Curriculum Vitae Michael R. Gionfriddo, Pharm.D, Ph.D

PERSONAL INFORMATION

Work Address:	Center for Pharmacy Innovation and Outcomes Geisinger Precision Health Center 190 Welles Street, Suite 128 Forty Fort, PA 18704 Phone: (570) 714-6652			
Email: mgionfriddo@geisinger.edu				
PRESENT POSITION				
Investigator I – Center for Pharmacy Innovation and Outcomes, Geisinger Precision Health Center, Forty Fort, Pennsylvania. Supervisor: Eric Wright, Pharm.D, MPH		2016-Present		
EDUCATION				
Nesbitt School of Pharmacy, Wilkes University, Wilkes-Barre, Pennsylvania, Pharm.D		2006-2011		
Mayo Graduate School, Mayo Clinic, Ph.D		2011-2016		
LICENSURE				
Pennsylvania (Pharmacist License)		2011-Present		
HONORS/AWARDS				
Achieving Independence Competition Winner Pennsylvania Pharmacists Association		2010		
Wilkes University Excellence in Pharmaceutical Research Award Pharmaceutical Sciences Department, Wilkes University, Wilkes-Barre, Pennsylvania		2011		
Mayo Clinic Quality Academy Silver Certification Mayo Clinic Rochester, Minnesota		2015		

PREVIOUS PROFESSIONAL POSITIONS AND MAJOR APPOINTMENTS

Graduate Student – Knowledge and Evaluation Research (KER) Unit, Mayo Clinic, Rochester, Minnesota. Primary Thesis Mentor: Victor Montori, MD, MSc	06/2011- 06/2016
Research Assistant – Department of Pharmaceutical Sciences Wilkes University, Wilkes-Barre, Pennsylvania Research Mentor: Adam L. VanWert Pharm.D, Ph.D	01/2009- 05/2010
Pharmacy Intern – Wilkes-Barre General Hospital, Wilkes-Barre, Pennsylvania	05/2007- 10/2009

PROFESSIONAL & COMMUNITY MEMBERSHIPS, SOCIETIES AND SERVICES

Membership in Professional Organizations:

National: Academy Health, American Pharmacists Association, American Association for the Advancement of Science, American Association of Pharmaceutical Scientists, American Society of Pharmacology and Experimental Therapeutics, American Society of Health-Systems Pharmacists, Lambda Kappa Sigma

JOURNAL RESPONSIBILITIES

Reviewer

EDUCATIONAL ACTIVITIES

Teaching

Pharmacy students	
Anatomy and Physiology Course for Third Year (P1) Pharmacy Students	08/2008-
Teaching Assistant. Helped run the laboratory portion of the course	05/2010
Wilkes University	
Wilkes-Barre, Pennsylvania	

Mentoring

Jones, Morgan L. Pharm.D (PGY1 Pharmacy resident)8/2014-7/2015**Description:** Served as the research mentor on Dr. Jones' PGY1pharmacy reisdency project.

INSTITUTIONAL COMMITTEE MEMBERSHIPS

Mayo Clinic Mayo Graduate School Education Committee Student Representative Mayo Graduate School Library Committee Student Representative	2012-2013 2013-2016
PRESENTATIONS	
International	
Optimizing Medication Use in Chronic Disease: A Shared Decision Making Approach 19 th Annual Mayo Clinic-Karolinska Institutet Conference Stockholm, Sweden	09/2013
National	
Helping Patients Make Wiser Choices: The Mayo Experience 2014 Association of Medical Illustrators Annual Conference Rochester, Minnesota	07/2014
Transforming Pharmaceutical Care: EBM, SDM, and MDM 2014 International Social Pharmacy Workshop Boston, Massachusets	08/2014
Introduction to GRADE Global Vascular Guidelines Steering Committee Meeting New York, New York	11/2014
Regional	
Prescribing Practices for Antihypertensive Medications in a Cohort of Patients with Diabetes: 1995-2010 16 th Annual Minnesota Health Services Research Conference St. Paul, Minnesota	03/2012
Deprescribing in the Elderly MPhA Annual Learning Networking Event St Paul, Minnesota	09/2015

