Jennifer L. Kirwin, Pharm.D., BCPS, RPh

Northeastern University Bouvé College of Health Sciences 120 Behrakis Health Science Building Boston, MA 02115

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EDUCATION	
1993 - 1999	Doctor of Pharmacy- summa cum laude

Northeastern University School of Pharmacy, Boston, Massachusetts

FORMAL PROFESSIONAL DEVELOPMENT		
2020	Leading People, Delivering Results	
	Northeastern University, facilitated by Tandem Solutions, Inc.	
2017	Comprehensive Instructors Workshop	
	Center for Medical Simulation, Boston, MA	
2011 – 2012	Academic Leadership Fellows Program	
	American Association of Colleges of Pharmacy	
1999 - 2000	Pharmacy Practice Residency (PGY1)	
	New England Medical Center, Boston, MA	

EMPLOYMENT HISTORY

Northeastern University, Bouvé College of Health Sciences, Office of the Dean

2019-present Associate Dean of Academic Affairs

Northeastern University, Bouvé College of Health Sciences, School of Pharmacy

2019- present	Clinical Professor (full time)
2017 - 2019	Director of Undergraduate and Professional Programs
2017 – 2019	Clinical Professor (80% time)
2013 - 2017	Vice Chair, Department of Pharmacy and Health Systems Sciences
2013 - 2017	Associate Clinical Professor (80% time)
2007 – 2013	Associate Clinical Professor (67% time)
2007	Associate Clinical Specialist
2000 - 2006	Assistant Clinical Specialist

Brigham Internal Medicine Associates Clinic

Brigham and Women's Hospital, Boston MA

2004 - 2007	Clinical Pharmacist, Glucose Management Clinic
	Department of Endocrinology
2000 - 2007	Clinical Pharmacist

New England Medical Center; Boston, Massachusetts

1999 - 2000	Pharmacy Practice Resident
	William Gouveia, M.S., Director

PUBLICATIONS- REFEREED ARTICLES * Indicates Student

- 1. Greenwood K, Kirwin J, Huo Z. Design and Implementation of the Health Professions Simulation Assessment, a Tool to Assess Students' Perceptions of Simulation Experiences. J Acute Care Physical Therapy. 2020;11(2):70-78.
- Kirwin J, Burton D*, Maddali N*, Gonyeau M. Implementation of a Revised Capstone Course with Expanded Flexibility. Accepted to Currents in Pharmacy Teaching and Learning. 2019;11(1):81-86.
- 3. **Kirwin J**, Miller D, DiVall M. Lessons Learned from an Evaluation of a Process for Systematic Curriculum Review. Accepted to the American Journal of Pharmaceutical Education. 2019;83(1):6783.
- 4. Bellottie G, **Kirwin J**, Allen R, Anksorus H, Bartelme K, Bottenberg M, Dula C, Kane T, Lee P, McMillan A, Riley B, Waghel R. Suggested Pharmacy Practice Laboratory Activities to Align with Pre-APPE Domains in the Doctor of Pharmacy Curriculum. Currents in Pharmacy Teaching and Learning. 2018(10):1303-1320.
- 5. Sando KR, Skoy E, Bradley CL, Frenzel JE, **Kirwin J**, Urteaga E. Assessment of SOAP notes in colleges and schools of pharmacy. Currents in Pharmacy Teaching and Learning. 2017;9(4):576-584.
- 6. **Kirwin J,** Greenwood K, Rico J, Nalliah R, DiVall M. Interprofessional curbside consults to develop team communication and improve student achievement of learning outcomes. American Journal of Pharmaceutical Education. 2017;81(1):Article 15.
- 7. Frenzel J, Eukel H, Neville M, Castillo S, Donohoe K, Jones M, **Kirwin J**, McMillan A, Starry M, Tingen J, Urteaga E. Essential skills for pharmacy graduates reported by advanced pharmacy practice experience preceptors. Currents in Pharmacy Teaching and Learning. 2015;7:700-704.
- 8. Edwards R, **Kirwin JL**, Gonyeau M, Lancaster J, Matthews S, DiVall M. A reflective teaching challenge to motivate educational innovation. American Journal of Pharmaceutical Education. 2014;78(5): Article 103.
- 9. DiVall M, Kolbig L*, Carney M, **Kirwin J,** Letzeiser C, Mohammed S. Professional socialization as a way to introduce interprofessional education competencies to freshman. Journal of Interprofessional Care. 2014; Journal of Interprofessional Care. 2014, Vol. 28, No. 6: 576–578.
- 10. Persky A, **Kirwin J**, Marasco C, May DB, Skomo M, Kennedy K. Classroom attendance: Factors and perceptions of students and faculty in US schools of pharmacy. Currents in Pharmacy Teaching and Learning. 2014;6(1):1-9.
- 11. **Kirwin JL**, DiVall MV, Guerra C*, Brown T. A Simulated Hospital Pharmacy Module Using an Electronic Medical Record in a Pharmaceutical Care Skills Laboratory Course. American Journal of Pharmaceutical Education. 2013;77(3): Article 62.
- 12. DiVall M, Edwards RA, Stevens C*, Zilberman E*, Blais K*, Watanabe M, **Kirwin J**. Student perceptions about develop an evidence-based public health program directed toward a vulnerable population. Currents in Pharmacy Teaching and Learning. 2013;5(2):76-84. Available at: http://www.sciencedirect.com/science/article/pii/S1877129712000883#
- 13. Cheng C*, Gonyeau M, **Kirwin JL**. Perampanel- A highly selective, non-competitive AMPA-type receptor antagonist for adjunctive treatment of refractory partial-onset seizures. Formulary Journal. 2013:48:19-27.
- 14. Kirwin J, Canales AE, Bentley ML, Bungay K, Chan T, Dobson E, Holder RM, Johnson D, Lilliston

