

Lessons Learned from Studying Pharmacists' Care for (how) Many Years?!

Karen B. Farris, PhD,
Charles R Walgreen III Professor
Director, CPTS Graduate and Fellow Program
EVP, The Rho Chi Society

Center for Pharmacy Practice Innovation (CPPI) Seminar

Lessons Learned from Studying Pharmacists' Care for (how) Many Years?! - 4/25/2022

Speaker(s): Karen Farris, PhD

Topic:

CPPI invites various health care professionals from around the country and globe to speak on issues relating to innovation in the health care space.

Please contact the Center for Pharmacy Practice Innovation to request a meeting password by clicking [here](#).

[Please click here to join the webinar](#)

Meeting ID : 972 0552 6057

Purpose or Objectives: At the conclusion of this activity, the participant will be able to:

1. Review changes in health care delivery that likely impact pharmacy practice.
2. Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.
3. Discuss practice innovations designed to improve health outcomes.
4. Discuss role delineation for pharmacists on the interprofessional health care team.

Date/Time: 4/25/2022 12:00:00 PM

+ Accreditation:



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Credit Designation(s): 0.75 ANCC contact hours.



This activity provides 0.75 contact hours of continuing education credit. ACPE Universal Activity Number (UAN): Pharmacist: JA4008237-0000-22-164-L04-P Technician: JA4008237-0000-22-164-L04-T

NOTE FOR PHARMACISTS: Upon closing of the online evaluation, VCU Health Continuing Education will upload the pharmacy-related continuing education information to CPE Monitor within 60 days. Per ACPE rules, VCU Health Continuing Education does not have access nor the ability to upload credits requested after the evaluation closes. It is the responsibility of the pharmacist or pharmacy technician to provide the correct information [NABP ePID and DOB (in MMDD format)] in order to receive credit for participating in a continuing education activity.

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Name of individual	Individual's role in activity	Name of Ineligible Company(s) / Nature of Relationship(s)
Dave Dixon, PharmD, FACC, FCCP, FNLA, BCACP, BCPS, CDE, CLS	Activity Director	Contracted Research-Boehringer Ingelheim Vetmedica GmbH - 08/04/2021
Karen Farris, PharmD	Faculty	AstraZeneca – 04/18/22
Dana Burns, DNP	Planning Committee	Nothing to disclose - 12/16/2021
Teresa M Salgado, MPharm, PhD	Planning Committee	Nothing to disclose - 10/25/2021
Evan Sisson, Pharm.D., MSHA, BCACP, CDE, FAADE	Planning Committee	Nothing to disclose - 11/18/2021



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Funding

2019-2022 Justin Gatwood, PI. Oral Adherence in Hematological Oncology Agents and Impact on Comorbid Therapy Adherence. Astra Zeneca (subaward from Univ of Tennessee). Astra Zeneca. Role: Site PI.

2020-2023 Karen Farris and Hae Mi Choe, Co-PIs. Improving control of HTN and HBC among individuals in rural Michigan. MDHHS via CDC 1817. Grants #F059805, F062616.

2021-2023 Emily Mackler, PI. Pharmacists Optimizing Oncology Care Excellence in Michigan (POEM). Blue Cross Blue Shield of Michigan. Role: Investigator/evaluator.

2015-2021 Jennifer Griggs, PI. Michigan Oncology Quality Consortium (MOQC), Blue Cross Blue Shield of Michigan. Role: Investigator/evaluator.

Objectives

Review

Review changes in healthcare delivery that impact pharmacy practice.

Describe

Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.

Discuss

Discuss practice innovations designed to improve health outcomes.

Discuss

Discuss role delineation for pharmacists on the interprofessional health care team.

Experiences distilled from past activities that should be actively taken into account in future actions and behaviors.

Wikipedia



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Objectives	Structure	Process	Outcomes
1. Review changes in healthcare delivery that impact pharmacy practice.	<ul style="list-style-type: none"> • HIT infrastructure • EHR • Increasing drug prices • DIR fees • Lack of pharmacist provider status at CMS 	<ul style="list-style-type: none"> • Quality payment uplifts • Team based care • Population health strategies • Telehealth • Assessing SDOH 	<ul style="list-style-type: none"> • Reimbursement for quality • Publishing quality/star ratings
2. Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.	<ul style="list-style-type: none"> • Lack of reimbursement for direct patient care from most payers • Access to EHR • IPE training in SOP/COP • Technician certification 	<ul style="list-style-type: none"> • Vaccinations • COVID vaccinations • OC prescribing • OUD – naloxone, MOUD • CMR • DM vs CMM • Transitions of Care • Med sync 	<ul style="list-style-type: none"> • Improvements in medication-related problems • Improvements in clinical outcomes
3. Discuss practice innovations designed to improve health outcomes.	<ul style="list-style-type: none"> • Pharmacy e-care plan • Roles of pharmacy technicians • Appointment-based model • Optimizing Care Model with Technician Product Verification (TPV) • Pharmacy initiatives, e.g., CPESN, Wisconsin Pharmacy Quality Collaborative, Flip the Pharmacy, <u>EQuIPP</u> 	<ul style="list-style-type: none"> • Remote BP • Linking community and primary care – UM BP model • Linking primary and specialty care • Billing MTM, CM or E/M codes • Expansion of clinical services • Size of roster or practice • Focus on workflow and technical support 	<ul style="list-style-type: none"> • ROI • <i>Impact on quality metrics</i>
4. Discuss role delineation for pharmacists on the interprofessional health care team.	<ul style="list-style-type: none"> • State laws - provider status or CPA 	<p>"It's the medications, stupid!"</p>	<p>What team?</p>

What I see...