POSTERS

National

- Gionfriddo MR, Olenak JL. The Future of Healthcare: United We Stand...Divided We Fall.... Pennsylvania Pharmacists Association Mid-Year Meeting in Grantville, Pennsylvania February 2010
- Gionfriddo MR, VanWert AL. Novel Interactions of β-Lactam Antibiotics with Renal Organic Anion Transporter 3 (Oat3). American Academy of Colleges of Pharmacy Annual Meeting in Seattle, Washington July 2010.
- Gionfriddo MR, LeBlanc A, Johnson A, Ylvasker H, Youel K, Ruud K, Shah ND, Montori VM. Wiser Choices in Making Decisions about Anti-Hypertensive Medication: Challenges in the Development of a Decision Aid for Use in Hypertension. 2nd Annual Shared Decision Making Symposium in St. Louis, Missouri. March 2012
- 4. Trombetta DP, **Gionfriddo MR**. An Interprofessional Education Model Using Medical Residents and Pharmacy Students: The Effect on Diabetes Education. American Academy of Colleges of Pharmacy Annual Meeting in Seattle, Washington. July 2012
- Gionfriddo MR, Rank MA, LeBlanc A, Montori VM. Reducing Medication Use: A Shared Decision Making Approach. 5th Annual National Clinical and Translational Science Predoctoral Programs Meeting. May 2013
- Rank MA, Johnson R, Branda M, Herrin J, van Houten H, Gionfriddo MR, Shah ND. Predicting Outcomes after Stepping Down Asthma Controller Medications. 20th Annual Mayo Clinic-Karolinska Institutet Conference. Rochester, Minnesota. September 2014

BIBLIOGRAPHY

Peer-reviewed Articles

- VanWert AL, Gionfriddo MR, Sweet DH. Organic anion transporters: discovery, pharmacology, regulation and roles in pathophysiology. Biopharm Drug Dispos. 2010 Jan;31(1):1-71. PMID: 19953504.
- Wolman AT, Gionfriddo MR, Heindel GA, Mukhija P, Witkowski S, Bommareddy A, et al. Organic anion transporter 3 interacts selectively with lipophilic beta-lactam antibiotics. Drug Metab Dispos. 2013 Apr;41(4):791-800. PMID: 23344796.
- Gionfriddo MR, Leppin AL, Brito JP, Leblanc A, Shah ND, Montori VM. Shared decisionmaking and comparative effectiveness research for patients with chronic conditions: an urgent synergy for better health. J Comp Eff Res. 2013 Nov;2(6):595-603. PMID: 24236798
- 4. **Gionfriddo MR,** Greenberg AJ, Wahegaonkar AL, Lee KH. Pathways of translation: deep brain stimulation. Clin Transl Sci. 2013 Dec;6(6):497-501. PMID: 24330698
- Gionfriddo MR, McCoy RG, Lipska KJ. The 2013 American Association of Clinical Endocrinologists' diabetes mellitus management recommendations: improvements needed. JAMA Intern Med. 2014 Feb 1;174(2):179-80. PMID: 24322834
- 6. Leppin AL, **Gionfriddo MR**, Sood A, Montori VM, Erwin PJ, Zeballos-Palacios C, Bora PR, Dulohery MM, Brito JP, Boehmer KR, Tilburt JC. The efficacy of resilience training programs: a systematic review protocol. Syst Rev. 2014 Mar;3:20. PMID: 24602236
- Foote EF, Roland BE, Gionfriddo MR, Holt-Macey S. Differences between residencyand non-residency-trained preceptors on student perceptions and activities of community practice advanced pharmacy practice experiences (APPEs). Currents in Pharmacy Teaching and Learning. 2014;6(2):259-64.
- 8. Brito JP, **Gionfriddo MR**, Al Nofal A, Boehmer KR, Leppin AL, Reading C, et al. The accuracy of thyroid nodule ultrasound to predict thyroid cancer: systematic review and meta-analysis. J Clin Endocrinol Metab. 2014 Apr;99(4):1253-63. PMID: 24276450
- Gionfriddo MR, Morey-Vargas OL, Brito JP, Leppin AL, Murad MH, Montori VM. Systematic reviews to ascertain the safety of diabetes medications. Curr Diab Rep. 2014 Apr;14(4):478. PMID: 24563375
- Gionfriddo MR, Leppin AL, Brito JP, Leblanc A, Boehmer KR, Morris MA, Erwin PJ, Prokop LJ, Zeballos-Palacios CL, Malaga G, Miranda JJ, McLeod HM, Rodríguez-Gutiérrez R, Huang R, Morey-Vargas OL, Murad MH, Montori VM. A systematic review of shared decision making interventions in chronic conditions: a review protocol. Syst Rev. 2014 Apr;3:38. PMID: 24731616
- Leppin AL, Gionfriddo MR, Kessler M, Brito JP, Mair FS, Gallacher K, Wang Z, Erwin PJ, Sylvester T, Boehmer K, Ting HH, Murad MH, Shippee ND, Montori VM. Preventing 30-day hospital readmissions: a systematic review and meta-analysis of randomized trials. JAMA Intern Med. 2014 Jul;174(7):1095-107. PMID: 24820131
- 12. Leppin AL, Bora PR, Tilburt JC, **Gionfriddo MR**, Zeballos-Palacios C, Dulohery MM, et al. The efficacy of resiliency training programs: a systematic review and meta-analysis of randomized trials. PLoS One. 2014 Oct;9(10):e111420. PMID: 25347713

