

**Inaugural CPF Research Forum APhA 2016**

**An Impact Evaluation of the Community Pharmacy Foundation's Grants Program: 2002-2015**

*University of Minnesota Independent Research Team*      *Community Pharmacy Foundation Project Coordinator*

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CPF Executive Director

**Background**

**CPF Mission:**  
To assist community pharmacy practitioners by providing resources for research and development to encourage new capabilities and continuous improvements in the delivery of patient care.

**Current**  
Grants In Study: **38**  
Grants Completed: **113**  
Total Grants Funded: **\$7,172,583**

First Grants Awarded 2002 Today 2016  
**14 YEARS**

**Objectives**

1. Describe the **SCOPE** of completed CPF grants from 2002 to June 2015.
2. Describe the **IMPACT** of completed CPF grants from 2002 to June 2015.

Founded 2002 June 2015  
**13 YEARS**

**Methods**

**Data Sources:** CPF Website, Principal Investigator Interviews, CPF Personnel

**Data Analysis:** CONTENT ANALYSIS

**Methods**

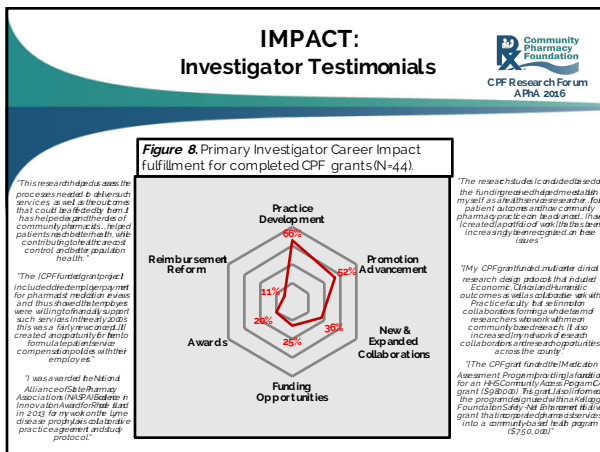
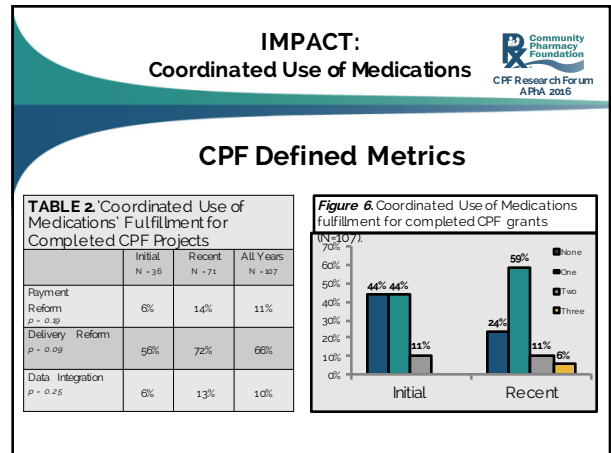
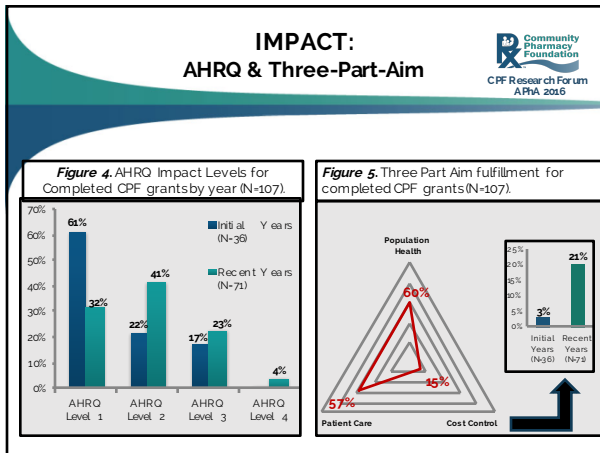
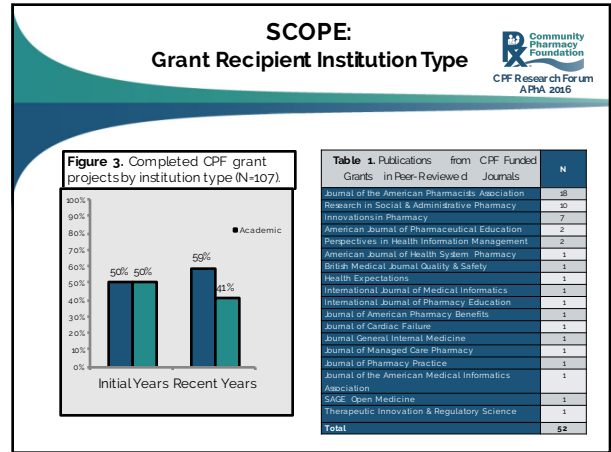
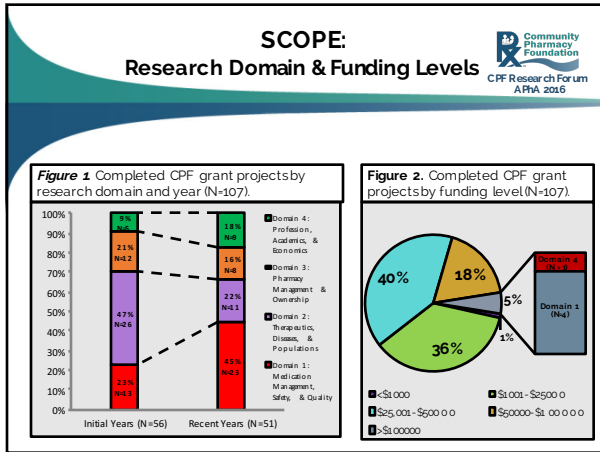
**chi-square**      **t-tests**