- A, Mohammad RA, Spinler SA. Process Indicators of Quality Clinical Pharmacy Services During Transitions of Care. Pharmacotherapy. 2012;32(11):338-47.
- 15. Hume AL, **Kirwin J**, Bieber HL, Couchenour RL, Hall DL, Kennedy AK, Allen LaPointe NM, Burkhardt CDO, Schilli K, Seaton T, Trujillo J, Wiggins B. Improving Care Transitions: Current Practice and Future Opportunities for Pharmacists. Pharmacotherapy. 2012;32(11):326-37.
- 16. DiVall MV, **Kirwin JL**. Using Facebook to Facilitate Course-Related Discussion Between Students and Faculty Members. American Journal of Pharmaceutical Education. 2012:76(2):32
- 17. Vitin L, Quinto E*, **Kirwin JL.** Rivaroxaban: a novel oral factor Xa inhibitor to prevent stroke in nonvalvular atrial fibrillation. Formulary. 2011;46:257–267.
- 18. Krause A*, Kirwin JL. Focus on Exenatide LAR. Formulary. 2010; 45:43-51.
- Kirwin JL, Cunningham RJ, Sequist TD. Pharmacist Recommendations to Improve the Quality of Diabetes Care: A Randomized Controlled Trial. Journal of Managed Care Pharmacy. 2010;16(2):104-13.
- 20. Howard E, Rickles N, Nanini A, Harvey R, Oneil-Pirozzi T, **Kirwin J,** Lowe S. Establishing an Interdisciplinary Geriatric Education Center. Journal of Allied Health. 2009;38(4):125E-129E(5).
- 21. Van Amburgh JA, Devlin J, **Kirwin JL**, Qualters D. A Tool for Measuring Active Learning in the Classroom. American Journal of Pharmaceutical Education. 2007;71(5):Article 85.
- 22. **Kirwin JL**. Pramipexole: A nonergot-derived dopamine agonist for the treatment of restless legs syndrome. Formulary. 2007;42:165-174.
- 23. Schnipper JL, **Kirwin JL**, Cotugno MC, Wahlstrom SA, Brown BA, Tarvin E, Kachalia A, Horng M, Roy CL, McKean SC, Bates DW. Role of pharmacist counseling in preventing adverse drug events after hospitalization. Archives of Internal Medicine. 2006 Mar 13;166(5):565-71.
- 24. Kirwin JL, Van Amburgh J. Focus on: Muraglitazar. Formulary 2005;40:285-293.
- 25. **Kirwin JL**, Van Amburgh JA, Napoli K. Service-Learning at a Camp for Children with Asthma as Part of an Advanced Pharmacy Practice Experience. American Journal of Pharmaceutical Education 2005; 69(3) Article 49.
- 26. **Kirwin JL,** Goren J. Duloxetine: A dual serotonin/ norepinephrine reuptake inhibitor for treatment of major depressive disorder. Pharmacotherapy 2005;25(3):396-410.
- 27. Kirwin JL. Focus on: Darifenacin. Formulary. 2004;39:291-9.
- 28. Kirwin JL, Goren J. Focus on: Duloxetine. Formulary. 2003;38:29-37.
- 29. **Berard JL**, Feldman SM. Identifying Antimicrobial Resistance Patterns in Long-Term Care: An Opportunity for Consultant Pharmacists. The Consultant Pharmacist 1999;14(12):1399-1403.
- 30. **Berard JL,** Velez RL, Freeman RB, Tsunoda SM. A review of interleukin-2 receptor antagonists in solid organ transplantation. Pharmacotherapy 1999;19(10):1127-37.

PUBLICATIONS — INVITED

Kirwin JL, Edwards RA. Helping patients articulate end-of-life wishes: a target for interprofessional participation. Annals of Palliative Medicine 2013;2(2).

PUBLICATIONS - BOOK CHAPTERS

Kirwin JL, Van Amburgh JA. What matters in laboratory teaching and learning? In: Sylvia LM, Barr JT, editors. *What Matters in Learning and Teaching in Pharmacy Education*. Jones and Bartlett. 2010.

Kirwin J, Fung T. Knowing the Healthcare Disciplines and Introduction to Team Development, Function and Maintenance. In Satin DG, editor. *Health Management for Older Adults Developing an Interdisciplinary Approach*. Oxford University Press. 2008.

PUBLICATIONS - REFEREED ABSTRACTS

- 1. Barry C, Cohen-Osher M, DiVall M, Greenwood K, Hickey M, Honda T, **Kirwin J**, Miselis H, Reffel A, White S. In-Person versus Remote IPE Activity: Is There a Difference? Poster to be presented at the 2021 Physician Assistant Educational Association Annual Educational Forum (Virtual) October 2021.
- 2. Matta T, Miller D, Brown T, **Kirwin J.** Using an Observer-focused Rubric during Peer Observation of Patient Simulations in a Pharmacy Skills Lab, Poster presented at the American Association of Colleges of Pharmacy Annual Meeting (virtual) July 2020.
- 3. DiVall M, Yimam E*, **Kirwin J**. Evaluation of Scholarship Output Resulting from a Research Capstone Requirement. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting, Boston, MA July 2018.
- 4. Vassallo K*, Bitton E*, Hubley S*, Kareem S*, Moloughney S*, Murphy J*, Greenwood K, **Kirwin J,** Comparison of Student and Professor Perceptions in Healthcare Simulations: A Mixed Methods Design Study. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting, Boston, MA July 2018.
- 5. **Kirwin J**, DiVall MV, Logothetis DE, Miller GM, Reynolds JR, Connecting PharmD Students to Research in Pharmaceutical Sciences Through a Research Capstone. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting, Boston, MA July 2018.
- 6. O'Neil-Pirozzi, TM Musler J, Carney M, Day L, Hamel PC, **Kirwin J**. A Model Experiential Education Program for First Year Health Professions Students to Begin Developing Interprofessional Competencies. Presented at the Nexus Fair during the National Center's Summit (Provocative Ideas for Practical IPE) in Minneapolis, MN on August 22, 2017 and at the American Association of Colleges of Pharmacy Annual Meeting, Boston, MA on July 2018.
- 7. **Kirwin J**, DiVall M, Greenwood KC, Brown T, Matta T, Rico J, Nalliah R. Interprofessional Curbside Consults (ICC) to Improve Student Achievement of Learning Outcomes. Poster presented at the 2017 American Association of Colleges of Pharmacy Annual Meeting, Nashville, TN.
- 8. **Kirwin J.** Krevat A*, Lukasik A*, DiVall M. JCPP Pharmacists' Patient Care Process (JCPP-PPCP): Should We Reinvent the Wheel? Poster presented at the 2017 American Association of Colleges of Pharmacy Annual Meeting, Nashville, TN.
- **9.** Miller D, **Kirwin J,** DiVall M. Evaluation of a systematic curriculum review (SCR) process and impact on the pharmacy curriculum. Presented at the 2016 American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA.