- Leppin AL, Montori VM, Gionfriddo MR. Minimally Disruptive Medicine: A Pragmatically Comprehensive Model for Delivering Care to Patients with Multiple Chronic Conditions. Healthcare. 2015;3(1):50-63.
- Brito JP, Asi N, Bancos I, Gionfriddo MR, Zeballos-Palacios CL, Leppin AL, Undavalli C, Wang Z, Domecq JP, Prustsky G, Elraiyah TA, Prokop LJ, Montori VM, Murad MH. Testing for germline mutations in sporadic pheochromocytoma/paraganglioma: a systematic review. Clin Endocrinol (Oxf). 2015 Mar;82(3):338-45. PMID: 24954084
- Tian M, Yuan YC, Li JY, Gionfriddo MR, Huang RC. Tumor necrosis factor-α and its role as a mediator in myocardial infarction: A brief review. Chronic Diseases and Translational Medicine. 2015 Mar;1(1):18-26
- Rank MA, Gionfriddo MR, Pongdee T, Volcheck GW, Li JT, Hagan CR, Erwin PJ, Hagan JB. Stepping down from inhaled corticosteroids with leukotriene inhibitors in asthma: A systematic review and meta-analysis. Allergy Asthma Proc. 2015 May;36(3):200-5. PMID: 25976437
- Elraiyah T, Gionfriddo MR, Murad MH. Acting on black box warnings requires a GRADE evidence table and an implementation guide: the case of teriparatide. J Clin Epidemiol. 2015 Jun;68(6):698-702. PMID: 25766055
- Tsulukidze M, Grande SW, Gionfriddo MR. Assessing Option Grid practicability and feasibility for facilitating shared decision making: An exploratory study. Patient Educ Couns. 2015 Jul;98(7):871-7. PMID: 25841546
- Gionfriddo MR, Hagan JB, Hagan CR, Volcheck GW, Castaneda-Guarderas A, Rank MA. Stepping Down Inhaled Corticosteroids from Scheduled to as-needed in Stable Asthma: Systematic Review and Meta-analysis. Allergy Asthma Proc. 2015 Jul;36(4):262-7. PMID: 26108083
- Huang R, Gionfriddo MR, Zhang L, Leppin AL, Ting HH, Montori VM. Shared decisionmaking in the People's Republic of China: current status and future directions. Patient Prefer Adherence. 2015 Aug 6;9:1129-41. PMID: 26273201
- Barr PJ, O'Malley AJ, Tsulukidze M, Gionfriddo MR, Montori VM, Elwyn G. The psychometric properties of Observer OPTION5, an observer measure of shared decision making. Patient Educ Couns. 2015 Aug;98(8):970-6. PMID: 25956069
- Brito JP, Asi N, Gionfriddo MR, Norman C, Leppin AL, Zeballos-Palacios C, et al. The incremental benefit of functional imaging in pheochromocytoma/paraganglioma: a systematic review. Endocrine. 2015 Sep;50(1):176-86. PMID: 25663601
- 23. Rank MA, Johnson R, Branda M, Herrin J, van Houten H, **Gionfriddo MR**, Shah ND. : Long term outcomes after stepping down asthma controller medications: A claimsbased, time-to-event analysis. Chest. 2015 Sep 1;148(3):630-639. PMID: 25997080
- 24. Brito JP, Castaneda-Guarderas A, Gionfriddo MR, Singh Ospina NM, Maraka S, Dean D, Castro MR, Fatourechi V, Gharib H, Stan MN, Branda M, Bahn RS, Montori V. Development and pilot testing of an encounter tool for shared decision making about the treatment of Graves Disease. Thyroid. 2015 Nov;25(11):1191-8. PMID: 26413979