Initial Years (2002-2008)      Recent Years (2009-2015)

**Methods**

	Quan	Qual
<b>Objective 1: Scope</b>	1. Research Domain 2. Institution Type 3. Funding Level	
<b>Objective 2: Impact</b>	1. AHRQ Impact Level 2. Three Part Aim 3. CPF Coordinated Med Use	1. Practice Development 2. Promotion & Advancement 3. New & Expanded Collaborations 4. Funding Opportunities 5. Awards 6. Reimbursement Reform


N = 107



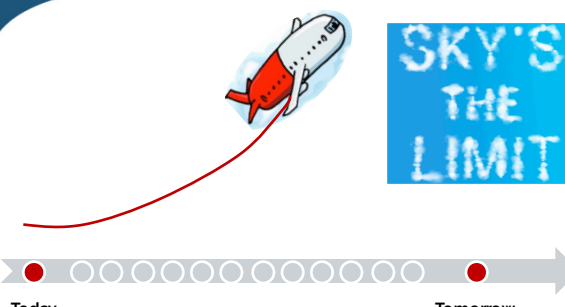
### Conclusions

- SCOPE: Research projects remained broad, but with increased emphasis on value based medication management
- IMPACT: Research orientation shifted from descriptive to applied
- IMPACT: Grants have been important for primary investigator (a) practice development and (b) promotion and advancement.


### Future Impact



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### Appendix: A Scope Measurements




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SCOPE Quantitative Measure 1		SCOPE Quantitative Measure 2	
Research Domain	Definition	Institution Type	
1: Medication Management, Safety & Quality	Projects with objectives or topics that further the understanding, implementation, or evaluation of appropriate medication use.	Academic	
2: Therapeutics, Diseases, & Populations	Projects with objectives or topics that further the understanding, implementation, or evaluation of disease treatment in individuals and populations.	Non-academic	
3: Pharmacy Management & Ownership	Projects with objectives or topics that further the understanding, implementation, or evaluation of pharmacy management and ownership.		
4: Profession, Academics, & Economics	Projects with objectives or topics that further the understanding, implementation, or evaluation of pharmacy practice, education, and		

SCOPE Quantitative Measure 3	
Category	Amount (\$)
1	< \$1,000
2	\$1,001 - \$25,000
3	\$25,001 - \$50,000
4	\$50,001 - \$100,000
5	> \$100,000


