learner Performance and Entrustment Decisions. Academic Medicine 2016; 91(2): 204-209. PMID: 26266461
4. Feraco AM, Starmer AJ, Sectish TC, **Spector ND**, West DC, Landrigan CP. Reliability of the Verbal Handoff Tool and Verbal Patient Handoff Quality Before and After Implementation of a Resident Handoff Bundle. Academic Medicine 2016. Revised and resubmitted. 2016: 16(6): 524-531. PMID: 27090858

IV. Scholarship in the Area of Professionalism

Dr. Spector has been a vocal proponent of establishing high levels of professionalism within graduate medical education and published one of the first articles to illustrate the challenges to professionalism in the age of social media and electronic communication. She **coined the word, e-professionalism**, in one of her articles.

1. Frohna JG, McGregor RS, **Spector ND**. Promoting professionalism in pediatrics. Academic Pediatrics 2009; 9(5): 295-297. PMID: 19683978
2. **Spector ND**, Matz PS, Levine LJ, Gargiulo KA, McDonald MB, McGregor RS. *e-Professionalism*: Challenges in the age of information. Journal of Pediatrics 2010; 156(3): 345-346. PMID: 20176180
3. **Spector ND**, Trimm RF. Promoting Professionalism: An Introduction (Chapter 1) in Teaching, Learning, and Assessing Professionalism Across the Continuum: A Medical Educator's Guide. . Accessed January 7, 2017 @ <https://www.abp.org/professionalism-guide>
4. Kuzma N, **Spector ND**. Electronic Professionalism (Chapter 7) in Teaching, Learning, and Assessing Professionalism Across the Continuum: A Medical Educator's Guide. Accessed January 7, 2017 @ <https://www.abp.org/professionalism-guide>

V. Scholarship in Mentoring, Professional Development, and Leadership

In her many leadership roles as an academic educator, Dr. Spector has been prominent and renowned for her work that spans the areas of mentoring, professional development and leadership. These are a few illustrative examples of her work in these areas.

1. **Spector ND**, Mann KJ, Anderson MS, Narayan AP, McGregor R. Facilitated peer group mentoring: A case study of creating leadership skills among the associate program directors of the APPD. Academic Pediatrics 2010; 10(3): 161-164. PMID: 20452565
2. Serwint J, Cellini MM, **Spector ND**, Gusic ME. The value of speed mentoring in a national organization. Academic Pediatrics 2014; 14(4): 335-40. PMID: 24816424
3. **Spector ND** and Sectish TC. Professional development planning for academic faculty. MedEdPORTAL; 2012. Available from: www.mededportal.org/publication/9280.
4. **Spector ND**, Sectish TC. Leading Innovative Projects: Essential Skills for Academic Faculty. MedEdPORTAL; 2014. Available from: www.mededportal.org/publication/9877

D. Funded Projects

Current

2014-2017 Bringing I-PASS to the Bedside: A Communication Bundle to Improve Patient Safety and Experience
PCORI CDR-1306-03556 (Landrigan)

Co-Investigator. (\$1,500,000)

10% effort

Aim to test the effects of incorporating I-PASS into morning family-centered rounds and in communication with families throughout the day. Hypothesis is that using these communication tools will improve lines of communication, and will help to better bring patients' families into the decision-making process in hospitals. Doing so could decrease medical errors and miscommunications between doctors, nurses, and patients.

- Membership on the Coordinating Council and Scientific Oversight Committee and **Co-Chair** of the Educational Executive and Dissemination Committees.
- Roles include major oversight for educational curriculum development, implementation, and dissemination.

2014-2017 Disseminating Safe Handoffs: Mentored Implementation of the I-PASS Program
AHRQ 1R18HS023291 (Landrigan)

Co-Investigator. (\$1,470,525)

10% effort

Communication failures are a leading cause of serious errors in hospitals. The I-PASS bundle is an evidence-based handoff practice including communication techniques and tools. Implementation of the bundle is associated with decreased miscommunications and, in a nine-center study, there was a significant reduction in errors that harmed patients decreased by 30% following and medical errors decreased by 23%. I-PASS will be implemented in 32 adult and pediatric hospitals in North America through the Society of Hospital Medicine's award-winning Mentored Implementation program.

- Membership on the Coordinating Council and Scientific Oversight Committee and **Senior Advisor** to the Co-Chair of the Educational Executive Committee and **Co-Chair** of the Dissemination Committee
- Roles include major oversight for educational curriculum development, implementation, and dissemination.

Completed Projects

R18, DHHS (PI Landrigan) "Bundling Effective Resident Handoff Practices to Improve Patient Safety" (I-PASS)