What I see...

Objectives	Structure	Process	Outcomes
1. Review changes in healthcare delivery that impact pharmacy practice.	<ul style="list-style-type: none">• HIT infrastructure• EHR• Increasing drug prices• DIR fees• Lack of pharmacist provider status at CMS	<ul style="list-style-type: none">• Quality payment uplifts• Team based care• Population health strategies• Telehealth• Assessing SDOH	<ul style="list-style-type: none">• Reimbursement for quality• Publishing quality/star ratings

What I see...

Objectives	Structure	Process	Outcomes
<p>2. Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.</p>	<ul style="list-style-type: none">• Lack of reimbursement for direct patient care from most payers• Access to EHR• IPE training in SOP/COP• Technician certification	<ul style="list-style-type: none">• Vaccinations• COVID vaccinations• OC prescribing• OUD – naloxone, MOUD• CMR• DM vs CMM• Transitions of Care• Med sync	<ul style="list-style-type: none">• Improvements in medication-related problems• Improvements in clinical outcomes

What I see...

Objectives	Structure	Process	Outcomes
<p>3. Discuss practice innovations designed to improve health outcomes.</p>	<ul style="list-style-type: none">• Pharmacy e-care plan• Roles of pharmacy technicians• Appointment-based model• Optimizing Care Model with Technician Product Verification (TPV)• Pharmacy initiatives, e.g., CPESN, Wisconsin Pharmacy Quality Collaborative, Flip the Pharmacy, <u>EQuIPP</u>	<ul style="list-style-type: none">• Remote BP• Linking community and primary care – UM BP model• Linking primary and specialty care• Billing MTM, CM or E/M codes• Expansion of clinical services• Size of roster or practice• Focus on workflow and technical support	<ul style="list-style-type: none">• ROI• <i>Impact on quality metrics</i>

What I see...

Objectives	Structure	Process	Outcomes
4. Discuss role delineation for pharmacists on the interprofessional health care team.	<ul style="list-style-type: none">• State laws - provider status or CPA	"It's the medications, stupid!"	What team?

1. Which of the following is a structure characteristic related to changes in healthcare?

A. Health IT

B. Providing COVID vaccines

C. Primary care pharmacists' ROI

D. Blood pressure improvement after pharmacists' care

2. Which of the following is TRUE about current trends in IP collaboration?

- A. Transitions of care help connect patients back to primary care.
- B. IPE training is widely seen in SOP/COP.
- C. COVID vaccines have likely raised pharmacists' profile or role among providers and patients.
- D. All of the above are TRUE

Lessons learned in...

1. Linking community and primary care
2. Linking primary and specialty care
3. Remote BP



1. Linking community and primary care in our CDC 1817 with MDHHS

DOI: 10.1002/jac5.1158

CLINICAL PHARMACY RESEARCH REPORT

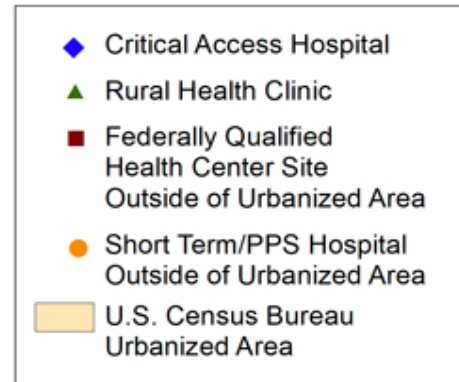


Improving hypertension control through a collaboration between an academic medical center and a chain community pharmacy

Sarah E. Vordenberg Pharm.D., MPH¹ | Valerie Lindell Pharm.D.² |
Krystal Sheerer Pharm.D.³ | Amy Settles MPA²  | Audrey L. Fan MD⁴ |
David C. Serlin MD⁵ | Ebony Parker-Featherstone MD^{5,6} |
Steven J. Bernstein MD, MPH^{7,8} | Hae M. Choe Pharm.D.^{1,2} 

Working with 3 sites in
one PO, yet all EHR are
different

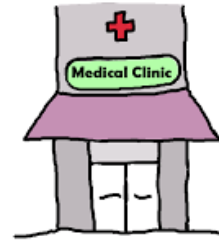
Selected Rural Healthcare Facilities in Michigan



Data Source(s): data.HRSA.gov,
U.S. Department of Health and Human
Services, January 2022