- 25. Singh Ospina N, Maraka S, Espinosa De Ycaza A, O'Keeffe D, Brito JP, Gionfriddo MR, Castro MR, Morris JC, Erwin P, Montori VM. Diagnostic accuracy of thyroid nodule growth to predict malignancy in thyroid nodules with benign cytology: Systematic review and meta-analysis. Clin Endocrinol (Oxf). 2015 Nov 12. [Epub ahead of print]. PMID: 26562828
- Elraiyah T, Gionfriddo MR, Montori VM, Murad MH. Content, Consistency, and Quality of Black Box Warnings: Time for a Change. Ann Intern Med. 2015 Dec 1;163(11):875-6. PMID: 26415046
- Alexander PE, Gionfriddo MR, Li SA, Bero L, Stoltzfus RJ, Neumann I, Brito JP, Djulbegovic B, Montori VM, Norris SL, Schünemann HJ, Thabane L, Guyatt GH. A number of factors explain why WHO guideline developers make strong recommendations inconsistent with GRADE guidance. J Clin Epidemiol. 2016 Feb;70:111-22. PMID: 26399903
- Alexander PE, Li SA, Gionfriddo MR, Bero L, Stoltzfus RJ, Neumann I, Brito JP, Djulbegovic B, Montori VM, Schünemann HJ, Guyatt GH. Senior GRADE methodologists encounter challenges as part of WHO guideline development panels: an inductive content analysis. J Clin Epidemiol. 2016 Feb;70:123-8. PMID: 26385188
- 29. Rodriguez-Gutierrez R, **Gionfriddo MR**, Ospina NS, Maraka S, Tamhane S, Montori VM, Brito JP. Shared decision making in endocrinology: present and future directions. Lancet Diabetes Endocrinol. 2016 Feb 22. [Epub ahead of print]. PMID: 26915314
- Schafer KM, Gionfriddo MR, Boehm DH. Shared decision making and medication therapy management with the use of an interactive template. J Am Pharm Assoc. 2016 Mar-Apr;56(2):166-72. PMID: 27000167
- Brito JP, Singh-Ospina N, Gionfriddo MR, Maraka S, Espinosa De Ycaza A, Rodriguez-Gutierrez R, Morris JC, Montori VM, Tuttle RM. Restricting ultrasound thyroid fine needle aspiration biopsy by nodule size: which tumors are we missing? A population-based study. Endocrine. 2016 Mar;51(3):499-505. PMID: 26254791
- Al Nofal A, Gionfriddo MR, Javed A, Haydour Q, Brito JP, Prokop LJ, Pittock ST, Murad MH. Accuracy of thyroid nodule sonography for the detection of thyroid cancer in children: systematic review and meta-analysis. Clin Endocrinol (Oxf). 2016 Mar;84(3):423-30. PMID: 25845503
- Maraka S, Singh Ospina NM, O'Keeffe DT, Espinosa De Ycaza AE, Gionfriddo MR, Erwin PJ, Coddington CC 3rd, Stan MN, Murad MH, Montori VM. Subclinical Hypothyroidism in Pregnancy: A Systematic Review and Meta-Analysis. Thyroid. 2016 Mar 3. [Epub ahead of print]. PMID: 26837268
- 34. Alexander PE, Brito JP, Neumann I, Gionfriddo MR, Bero L, Djulbegovic B, et al. World Health Organization strong recommendations based on low-quality evidence (study quality) are frequent and often inconsistent with GRADE guidance. J Clin Epidemiol. 2016 Apr;72:580-90. PMID: 25618534
- 35. Dabrh AM, Singh Ospina NM, Nofal AA, Farah WH, Barrionuevo P, Sarigianni M, Mohabbat AB, Benkhadra K, Carranza Leon BG, **Gionfriddo MR**, Wang Z, Mohammed K, Ahmed A, Elraiyah TA, Haydour Q, Alahdab F, Prokop LJ, Murad MH. Predictors of biochemical remission and recurrence after surgical and radiation treatments of Cushing's disease: a systematic review and meta-analysis. Endocr Pract. 2016 Apr;22(4):466-75. PMID: 26789343