- **10.** Khalil K*, Sibicky S, **Kirwin J.** Student Pharmacist Perception of Pharmacy Simulation Lab Experiences at a Private Research-Intensive Institution. Presented at the 2016 American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA.
- 11. Brown C*, Goyette A*, Lewis B*, Lyons C*, Masse J*, McCarthy K*, Pham M*, Scott S*, Walter H*, Yablonski S*, Greenwood K. **Kirwin J**. Interprofessional Education Through Simulation. Presented at the 2016 Northeastern University Research, Innovation and Scholarship Expo, Boston, MA. April 2016.
- 12. Gonyeau M, DiVall M, **Kirwin J**, Copeland D, Carlson A, Booth R. Development of a co-curricular e-portfolio to promote student self-awareness, professional development and encourage leadership. Poster presented at the 2015 American Association of Colleges of Pharmacy Annual Meeting, National Harbor, MD.
- 13. **Kirwin J**, DiVall M. Interprofessional curbside consults to improve student drug information skills and achievement of learning outcomes. Poster presented at the 2015 American Society of Health-System Pharmacists Midyear Clinical Meeting, New Orleans, LA.
- 14. **Kirwin JL**, Arena DA, Stephan M, Rickles N. Design and implementation of an introductory USP <797> curricular module for P1 and P3 pharmacy students. Poster presented at the 2015 American Society of Health-System Pharmacists Midyear Clinical Meeting, New Orleans, LA.
- 15. **Kirwin J**, DiVall M. Using ExamSoft Rubrics to Improve a Pharmacy Skills Laboratory Course. Poster presented at the 2015 American Association of Colleges of Pharmacy Annual Meeting, National Harbor, MD.
- 16. Brown T, **Kirwin J**, Gillis C*, Zgarrick D. Analysis of a Continuous Quality Improvement Curriculum. Presented at the American Association of Colleges of Pharmacy Annual Meeting, Pharmacy Education 2014 in Grapevine, TX. July 2014.
- 17. Gonyeau M, Kirwin J, Edwards RA, Matthews SJ, DiVall M, Zgarrick DP. Reflective Teaching Challenge to Motivate Educational Innovation and Improve Teaching and Learning. Presented at the American Association of Colleges of Pharmacy Annual Meeting, Pharmacy Education 2013 in Chicago, IL. July 2013.
- 18. Kolbig L, DiVall M, Carney M, **Kirwin J**, Letzeiser C, Mohammed S. Are First Year Health Science Students Ready for Interprofessional Education? Presented at the Northeastern University Interprofessional Research Symposium, Boston, MA. April 9, 2013.
- 19. **Kirwin JL,** DiVall M, Guerra C*, Brown T. Evaluation of a simulated hospital pharmacy module using an EMR in a pharmacy skills laboratory. Poster presented at the 2012 American Association of Colleges of Pharmacy Annual Meeting, Kissimmee, FL and at the Northeastern University Interprofessional Research Symposium, Boston, MA April 9, 2013.
- **20.** DiVall M, Gonyeau M, **Kirwin JL**, Zgarrick D. Using the iPad tablet for didactic and experiential teaching: faculty experiences and perceptions. Poster presented at the 2012 American Association of Colleges of Pharmacy Annual Meeting. Kissimmee, FL.
- **21.** DiVall M, Van Amburgh J, Derderian C*, Gingras D, Barr J, Chou C, Douglass M, Edwards R, **Kirwin J**, Rickles N, Skirvin JA, Zgarrick D. An Inventory of Interprofessional Activities and Collaborations at Northeastern University School of Pharmacy. Poster presented at the 2012 American Association of Colleges of Pharmacy Annual Meeting. Kissimmee, FL.

- 22. **Kirwin JL**, DiVall M, Douglass M, Gonyeau M, Jacobs M, McQueeney M, Skirvin JA, Van Amburgh JA, Watanabe M, Zgarrick D. Curricular Revision Incorporating Pathophysiology, Pharmaceutical Care Skills, Self-care, and Pharmacotherapeutics to Enhance Content Delivery. Poster presented at the 2011 American Association of Colleges of Pharmacy Annual Meeting, San Antonio, TX.
- 23. DiVall M, **Kirwin J.** Using Facebook to connect students and faculty outside of class: student perceptions and utilization data. Poster presented at the 2011 American Association of Colleges of Pharmacy Annual Meeting, San Antonio, TX.
- 24. Edwards RA, DiVall M, Stevens C*, Zilberman E*, Kirwin J, Watanabe M. Teaching pharmacy students to develop an evidence-based public health program directed toward a vulnerable population. Poster presented at the 2011 American Association of Colleges of Pharmacy Annual Meeting, San Antonio, TX.
- 25. Barr J, Bird S*, Copeland D, DiVall M, Gonyeau M, **Kirwin J**, Matthews S, McIntosh J, Pepe S*, Rickles N, Van Amburgh J, Wanat M*, Woolley A, Reynolds J. An Inventory of the Scholarship of Assessment, Learning and Teaching at Northeastern University. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting. July 2010 Seattle, WA.
- **26.** Barr J, Gonyeau M, **Kirwin J**, DiVall, Skirvin A, Copeland D. Authentic Learning in University-based Advanced Pharmacy Practice Educational Experiences. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting. July 2010 Seattle, WA.
- 27. Rickles N, Kirwin J, Brown T. Development and Integration of a Communication Skills Evaluation Form for Use Across the Pharmacy Curriculum. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting. July 2009 Boston, MA.
- 28. Gonyeau MJ, DiVall M, **Kirwin J**, Rickles N. Developing a systematic curricular review process. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting. July 2009 Boston, MA.
- **29. Kirwin JL,** Reid D. Using Peer Review in a Large Drug Information Course. Poster presented at the American Association of Colleges of Pharmacy Annual Meeting. July 2009 Boston, MA.
- 30. DiVall M, Barr J, Douglass M, Gonyeau M, **Kirwin J**, Matthews SJ, Pomfret T, Van Amburgh J, Mason E, Qualters D, Trujillo J. Development of a Peer Observation and Evaluation Tool (POET) for Large Classroom Teaching. Presented at the 2007 American Association of Colleges of Pharmacy Annual Meeting and Seminars, Lake Buena Vista, Florida.
- 31. **Kirwin JL**, Brown TB, Copeland D. Pharmacy Student Attitudes Toward Plagiarism Before and After an Interactive Workshop. Poster presented at the 2006 American Association of Colleges of Pharmacy Annual Meeting and Seminars, San Diego, California.
- 32. Van Amburgh JA, Devlin JW, **Kirwin J**, Qualters D. Capturing the action! Development of a valid and reliable active learning inventory tool. Presented at the 2006 American Association of Colleges of Pharmacy Annual Meeting and Seminars, San Diego, California.
- 33. Devlin JW, **Kirwin J**, Qualters D, Van Amburgh JA. "To do or not to do": faculty perceptions of active learning in large classes. Presented at the 2006 American Association of Colleges of Pharmacy Annual Meeting and Seminars, San Diego, California.
- 34. Gonyeau M, Trujillo J, DiVall M, Kirwin J, Van Amburgh JA. Evaluation of students' learning styles