MDHHS 1817

Year 1



Year 2



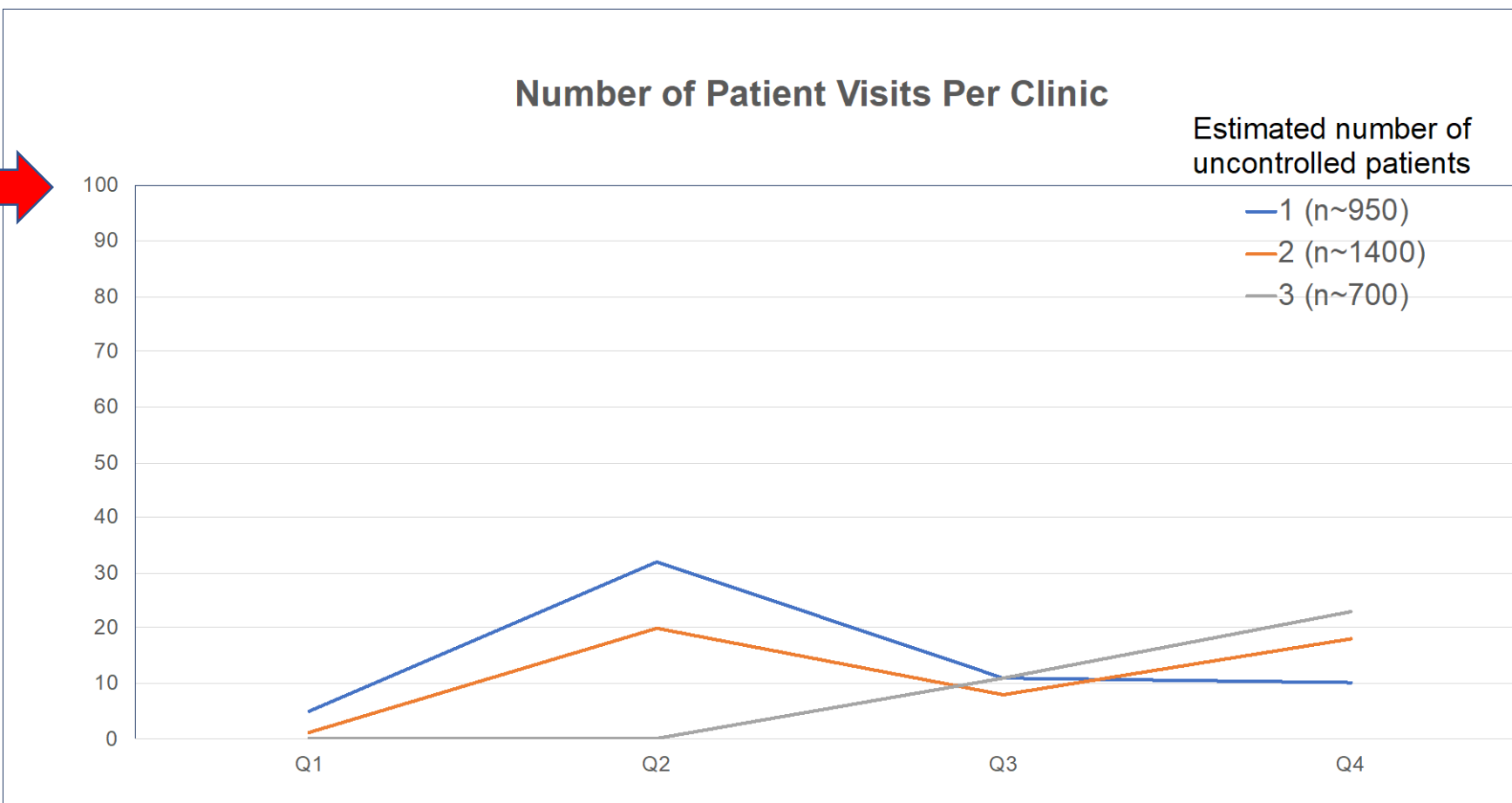
Year 3



Rural Health Clinics and Physician Organizations to implement pharmacists' CM services for chronic conditions

3 years of data: Patients seen; Visits billed; HTN controlled (all 3 years); HBC treated (2 years)

Only
assumes
8/day...
expect 144
visits/Q!



- 139 visits for 69 patients

- Clinic 1 – 4 controlled among 32 patients, 50 weeks, #2 half-days in clinic, billed 25 visits

- Clinic 2 – 6 controlled among 22 patients, 48 weeks, returned to #2 different half-days in clinic, ? billed

- Clinic 3 – 8 controlled among 15 patients, 24 weeks, returning to #2 different half-days in clinic, billed 29 visits

Billing

- **G9002** – HCPCS Coordinated care fee, maintenance rate
 - **G0511** - Could use if visit was comprehensive...Chronic Care Management for FQHCs or RHCs
 - **98966, 98967, 98968** - Telephone assessment and management service provided by a qualified nonphysician health care professional to an established patient, parent, or guardian; 5-10 min, 11-20 min, 21-30 min
 - **99605, 99606, 99607** - Clinics 2 and 3 are exploring MTM billing in FQHC or RHC using CHAMPS
-
- <https://micmt-cares.org/g9001-comprehensive-assessment>
 - https://www.ohiopharmacists.org/aws/OPA/asset_manager/get_file/168462?ver=1

Lessons learned...

Necessary but not sufficient...

- ✓ PO leadership support; meetings with physicians
- ✓ Academic partnerships with funding for clinical innovation
- ✓ [UM ACE Training](#)
- ✓ Workflow changes PDSA'd
- ✓ Clinical/expert on-going, monthly support
- ✓ Provision of local technical assistance but billing is difficult

Making it happen...