- 36. Singh Ospina N, Brito JP, Maraka S, Espinosa de Ycaza AE, Rodriguez-Gutierrez R, Gionfriddo MR, Castaneda-Guarderas A, Benkhadra K, Al Nofal A, Erwin P, Morris JC, Castro MR, Montori VM. Diagnostic accuracy of ultrasound-guided fine needle aspiration biopsy for thyroid malignancy: systematic review and meta-analysis. Endocrine. 2016 Apr 12. [Epub ahead of print]. PMID: 27071659
- 37. Singh Ospina NM, Rodriguez-Gutierrez R, Maraka S, Espinosa de Ycaza AE, Jasim S, Castaneda-Guarderas A, Gionfriddo MR, Al Nofal A, Brito JP, Erwin P, Richards M, Wermers R, Montori VM. Outcomes of Parathyroidectomy in Patients with Primary Hyperparathyroidism: A Systematic Review and Meta-analysis. World J Surg. 2016 Apr 19. [Epub ahead of print]. PMID: 27094563
- Serrano V, Rodriguez-Gutierrez R, Hargraves I, Gionfriddo MR, Tamhane S, Montori VM. Shared decision-making in the care of individuals with diabetes. Diabet Med. 2016 Apr 22. [Epub ahead of print] PMID: 27105298
- Inselman J, Branda M, Castaneda-Guarderas A, Gionfriddo MR, Zeballos-Palacios CL, Morris MM, Shah ND, Montori VM, LeBlanc A. Uptake and Documentation of the Use of an Encounter Decision Aid in Usual Practice: A Retrospective Analysis of the Use of the Statin/Aspirin Choice Decision Aid. Med Decis Making. 2015 May;36(4):557-61. PMID: 26721257
- Rank MA, Liesinger JT, Branda ME, Gionfriddo MR, Schatz M, Zeiger RS, Shah ND. Comparative safety and costs of stepping down asthma medications in patients with controlled asthma. J Allergy Clin Immunol. 2016 May;137(5):1373-1379. PMID: 26506020
- Boehmer KR, Gionfriddo MR, Rodriguez-Gutierrez R, Dabrh AM, Leppin AL, Hargraves I, May CR, Shippee ND, Castaneda-Guarderas A, Palacios CZ, Bora P, Erwin P, Montori VM. Patient capacity and constraints in the experience of chronic disease: a qualitative systematic review and thematic synthesis. BMC Family Practice. 2016 Sept;17:127. PMID: 27585439
- 42. Huang RC, Song XT, Wu J, Huang W, Leppin AL, Gionfriddo MR, Liu YX, Boehmer KR, Ting HH, Montori VM. Assessing the feasibility and quality of shared decision making in China: evaluating a clinical encounter intervention for Chinese patients. Patient Prefer Adherence. 2016 Nov;10:2341-2350. PMID: 27881912
- 43. Farah WH, Alsawas M, Mainou M, Alahdab F, Farah MH, Ahmed AT, Mohamed EA, Almasri J, Gionfriddo MR, Castaneda-Guarderas A, Mohammed K, Wang Z, Asi N, Sawchuk CN, Williams MD, Prokop LJ, Murad MH, LeBlanc A. Non-pharmacological treatment of depression: a systematic review and evidence map. Evid Based Med. 2016 Dec;21(6):214-221. PMID: 27836921

Book Chapters

 Morey-Vargas OL, Zeballos-Palacios C, Gionfriddo MR, Montori VM. The Hierarchy of Evidence. In: Biondi-Zoccai G, editor. Network Meta-Analysis: Evidence Synthesis with Mixed Treatment Comparison. NOVA Science Publishers; 2014: 3-20 (Book Chapter)