- over time and their correlation to academic performance. Presented at the 2006 American Association of Colleges of Pharmacy Annual Meeting and Seminars, San Diego, California.
- 35. Trujillo J, Gonyeau M, DiVall M, **Kirwin JL**, Van Amburgh JA. Do learning styles of pharmacy students change over time and correlate to academic performance? Presented at the 2005 American Association of Colleges of Pharmacy Annual Meeting, Cincinnati, Ohio.
- 36. **Kirwin JL,** Van Amburgh JA, Napoli K*. Advanced Pharmacy Practice Experience + Service Learning: A Winning Combination [Update]. Poster presented at the Northeastern University Scholarship Reconsidered Reconsidered! Symposium and poster session. November 2004 Boston, MA.
- 37. Trujillo J, DiVall M, Gonyeau M, **Kirwin J**, Van Amburgh J. Students' perceptions of the value of determining their learning style. Poster presented at the 2004 American Association of Colleges of Pharmacy Annual Meeting, Salt Lake City, UT.
- 38. Czyz Y*, Pettaway P*, Fang E*, **Kirwin JL**, DiVall MV. Creating Opportunities for Professional Development, Public Service, and Networking in an Entry Level Pharm.D. Program: The Northeastern University Student Society of Health-System Pharmacy. Poster presented at the 2003 ASHP Midyear Clinical Meeting, New Orleans, LA.
- 39. **Kirwin JL**, Van Amburgh JA, Bencivenga GB*, Polk P*. Advanced Pharmacy Practice Experience + Service Learning: A Winning Combination. Poster presented at the 2003 American Association of Colleges of Pharmacy Annual Meeting, Minneapolis, MN.
- 40. Barr JT, Cersosimo R, Copeland D, **Kirwin J**, Matthews SJ. Initiation and Midyear Review of a Three-Part P4 Student Portfolio. Poster presented at the 2003 American Association of Colleges of Pharmacy Annual Meeting, Minneapolis, MN.
- 41. Schnipper JL, **Kirwin JL**, Cotugno MC, Wahlstrom S, Brown BA, Tarvin E, Zanfini C, McKean SC. The effect of pharmacist counseling and follow-up on patient outcomes following hospital discharge. Poster presented at: the 26th Society of General Internal Medicine Annual Meeting; April 2003: Vancouver, BC. Presented at the American College of Clinical Pharmacy Annual Meeting, November 2003, Atlanta, GA.
- 42. Schnipper JL, **Kirwin JL**, Cotugno MC, Wahlstrom S, Brown BA, Roy CL, et al. The effect of pharmacist counseling and follow-up on patient outcomes following hospital discharge. Paper presented at: Society of General Internal Medicine Annual Meeting; April, 2002: Atlanta, GA.
- 43. **Kirwin JL**. Expanding clinical pharmacy services in a hospital-based internal medicine practice: successes and challenges. Presented at the 36th American Society of Health-System Pharmacy Midyear Clinical Meeting. New Orleans, Louisiana. December 2001.
- 44. **Kirwin JL**, Desyatnik MD. Using internet-based technology to improve access to information about postgraduate training options for Doctor of Pharmacy Students. Presented at the 36th American Society of Health-System Pharmacy Midyear Clinical Meeting. New Orleans, Louisiana. December 2001.
- **45. Berard (Kirwin) JL**, Ouellette (Croteau) DA. Sumatriptan vs. dihydroergotamine: A cost-utility analysis of intranasal treatment for acute migraine. Presented at the 33rd American Society of Health-System Pharmacy Midyear Clinical Meeting. Las Vegas, Nevada. December 1999.

PRESENTATIONS — PEER REVIEWED

National Forums

Bradley CL, Frenzel JE, **Kirwin J**, Sando KR, Skoy ET, Urteaga EM. *Assessment of SOAP Notes in Colleges and Schools of Pharmacy*. Presented at the 2017 American Association of Colleges of Pharmacy Annual Meeting, Nashville, TN.

Kirwin J, DiVall M. *Systematic Curriculum Review: Establishing a Process That's Worth the Time.* Presented at the Drexel University 2016 Annual Assessment Conference, Philadelphia, PA.

Kirwin J, DiVall M, Miller D. *Evaluation of a Systematic Curriculum Review Process and Impact on the Pharmacy Curriculum.* Presented at the 2016 American Association of Colleges of Pharmacy Annual Meeting, Anaheim, CA.

Kirwin J, DiVall M. *Using Electronic Rubrics to Produce Actionable Assessment Data in a Skills-based Course*. Presented at the Indiana University - Purdue University Indianapolis 2015 Assessment Institute. Indianapolis, IN.

Kirwin J, May DB, Persky A, Skomo M, Marasco C, Kennedy K. *Factors that Affect Student Classroom Attendance: Perceptions of Students and Faculty in Colleges of Pharmacy*. Presented at the 2012 American Association of Colleges of Pharmacy Annual Meeting, Kissimmee, FL.

Kirwin JL and Brown T. *Using an EMR in a Simulated Hospital Laboratory Module.* Presented as part of the Laboratory Instructors SIG session: Bridging the Gap Between the Classroom and the Clinical Environment at the 2012 American Association of Colleges of Pharmacy Annual Meeting. Kissimmee, FL.

Edwards RA, DiVall M, Stevens C, Zilberman E, **Kirwin J**, Watanabe M. *Teaching pharmacy students to develop an evidence-based public health program directed toward a vulnerable population*. Oral presentation at the 2011 American Public Health Association Annual Meeting, Washington, DC.