- ✓ 'Special' pharmacist
- ✓ Physician champion

3. Which of the following innovations in healthcare is most directly focused on sustainability of pharmacists' care?

A. Health IT

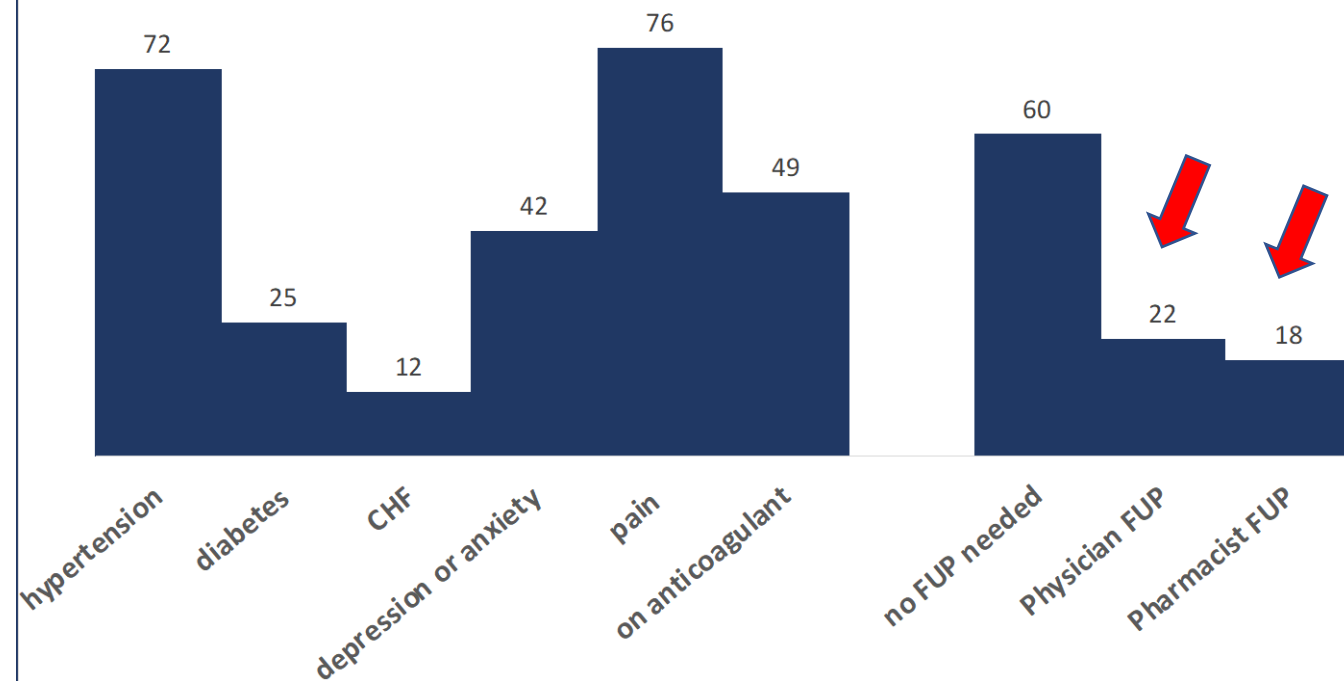
B. Certification and roles of pharmacy technicians

C. Billing E/M, CM, or MTM codes

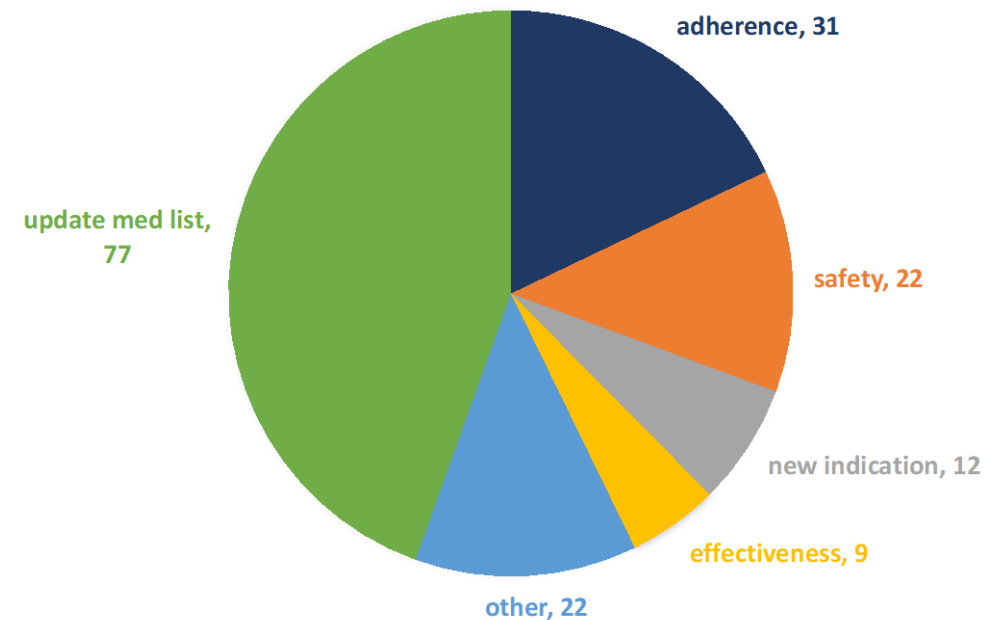
D. New models of care like ABM or OCM

2. Linking primary and specialty care in PCOM pilot and AZ funded study

Percent of Conditions and FUP in CMRs among Participants with New OAA (n=55/96)