Letters to the Editor

1. Brito JP, **Gionfriddo M**, Morris JC, Montori VM. Overdiagnosis of Thyroid Cancer and Graves' Disease. Thyroid [letter to the editor] 2014 24 (2): 402-3. PMID: 23931639

- 2. **Gionfriddo MR**, McCoy RG, Lipska KJ. AACE Response to Viewpoint of December 9, 2013—Reply. JAMA Intern Med 2014 174 (5): 827-828. PMID: 24799017
- 3. Elraiyah T, **Gionfriddo MR**, Murad MH. Response to letter to the editor by Wei et al. J Clin Epidemiol. 2015 Aug 25 [epub ahead of print]. PMID: 26318826
- Gionfriddo MR. Subjectivity is a strength: A comment on "An algorithm was developed to assign GRADE levels of evidence to comparisons within systematic reviews". J Clin Epidemiol. 2016 Jan 5. [epub ahead of print]. PMID: 26769254

Published Abstracts

- 1. **Gionfriddo MR**, VanWert AL. Novel Interactions of ß- Lactam Antibiotics with Renal Organic Anion Transporter 3 (Oat3) [abstract]. Am J Pharm Educ 2010 74 (5) Article 96.
- Trombetta DP, Gionfriddo MR. An Interprofessional Education Model Using Medical Residents and Pharmacy Students: The Effect on Diabetes Education [abstract]. Am J Pharm Educ 2012 76 (5) Article 99.
- Hagan J, Gionfriddo M, Pongdee T, Volcheck G, Li J, Hagan C, Erwin P, Rank M. The Risk Of Asthma Exacerbation After Stopping Inhaled Corticosteroids And Substituting Leukotriene Receptor Antagonists: A Systematic Review [abstract]. Am J Respir Crit Care Med 2014 189: A1331

Non-Peer Reviewed Articles

 Boehmer K, Leppin A, Brito-Campana JP, Gionfriddo M, Morey-Vargas O, Montori V. Capacity Matters: Considering the Patient's Ability to Implement Evidence-Based Treatment Strategies. Newsletter of the International Society for Evidence-Based Health Care. Newsletter 13; Oct. 2013

Contributions

1. American Association of Colleges of Pharmacy & National Community Pharmacists Association. Medication Adherence Educators Toolkit. 2013 Available from: <u>http://www.aacp.org/resources/education/Documents/AACP%20NCPA%20Medication%2</u> <u>0Adherence%20Educators%20Toolkit.pdf</u>

RESEARCH INTERESTS

My career goal is to better understand and improve how healthcare is delivered and experienced, specifically as it relates to persons with chronic diseases. To accomplish this goal I will draw upon multiple theoretical perspectives and utilize a variety of methodologic approaches. My current work is focused on the relationship between adolescents with asthma and the medication they use to manage their asthma. Utilizing gualitative methods and a user centered design approach I will leverage this understanding to develop a tool that facilitates a conversation between clinicians and adolescents on the issue of medication therapy for asthma. My previous work has focused on evidence based medicine and how it is implemented in practice, specifically through the use of shared decision making and minimally disruptive medicine. These areas complement each other as together they make up a paradigm of healthcare where the care a person receives is not only informed by the best available evidence, but also by their values and context where what is best for the patient and their family is prioritized. To that end, I have been involved in several systematic reviews summarizing the best available evidence, but I have also critiqued the way evidence is used. Specifically, I have critiqued how evidence is interpreted and translated for use into practice. In collaboration with experts from around the world I have evaluated evidence and critiqued guidelines from a variety of sources including the American Association of Clinical Endocrinologists and the World Health Organization. These efforts will hopefully encourage thoughtful discussion of the limitations of evidence and how that evidence can be used to inform practice.

Methods and policy

- Corruption of the research evidence and clinical practice
- Evidence synthesis and guideline development

Care delivery

- Healthcare delivery research for patients with chronic disease
 - Patient-centered care through shared decision-making and minimally disruptive medicine

Pharmacy

Impact of pharmacists and pharmaceutical care

Communication

- Clinician-Patient Relationship
- Written and verbal communication about pharmaceuticals

Qualitative Research

- Methods, especially evidence synthesis as it regards to qualitative research
- Experiences of persons with chronic disease and their caregivers and clinicians
- Experiences/attitudes towards medication taking/decision making about medication use