Van Amburgh JA, Devlin JW, **Kirwin JL**, Qualters D. *The Active Learning Inventory: A Tool to Quantify Active Learning in Your Classroom.* Presented as a special session at the American Association of Colleges of Pharmacy Annual Meeting and Seminars, Lake Buena Vista, FL.

Local and Regional Forums

Greenwood K, DiVall M, Hickey M, **Kirwin J**. Making Connections Across Town and Virtually: Addressing Students' Competence in Interprofessional Team Care. Panel presentation at the Conference for Advancing Evidence-Based Learning (Virtual) Northeastern University, Boston MA. Accepted for presentation in 2020 but conference was cancelled due to COVID-19 pandemic; presented in 2021.

Kirwin J, DiVall M, Greenwood, et al. *Interprofessional Curbside Consults (ICC) to Improve Student Achievement of Learning Outcomes.* Presented at the second annual Northeastern University Center for Advancing Teaching and Learning Through Research (CATLR) Conference for Advancing Evidence Based Teaching, Boston, MA; May 2016.

DiVall M, Gonyeau M, **Kirwin J**, Van Amburgh J, Zgarrick D. *Using ExamSoft e-testing and assessment software to improve teaching and learning in the Doctor of Pharmacy (PharmD) program.* Presented at the Northeastern University Center for Advancing Teaching and Learning Through Research (CATLR) Conference for Advancing Evidence Based Teaching, Boston, MA May, 2015

Presentations — Invited

National

Kirwin J. Handoff to a Good Start: Defining Safe and Effective Patient Handoffs Across Practice Settings. Speaker. American College of Clinical Pharmacy Global Conference, Seattle, WA. October 2018.

Kirwin J. *Models for Physician-Pharmacist Research Panel*. Panel Member. University Health-System Consortium Annual Meeting, San Diego, CA. May 2003.

Local and Regional

Brown T, **Kirwin J**, Matta T. You Can't Always Get What You Want: Using Simulation when Resources are Limited. Presented as part of the BCHS Simulation Faculty Speaker Series March 28, 2018

Greenwood K, O'Neil-Pirozzi T, **Kirwin J**. *The Practicality of Using Simulation as an Educational Tool for Interprofessional Practice in Your Courses*. Presented as part of the Simulation Council Educational Series February and March, 2016

Kirwin J. How Can We Call Faculty to Action to Incorporate Evidence-Based Teaching Innovation for Curricular Improvement? Presented as part of the Northeastern University Center for Advancing Teaching and Learning Through Research (CATLR) Research Now series. March 2015

Kirwin J. Using TurnItIn (via Blackboard) – Overview, Workflow Tips, and a Discussion on Interpreting Originality Reports. Faculty Development Program. Presented at Northeastern University School of Pharmacy, May 14, 2014

Kirwin J. *Pharmacology and the Rehab Patient*. A four-part Webinar series through the Home Care Association of New Hampshire. January through April 2014

Kirwin J. Update on Commonly Used Medications that Impact Rehabilitation Therapy. Northeast Rehabilitation Hospital, Salem NH. January- February 2011

Kirwin J. *Using Turnitin.Com Anti-plagiarism Software in Your Course*. Northeastern University Center for Effective University Teaching Workshop for Faculty and Teaching Assistants. November 2006.

Kirwin J. Restless Legs Syndrome. Recorded for web-based home study. Offered by the Bouvé College of Health Sciences, School of Pharmacy Continuing Education. Accredited by the Accreditation Council for Pharmacy Education October 2007-October 2010.

Kirwin J. *Review of Commonly Used Medications that Impact Rehabilitation Therapy.* Northeast Rehab Hospital Salem, NH. June 2007.

Kirwin J. Helping Patients with Medication Costs and Adherence. Presented at the Harvard Medical School CME Office Practice of Primary Care CME Program, Boston, MA. March 2006 & March 2007. Presented to Medicine Housestaff at Brigham and Women's Hospital, Boston MA July & Dec 2006.

Kirwin J. *Updates in Asthma and COPD.* Presented at the Bouvé College of Health Sciences, School of Pharmacy Continuing Education Program. July 2005, December 2005.

Kirwin J. Overactive Bladder Syndrome: Recognizing Symptoms and Recommending Treatment. Presented at the Bouvé College of Health Sciences, School of Pharmacy Continuing Education Program. November 2004, February 2005, June 2005, September 2005, November 10 and 17, 2005. Taped for web-based home study. Accredited by the Accreditation Council for Pharmacy Education November 2005- November 2008.

Kirwin J. How to Get Your BIMA Patients What They Need. Lecture to Brigham and Women's Hospital, Boston MA Medicine Housestaff, October 2003, December 2003, December 2004, July 2005.

Kirwin J. *Nicotine Dependence in Women*. Presented at the Bouvé College of Health Sciences, School of Pharmacy Continuing Education Program. The Sheraton Hotel. Needham, MA. June 29, 2004.

Kirwin J. *Electronic Drug Information Resources on the Partners Handbook*. In-Service for BIMA Nurses. May 2003.

Kirwin J. *Obesity: What do Nursing, Pharmacy, Physical Therapy and Counseling Psychology Have to do with it?* Panel Member. Northeastern University. Boston, MA April 2002.

Kirwin J. *Taking Medications Safely*. Presented to Patients at Brigham and Women's Hospital. Boston, MA. April 2002, October 2002, May 2003.

Kirwin J. *Medication Assistance*. Presented to Faculty Physicians. Brigham Internal Medicine Associates Clinic. Brigham and Women's Hospital. Boston, MA. April 2001.

Kirwin J. *Resources for Medication Assistance*. Presented at the Bouvé College of Health Sciences School of Pharmacy Continuing Education Weekend Seminar. The Sheraton Hotel. Needham, MA. November 2000.

Kirwin J. *The 10 Most Commonly Purchased Herbal Medicines*. Presented at the Bouvé College of Health Sciences School of Pharmacy Continuing Education Weekend Seminar. The Sheraton Hotel. Needham, MA. November 2000.

Kirwin J. *Medications and Substance Abuse*. A presentation to resident assistants of elderly assisted living facilities about the impact of medications and substance abuse on older adults. Beverly, MA. June 2000.

Kirwin J. *The Use of Immunosuppressant Agents in Pediatric Medicine*. Nursing In-service. New England Medical Center Pediatric Medicine Nursing Staff. Boston, MA. March 2000.