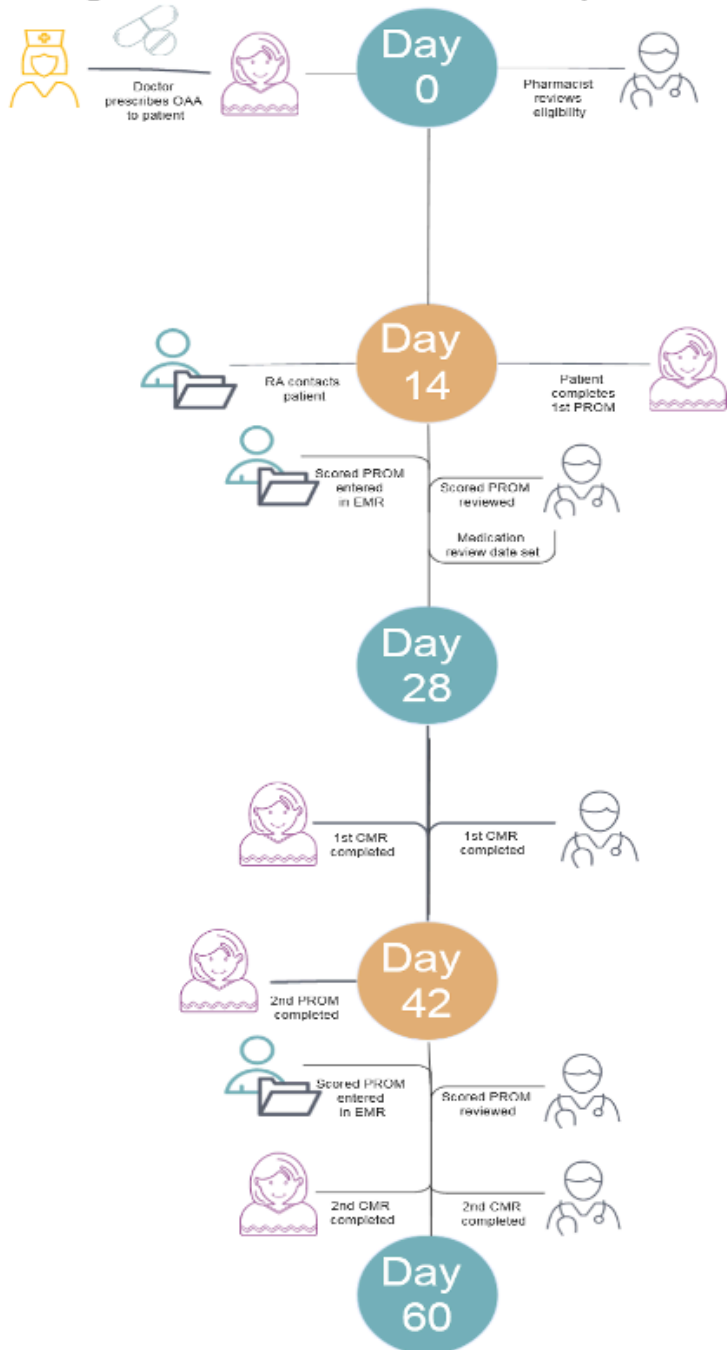


Distribution of MRPs among 55 CMRs for Participants with New OAA (n=22)



Mackler EM, et al., Care Coordination by Primary Care Pharmacists in Patients with Cancer and Comorbid Conditions. JCO Oncology Practice (under review)

Figure 1. Timeline For Intervention Components



Pharmacists Coordinated care Oncology Model (PCOM): Implementation and Evaluation in Single Arm

Gatwood J (PI), Gatwood K; Farris (site PI), Mackler E; Farley (site PI)

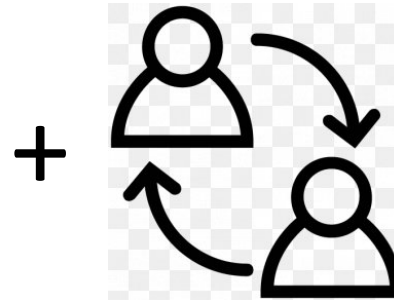
Feasibility		Data collection
Days until CMR completed	EMR	10 and 20 patients
Feasibility Intervention Measure (survey)	Pharmacists	10 and 20 patients
		10 and 20 patients
Acceptability		
Acceptability of Intervention Measure (survey)	Pharmacists	10 and 20 patients
Adoption		
% participants with 2 PROMS	EMR	After intervention
% participants with CMR	EMR	After intervention
Fidelity		
% participants where oncology pharmacist reviewed PROM within 1 day	EMR	10 and 20 patients
% participants with scheduled CMR within 1 week of first PROM result	EMR	10 and 20 patients
% CMRs with note routed to oncology pharmacist	EMR	10 and 20 patients
% CMR notes reviewed by oncology pharmacist	EMR	10 and 20 patients

Lessons learned...

1. One in 5 patients with a new OAA needed physician follow-up and almost one in 5 needed pharmacist follow-up.
2. COVID killed recruitment, and we are just now starting again.
3. Really, really, really 'pharmacists being pharmacists' cannot recruit for studies. We have tried three different ways to recruit participants...