Kirwin J. A Review of Common Herbal Medicines. A continuing education program for pharmacists. Accredited by the Massachusetts Board of Pharmacy. New England Medical Center, Boston, MA. November 1999.

COMPETITIVE GRANTS

"Development of an Outcome Assessment to Measure Student's Perceptions of Simulation Education Experiences"

Co-investigator: Kristin Greenwood

Funding Source: Academy of Acute Care Physical Therapy Biostatistical Consulting Program

Amount Funded: \$2000

"Comparison of Student Perceptions and Professor Expectations in Healthcare Simulations"- faculty co-mentor

Student participants: Emily Bitton, Samantha Hubley, Shakira Kareem, Shannon Moloughney, James

Murphy, Kelly Vassallo

Funding Source: Undergraduate Research / Creative Endeavor Awards

Amount funded: \$500

Faculty Development Grant

Funding Source: Bouvé Simulation Leadership Council

Amount: \$5000

Used to attend the Center for Medical Simulation - Comprehensive Instructors Workshop

Faculty Development Grant

Funding Source: Full Time Faculty Development fund, Northeastern University Provost's Office

Amount: \$2000

Used to attend the Center for Medical Simulation - Comprehensive Instructors Workshop

"A Model Experiential Education Program for Bouvé Freshmen to Begin Developing Interprofessional Healthcare Competencies"

Principle Investigator: Therese O'Neil-Pirozzi

Collaborators: J. Musler, M. Carney, L. Day, P. Hamel, J. Kirwin

Funding Source: Northeastern University Provost's Office grants for Advancing Undergraduate Teaching

and Learning

Submitted in 2016, not funded.

"Interprofessional Curbside Consults to Improve Student Achievement of Learning Outcomes"

Principle Investigator: J Kirwin

Collaborators: M. DiVall, K. Greenwood, N. Rickles, T. Brown, T. Matta, J. Rico, R. Nalliah

Funding Source: Northeastern University Provost's Office grants for Advancing Undergraduate Teaching

and Learning

Amount: \$5000, Period: 7/01/2015-6/31/2016

"Interprofessional Curbside Consults"

Principle Investigator: J Kirwin

Collaborators: M DiVall, K. Greenwood, N. Rickles, T. Brown, B. Douglas, T. Matta

Funding Source: Integration of Oral Health and Primary Care Curricular Innovation Awards

Submitted in 2014, not funded

"Using ExamSoft assessment software to improve teaching and learning in the Doctor of Pharmacy program"

Principle Investigator: M. DiVall

Collaborators: M. Gonyeau, J. Kirwin, J. Van Amburgh, D. Zgarrick

Funding Source: Northeastern University Provost's Office grants for Advancing Undergraduate Teaching

and Learning Amount: \$10,000

Period: 7/01/2014-6/31/2015

"Developing an Interdisciplinary Geriatric Education Resource Center"

Principle Investigator: A. Nannini

Collaborators: N. Rickles, E. Howard, R. Harvey, J. Kirwin, S. Lowe, T. Oneil-Pirozzi

Funding Source: Northeastern University Provost's Office Instructional Development Grant

Amount: \$6,700

Period: 7/01/2007-6/30/2008

"Development of a Peer Evaluation System in the Department of Pharmacy Practice"

Principle Investigator: M. Gonyeau

Collaborators: M. DiVall M, J. Trujillo, J. Kirwin, J. Barr, M. Douglass, S.J. Matthews, T. Pomfret, J. Van

Amburgh, E. Mason, D. Qualters

Funding Source: Northeastern University Provost's Office Instructional Development Grant

Amount: \$3,750

Period: 7/01/2007-6/30/2008

"Development of a Valid and Reliable Tool to Quantify Active Learning in Large Turn-Taught Courses"

Principle Investigator: J. Devlin

Collaborators: J. Van Amburgh, J. Kirwin, D. Qualters

Funding Source: Northeastern University Provost's Office Instructional Development Grant

Amount: \$6,700

Period: 7/01/2005-6/31/2006

"Maximizing the Classroom Learning Environment Using An Interactive Response System in the Doctor of Pharmacy Curriculum"

Principle Investigator: J. Trujillo

Collaborators: M. Gonyeau, J. Kirwin, G. Schumacher

Funding Source: Northeastern University Provost's Office Instructional Development Grant

Amount: \$6,800

Period: 7/01/2005-6/31/2006

Seed Grant to Develop a Student Chapter Affiliated with American Society of Health System Pharmacists

Co- Principle Investigators: DiVall M, Kirwin JL.

Funding Source: American Society of Health System Pharmacists

Amount: \$500 Period: 2002

PROFESSIONAL DEVELOPMENT

1999- present	Licensed Pharmacist
-	

Massachusetts License #24555

2001- present **Board Certificated Pharmacotherapy Specialist #301003961**

Board of Pharmaceutical Specialties

2008-present Basic Life Support for Healthcare Providers (CPR and AED)

1999-2006 American Heart Association

2015 Point of Care Testing Certificate and Trainer Credentialing

National Association of Chain Drug Stores

2015 Pharmacy Based Immunizations Certificate and Trainer Credentialing

American Pharmacists Association

2012 Self-Care Institute

American Pharmacists Association

2010 Adult Immunization Training Program

Northeastern University

2007 Tobacco Treatment Specialist Certification Training

University of Massachusetts Medical School Center for Tobacco Prevention and Control

AWARDS AND RECOGNITIONS

2016 American Association of Colleges of Pharmacy Award for Excellence in Assessment

2010 Nominee for the 2010 Journal of Managed Care Pharmacy Award for Excellence for Kirwin JL, Cunningham RJ, Sequist TD. Pharmacist Recommendations to Improve the Quality of Diabetes Care: A Randomized Controlled Trial. Journal of Managed Care Pharmacy. 2010;16(2):104-13.

TEACHING AND ADVISING

Northeastern University

Course Coordinator

* Indicates Developed New Course

2017-present American Pharmacists Association Pharmacy Based Immunizations, Program

coordinator and instructor

2019-present Boston University -Northeastern University Interprofessional Workshop

This half-day program brings together students from one cohort each from: Northeastern's PharmD, Physical Therapy, Physician Assistant, BS Nursing and Nurse Anesthesia programs and Boston University's Medicine and Physician Assistant programs for a series of team-based active learning exercised focused on developing interprofessional team skills.