3. Remote BP

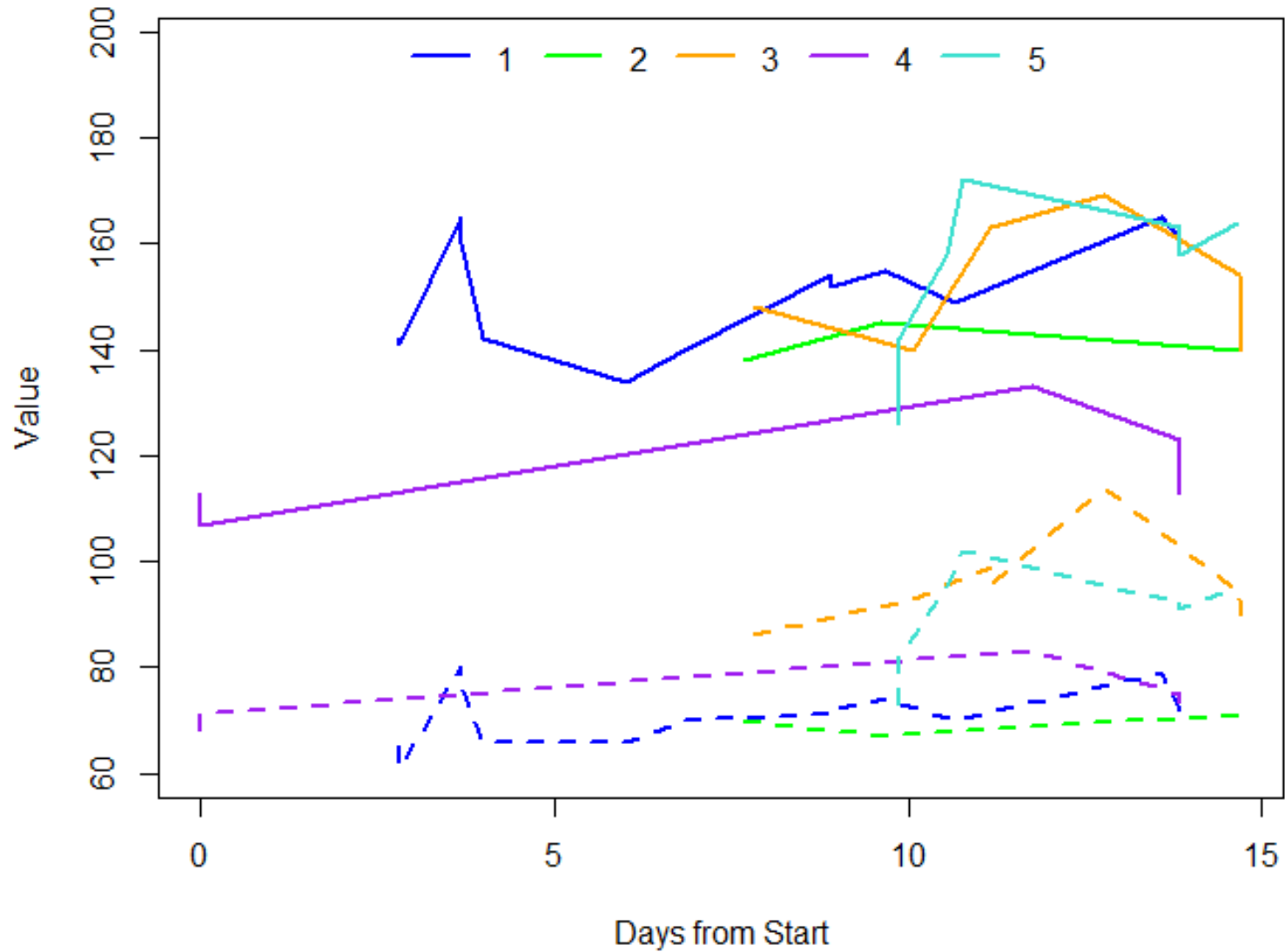
Pilot study among low income, older adults residing in Ann Arbor Housing Commission (AAHC) property



- Build relationship and 'presence' with resident and AAHC
- Residential peer support
- Cellular enabled BP devices
- Notifying providers
- Texting for feedback, can be 2-way
- N=20 * 4 months
- Using surveys and interviews to assess
 - Feasibility
 - Acceptability
 - Satisfaction
 - Facilitators and barriers



Blood Pressures



Peer Support

- Helped 2 individuals retake BPs
- Need to re-emphasize use of BP device to rest before taking; rest again before retaking
- Already had one medication change! Patient had high BP, saw provider and added diuretic/spironolactone
- Retrain re email communications

Issues...



What is the reading when you phone for safety?



Which 'high' readings over how many days before you report to provider?



After 4 participants, what new text messages do we need?

Lessons learned...

1. Peer, on-site, support is terrific for study participants, but difficult on the administrative side, i.e., IRB training, IRB approval, paying 'non-UM' person.
 - Interviewed and trained (remote BP device, BP goals, role in study) our peer support individual.
 - Communicate via email or text weekly.
2. Cell vs wifi RBP device...we will see.
3. Some older adults text.
4. Some older adults worry about their numbers.

4. Which topic is most important for pharmacists to focus on in interprofessional healthcare teams?

- A. SDOH
- B. Medications
- C. Using technology to support patients
- D. Collaborative practice agreement

Summary lessons learned ...

1. Reimbursement is still the key barrier for ***sustaining*** models of pharmacists' care. Politics of provider status and billing...
3. Context and support matter but so do the people...
4. Use peer support in your work when possible...we will only need more as technology in care increases.

How many years have I been studying
pharmacists' care?!

> Ann Pharmacother. 1993 Jan;27(1):68-73. doi: 10.1177/106002809302700116.

Assessing the quality of pharmaceutical care. I. One perspective of quality

K B Farris¹, D M Kirking¹ [Review](#) > Ann Pharmacother. 1993 Feb;27(2):215-23. doi: 10.1177/106002809302700218.

Affiliations + expand
PMID: 8431625 DOI: 10.1177/106002809302700218

Abstract

Objective: To evaluate the quality of pharmaceutical care in ambulatory pharmacy practices.

Assessing the quality of pharmaceutical care. II. Application of concepts of quality assessment from medical care

K B Farris¹, D M Kirking¹

Affiliations + expand
PMID: 8439702 DOI: 10.1177/106002809302700218

Abstract

Objective: To present a framework that facilitates quality assessment of pharmaceutical care (PC) so that the profession and the public may identify pharmacists in ambulatory settings who provide quality care in all aspects of their practices.

Fernando Fernandez-Llimos



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Salas: [E3](#) | [S30.P4.E3](#)

Funções

23. Karen B. Farris. Pharmaceutical Care: Researching Processes and Outcomes of PC. III National Congress on Pharmaceutical Care. Granada, Spain. September 18-20, 2003.

Editorial > Ann Pharmacother. 2005 Sep;39(9):1539-41. doi: 10.1345/aph.1G049.

Epub 2005 Jul 12.

Pharmaceutical care in community pharmacies: practice and research from around the world

Karen B Farris, Fernando Fernandez-Llimos, S I Charlie Benrimoj

PMID: 16014373 DOI: 10.1345/aph.1G049

Abstract

Pharmaceutical care models and practices differ in various countries. Reimbursement for cognitive services, for example, varies across countries in Europe, Asia, and the Americas. Practice-based research has blossomed in many countries, with different emphases and challenges. This international series will describe the organization of community pharmacy within the healthcare system and report the status of practice-based research. Each paper will focus on one country. The series will conclude with a summary by the series editors describing the key themes across the papers, outlining milestones yet to be achieved, and proposing a research agenda for community pharmacy practice.

2010 ISPW Lisbon, Portugal

2014



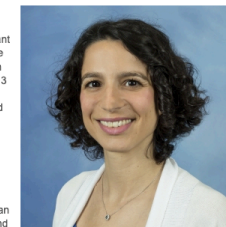
Teresa Salgado, Clinical Pharmacy Translational Science Post-Doctoral Fellowship Program Graduate, Shares Insight on Program, Career

JULY 10, 2018

Teresa M. Salgado, MPharm, PhD, completed the CPTS Post-Doctoral Fellowship program in 2016 and joined the Virginia Commonwealth University (VCU) School of Pharmacy as an Assistant Professor in the same year. She also serves as the Assistant Director for Research at the VCU's School of Pharmacy Center for Pharmacy Practice Innovation since January 2017. Dr. Salgado earned her Pharmacy degree and PhD in Social-Pharmacy from the Faculty of Pharmacy, University of Lisbon (Portugal) in 2013 and worked there as a community and hospital pharmacist. Dr. Salgado recently shared her experiences with the CPTS program, and what those interested in the field should know.

What motivated you to apply to the U-M Pharmacy CPTS post-doc fellowship?

After completing my PhD, I was working as a hospital pharmacist in my hometown of Lisbon (Portugal). Throughout those one and a half years working at the hospital, I realized that, what I once thought was my dream job, ended up not meeting my expectations. However, it helped me recognize that my real passion was research in an academic environment. This is when I learned about the CPTS post-doc fellowship and how this would be a great opportunity to gain additional research training to help me establish myself as an independent researcher and a future academic. I later learned how critical of a role this program played in the transition to a different research environment and health care system from what I was used to. I joined Dr. Karen Farris' lab, who is a world-renowned expert in medication adherence and outcomes research, and that was one of the best things that have happened to me!



Teresa M Salgado, MPharm, PhD

Assistant Professor

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PubMed Results	
1.	Effect of Clinical and Attitudinal Characteristics on Obtaining Comprehensive Medication Reviews . Farris KB, Salgado TM, Anesse N, Marshall VD, Pendergast JF, Frank J, Christilles EA, Doucette WR. <i>J Manag Care Spec Pharm</i> . 2018 Apr;22(4):388-95. doi:10.18553/jmcp.2016.22.4.388. PMID: 27023692
2.	Confirming the theoretical structure of expert-developed text messages to improve adherence to anti-hypertensive medications . Farris KB, Salgado TM, Batra P, Plette JD, Singh S, Guhad A, Newman S, Marshall VD, An L. <i>Res Social Adm Pharm</i> . 2016 Jul-Aug;12(4):578-91. doi: 10.1016/j.sapharm.2015.09.009. Epub 2015 Oct 3. PMID: 26525857 Free PMC article.
3.	The relationship between patient activation, confidence to self-manage side effects, and adherence to oral oncolytics: a pilot study with Michigan oncology practices . Salgado TM, Mackler E, Severson JA, Lindsay J, Batra P, Petersen L, Farris KB. <i>Support Care Cancer</i> . 2017 Jun;25(6):1797-1807. doi: 10.1007/s00520-017-3584-0. Epub 2017 Jan 20. PMID: 28108821
4.	Identifying socio-demographic and clinical characteristics associated with medication beliefs about aromatase inhibitors among postmenopausal women with breast cancer . Salgado TM, Davis EJ, Farris KB, Fawaz S, Batra P, Henry NL. <i>Breast Cancer Res Treat</i> . 2017 Jun;163(2):311-319. doi: 10.1007/s10549-017-4177-9. Epub 2017 Mar 1. PMID: 28251384
5.	Impact of a Statewide Oral Oncolytic Initiative on Five Participating Practices . Mackler E, Scappaticci GB, Salgado TM, Petersen L, Davis EJ, Peltier E, Griggs JJ, Sabo RT, Farris KB. <i>J Oncol Pract</i> . 2018 May;14(5):e304-e309. doi: 10.1200/JOP.18.00058. Epub 2018 Apr 11. PMID: 29641272
6.	Identifying Medication Management Smartphone App Features Suitable for Young Adults With Developmental Disabilities: Delphi Consensus Study . Salgado TM, Fedrigon A, Riccio Omichinski D, Meade MA, Farris KB. <i>JMIR Mhealth Uhealth</i> . 2018 May 23;6(5):e129. doi: 10.2196/mhealth.9527. PMID: 29792292
7.	Patient factors associated with discrepancies between patient-reported and clinician-documented peripheral neuropathy in women with breast cancer receiving paclitaxel: A pilot study . Salgado TM, Liu J, Reed HL, Quinn CS, Syverson JG, Le-Rademacher J, Lopez CL, Beutler AS, Loprinzi CL, Vangipuram K, Smith EM, Henry NL, Farris KB, Hertz DL. <i>Breast</i> . 2020 Jun;51:21-28. doi: 10.1016/j.breast.2020.02.011. Epub 2020 Mar 3. PMID: 32193049
8.	Primary healthcare policy and vision for community pharmacy and pharmacists in the United States . Salgado TM, Rosenthal MM, Coe AB, Kaefer TN, Dixon DL, Farris KB. <i>Pharm Pract (Granada)</i> . 2020 Jul-Sep;18(3):2160. doi: 10.18549/PharmPract.2020.3.2160. Epub 2020 Sep 18. PMID: 33029264
9.	Reporting of paclitaxel-induced peripheral neuropathy symptoms to clinicians among women with breast cancer: a qualitative study . Salgado TM, Quinn CS, Krumbach EK, Wenceslaso I, Gonzalez M, Reed HL, Syverson JG, Etz RS, Vangipuram K, Barker MR, Henry NL, Farris KB, Hertz DL. <i>Support Care Cancer</i> . 2020 Sep;28(9):4163-4172. doi: 10.1007/s00520-019-05254-6. Epub 2020 Jan 2. PMID: 31897779