2017 **PHSC 5360 Anti-Infectives**

139 students

2005 – 2014 PHMD 6467 Advanced Pharmacy Practice Experience in Education*

2014 - 2 students 2011 - 2 students 2008 - 0 students 2013 - 1 student 2010 - 6 students 2007 - 5 students 2012 - 3 students 2009 - 3 students 2006- 2 students

2000 – 2007 PMDU 942/5 Advanced Pharmacy Practice Experience / Ambulatory Care*

2003 - 21 students 2007 – 6 students 2006 - 7 students 2002 - 18 students 2005 - 7 students 2001 - 15 students 2004 - 9 students 2000 - 1 student

2015-2019 PHMD 4643 Comprehensive Disease Management Skills Lab 4* (Includes the Interprofessional Curbside Consult Activity as a major aspect of the course)

Spring Semester, Course Coordinator for all lab sections, Lab Coordinator for sections indicated:

2018-133 students, 4 sections

2017- 147 students, 4 sections

2016 - 112 students; 4 sections 2015 - 130 students; 4 sections

2014-2017 PHMD 4633 Comprehensive Disease Management Skills Lab 3*

Fall Semester, Course Coordinator where indicated, Lab Coordinator for sections indicated:

2017- taught 3 sections 2016- 140 students, 4 sections 2015 - 123 students; 4 sections 2014 - 128 students; 4 sections

2014-2016, PHMD 4623 Comprehensive Disease Management Skills Lab 2*

2020-present Summer Semester, Course Coordinator for all lab sections, Lab Coordinator for sections indicated:

2022 – 90 students; 4 sections

2020- 131 students; 2 sections 2021- 90 students; 4 sections

2016 - 141 students; 4 sections 2014 – 127 students; 2 section

2015 - 123 students; 4 sections

2008 – 2014 PHMD 6376 Pharmaceutical Care Lab 2 (0.5 SH) – Spring Semester

Course Coordinator for all lab sections, Lab Coordinator for sections indicated:

2014- 138 students; 4 sections 2011 - 123 students; 3 sections

2013- 150 students; 6 sections 2009 - 131 students; 4 sections

2012 – 153 students; 6 sections 2008 – 135 students; 4 sections

2008-2010 PMDU 575 Pharmaceutical Care 2 Lecture (1.5 SH)- Spring Semester.

100-135 students enrolled

2007 – 2013 PHMD 6366 Pharmaceutical Care Lab 1 (0.5 SH) Fall Semester

Course Coordinator for all lab sections, lab coordinator in two lab sections

2013 - 145 students; 6 sections 2009 - 97 students; 3 sections

2012 - 153 students; 4 sections 2008 - 131 students; 4 sections

2011 - 135 students; 6 sections 2007 - 140 students; 4 sections

2010 - 123 students; 4 sections

2007- 2009 PMDU 565 Pharmaceutical Care I Lecture (1.5 SH) Fall Semester. 97-140 students enrolled.

2010 PHMD 6255 Comprehensive Disease Management 5 (4SH), Fall Semester 123 Students

2004-2007 PMDU 560 Drug Information and Evaluation* (3 SH), Summer Semester

2007 - 130 students enrolled 2005 - 95 students enrolled

2006 - 114 students enrolled 2004 - 107 students enrolled

2004-2005 PMDU 477 Drug Information Honors Adjunct* (1 SH), Summer Semester

2005 - 2 students enrolled 2004 - 5 students enrolled

2001-2003 BHSU 100 Transitions, Decisions, the University & You (1 SH)

Fall Semester, 19-25 students annually

Instructor

2020-present PHMD 5560 Applied Drug Information

Fall semester ~100 students annually.

2 classes taught:

- Systematic Approach to Answering a DI Question; Review of Literature Types;
 Search strategies & Medline
- Writing in the Profession: Considerations for Various Audiences; Providing Drug Information Reponses; Integrity in Medical Writing/ Ethics in Drug Information

2001- 2017 HLTH 5135 Developing an Interdisciplinary Approach to Health Management for Older Adults (4 SH) Spring Semester

Enrollment 16 - 30 students annually

(offered in conjunction with Harvard Medical School)

Module III Faculty, 4 class periods taught

2014- 2015 PHMD 4587 Comprehensive Disease Management 1

Spring Semester, Enrollment 123 - 131 students annually

- Respiratory Assessment (1 hr)
- Tobacco Cessation (2 hr)
- Cough, Cold, Allergy (4 hr)
- Advanced Active Learning (2 hr)

2010-2013 PHMD 4587 Comprehensive Disease Management 2

Summer Semester, Enrollment 135 - 154 students annually

- Respiratory Assessment (1 hr)
- Tobacco Cessation (2 hr)
- Cough, Cold, Allergy (4 hr)

2014-2016 PHMD 4631 Comprehensive Disease Management 3

Fall Semester, Enrollment 123 - 135 students annually

- Medication Therapy Management / Intro to CDM Skills Lab 3 (2 hr)
- Therapeutic Integration (2 hr)

2015-present PHMD 4641 Comprehensive Disease Management 4

Spring Semester, Enrollment 130 students annually

• Pharmacists' Role in Transitions of Care / Intro to CDM Skills Lab 4 (2hr)

2004- present Evidence Based Medicine (2 SH)

Enrollment 93 - 154 students annually

Avoiding Plagiarism & Scientific Writing

2001-2003 PHP 1300 Pharmacotherapy for Physical Therapy Practitioners

Enrollment about 40 students annually

- Introduction to Pharmacology (1.5 hr)
- Geriatrics (1 hr)
- Endocrine (1 hr)

2001-2007 PMDU 539- 544 Pharmacotherapeutics Series

Enrollment 80-130 annually

- Respiratory (6 hrs)
- Geriatrics (1 hr)

2003-2009 PMDU 440 Self Care Therapeutics

Enrollment 85-135 annually

- Cough Cold & Allergy (3 hr)
- Smoking Cessation (2 hr)

2003-2007 PMDU 401 Pathophysiology

Enrollment 85-135 students annually

Respiratory Disease

2001-2005 PMDU 102 Introduction to the Profession of Pharmacy

Enrollment 100-130 annually

• Medication Errors (1Hr)