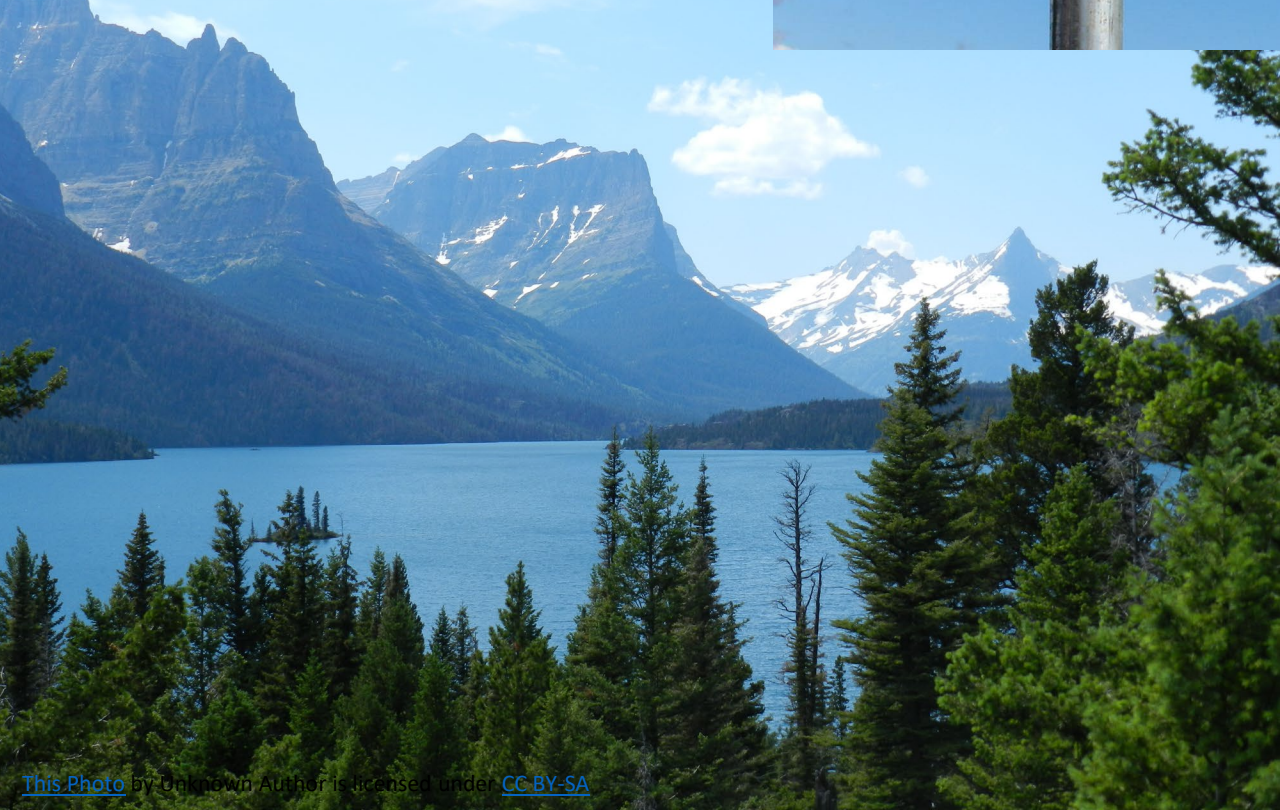
Quick advice for our students...



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Collaborators

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Victoria Nachar

Antoinette Coe
Sarah Vordenberg
Laurie Buis
Reema Kadri
Chinwe Eze
Penny Ryder

Funding

2019-2022 Justin Gatwood, PI. Oral Adherence in Hematological Oncology Agents and Impact on Comorbid Therapy Adherence. Astra Zeneca (subaward from Univ of Tennessee). Astra Zeneca. Role: Site PI.

2020-2023 Karen Farris and Hae Mi Choe, Co-PIs. Improving control of HTN and HBC among individuals in rural Michigan. MDHHS via CDC 1817. Grants #F059805, F062616.

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2015-2021 Jennifer Griggs, PI. Michigan Oncology Quality Consortium (MOQC), Blue Cross Blue Shield of Michigan. Role: Investigator/evaluator.

Thank you so
much for the
opportunity to
visit with you!



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