2003-2007 NU Board Review Program

Respiratory Medications

Seminar Facilitator

2010 - 2011	PHMD 6233 Comprehensive Disease Management 3 Seminar	(1 SH)
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Enrollment 13- 14 annually

2001 –2009 Pharmacotherapeutics Seminar (1 SH)

Enrollment 13 - 14 students annually

Capstone and Independent Study

PHMD 5600 Pharmacy Capstone (4 SH)

2016-2017 Interprofessional Education Through Medical Simulation, 4 students

2016-2017 Pharmacy Capstone – Assessment of Processes and Impact, 2 students

2015-2016 Interprofessional Education Through Medical Simulation, 2 students

PMDU 923/4 Directed Study (4 SH)

2005, 2007 2 students each year

Boston University

2006 - 2016 Boston University Occupational Therapy Program "Adverse Effects of Commonly Used Medications." Guest Lecturer (2 hours)

Simmons College

2006 – 2015 Simmons College Physical Therapy Program. Special Topics Course. "Orthopedic Medications: Medications Affecting Skeletal Muscle." Guest Lecturer (2 hours)

Simmons College Physical Therapy Program. Complex Conditions Course.

2007-2015 "Medications Used in Patients with Complex Conditions." Guest Lecturer (3 hours)

Massachusetts College of Pharmacy and Allied Health Sciences

Spring Preceptor, Introductory Pharmacy Experience Module I 2000 Component of Dosage Forms II Laboratory (30 Hrs)

ADVISING	
2003- present	Northeastern University School of Pharmacy Portfolio Advisor 3-4 students under advisement per each of 5 classes of students, approximately 20 students annually
2003-2007	Co-Advisor to Northeastern University Student Society of Health System Pharmacy (NUSHP)
2004- 2013	School of Pharmacy Honors Program Advisor

MEDIA

Interviewed by Thea Singer for "Unraveling the mystery of the flu vaccine." Published as part of the news@Northeastern series. October 2015. Available at:

http://www.northeastern.edu/news/2015/10/unraveling-the-mystery-of-the-flu-vaccine/

Interviewed by Alison Burzek from WBUR for "Sorry, Intriguing Studies Are No Excuse To Skip The Flu Shot This Year." November 2015.

SERVICE TO NORTHEASTERN UNIVERSITY

Department of Pharmacy and Health Systems Sciences

2021, 2022	Department Promotion Committee
2015 – 2018	Practice Ready Pharmacists – Strategic Planning T

Chair, Evaluation Sub-Committee

nacists – Strategic Planning Task Force member

2013 – 2017 Department Vice-Chair

2012 – present Faculty Mentor

Faculty Search Committee:

	radaity scarer committee.
2016-2017	member
2015-2016	member
2014-2015	Chair, 3 lines
2012-2013	Chair, 3 lines
2008-2009	member
2003-2005	member
2000-2001	member
2009- present	Trained Evaluator for Peer Observation and Evaluation of Teaching (POET)
	process
2012, 2018	Promotion Review Committee
2009	Promotion Review Committee
2008- present	CDM coordinators group, Chair 2008-2009
2010- 2014	Curriculum Review Task Force, <u>Chair</u>
2002, 2005	Merit Review Committee
2002- 2005	Portfolio Development Committee
2000	Ambulatory Care Assessment and Evaluation Committee,

School of Pharmacy

2017-2019	Student Professional Development Committee, Chair
2017- 2019	School of Pharmacy Executive Committee
2003-2019	School of Pharmacy Curriculum Committee, Chair or Co-Chair 2008-2017,
	<u>Secretary 2003-2008</u>
2003-2019	School of Pharmacy Assessment Committee
2013-2015	ACPE Re-accreditation Self-Study. Chair, Curriculum Standards Team
2009	ACPE Self Study – Curriculum Subgroup
2007- 2008	Steering Committee
2005- 2007	Peer Evaluation Task Force
2005	Academic Honesty Task Force
2000- 2003	Scholarship and Awards Committee

Other Departments in Bouvé College of Health Sciences

2017 Department of Physical Therapy, Movement and Rehabilitation Sciences-Clinical Faculty Promotion Committee,

Bouvé College of Health Sciences

2019-present	Bouve College of Health Science Leadership Team
2019-present	Bouve College of Health Sciences Graduate Curriculum Committee
2017- present	Bouvé College Undergraduate Curriculum Committee, Chair 2018-2019
2011-present	Bouvé College of Health Sciences, Simulation Leadership Council
2015-2020	Bouvé College of Health Sciences, Simulation Leadership Council – Faculty Development Grant Review Committee
2012-2014, 2019-	Bouvé College of Health Sciences, Interdisciplinary Practice, Education and
present	Research Committee
2014	Bouvé College of Health Sciences, Kenerson Award Committee
2005- 2009	Bouvé Interdisciplinary Geriatrics Education Center, Steering Committee
	Member
theastern University	
2010 procent	Craduata Council

North

2019-present	Graduate Council
2019-present	University Undergraduate Curriculum Committee
2019-present	Associate Deans for Undergraduate Education
2019-present	Graduate Associate Deans and Network
2018	Variable Credit Task Force
2017	Re-imagine Honors Task Force
2020	NU Graduate Education Working Group, Co-chair, Doctoral Education group

SERVICE TO THE PROFESSION

American Association of Colleges of Pharmacy

2018-2019	New Investigator Award, Reviewer
2015-2016	Pharmacy Practice Section, Nominating Committee
2014-2016	Laboratory Instructors Special Interest Group
	Co-Chair, White Paper/Best Practices Committee

2014-2017 Laboratory Instructors Special Interest Group

Assessment Committee

2013 Council of Faculties Nominations Committee

2006-7, 2011-12 Faculty Delegate

American College of Clinical Pharmacy

2010- 2011 Public and Professional Relations Committee; <u>Chair</u>
 2009- 2010 Public and Professional Relations Committee; Vice- Chair

American Society of Health System Pharmacy

2001- 2010 Local Clinical Skills Competition Coordinator

Massachusetts Society of Health System Pharmacy

2002- 2007 School Liaison

Peer Reviewer

Journal of the American Medical Association American Journal of Pharmaceutical Education Pharmacist's Letter and Prescriber's Letter Jones & Bartlett Learning Journal of General Internal Medicine INNOVATIONS in pharmacy

Journal of Pharmacy Practice and Research Currents in Pharmacy Teaching and Learning Formulary Applied Clinical Informatics Pharmacy Practice