### Appendix B: Impact Measurements (1/2)



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IMPACT: Quantitative Measure 1		IMPACT: Quantitative Measure 2	
AHRO Impact Level	Definition	Theme Part Aim	Definition
1	Add to the knowledge base only and do not represent a direct change in policy or practice.	Improving Patient Care	Projects with objectives and results that further the understanding, implementation, or evaluation of methods for "improving the individual experience of care for patients."
2	May directly lead to a policy or program change.	Population Health	Projects with objectives and results that further the understanding, implementation, or evaluation of methods for "improving population health."
3	May cause a change in what clinicians or patients do, or may alter a care pattern.	Controlling Costs through Quality Improvement	Projects with objectives and results that further the understanding, implementation, or evaluation of methods for "reducing the per capita costs of care for populations."
4	May change actual health outcomes (e.g. clinical, economic, QoL, etc.) or profoundly change practice.		


### Appendix B: Impact Measurements (2/2)



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IMPACT: Quantitative Measure 3		IMPACT: Quantitative Measure 4	
CPF Coord Use of Medications	Definition	Investigator Impact	Definition
Payment Reform	Projects with results that further the understanding, implementation, or evaluation of global or budgeted payment models that standardize and incentivize appropriate medication use to help meet quality health goals.	Practice Development	Investigators used project results for practice development.
Delivery Reform	Projects with results that further the understanding, implementation, or evaluation of new payment models with prerequisites (i.e. credentialing) and strategies for delivering medication-related care and services.	Promotion & Advancement	Investigators used project results and funding for career advancement.
Real-time Data Integration	Projects with results that further the understanding, implementation, or evaluation of health information environment standardization, completeness, and real-time point of care data crucial to effective and efficient medication use.	New & Expanded Collaborations	Investigators used project to establish future collaborations.
		Funding Opportunities	Investigators received subsequent funding related to their project.
		Awards	Investigators received an award or other notable recognition related to their project.
		Reimbursement Reform	Investigators used results to improve pharmacist compensation policies.

### Appendix C: Investigator Impact Quotes



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#### Practice Development

*"This research helped us assess the processes needed to deliver such services, as well as the outcomes that could be affected by them...It has helped expand the roles of community pharmacists...helped patients reach better health, while contributing to healthcare cost control and better population health."*

#### Promotion & Advancement

*"The research studies I conducted based on the funding received helped me establish myself as a health services researcher, for patient outcomes and how community pharmacy practice can be advanced...I have created a portfolio of work that has been increasingly been recognized on these issues."*

#### Reimbursement Reform

*"The ICFP funded grant project included direct employer payment for pharmacist medication reviews and thus showed that employers were willing to financially support such services. In the early 2000's this was a fairly new concept...It created an opportunity for them to formulate patient service compensation policies with their employers."*

#### New & Expanded Collaborations

*"My CPF grant funded, multicenter clinical research design protocols that included Economic, Clinical and Humanistic outcomes as well as collaborative work with practice faculty that set in motion collaborations forming a whole team of researchers who work with me on community based research...It also increased my network of research collaborators and research opportunities across the country."*

#### Awards

*"I was awarded the National Alliance of State Pharmacy Associations (NASPA) Excellence in Innovation Award for Rhode Island in 2013 for my work on the Lyme disease prophylaxis collaborative practice agreement and study protocol."*

#### Funding Opportunities

*"The CPF grant funded the Medication Assessment Program (providing a foundation for an HHS Community Access Program (CAP) grant (\$280,000). This grant, also informed the program design used within a Kellogg Foundation Safety-Net Enhancement Initiative grant that incorporated pharmacist services into a community-based health program (\$750,000)."*

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**An interdisciplinary approach to increase billable patient care opportunities in a rural community pharmacy resulting in positive patient outcomes**


Geoffrey Twigg, PharmD, BCACP,  
CDE John Motsko, RPh, CDE  
Jeffrey Sherr, RPh, FACA

**Who We Are**




- A full service pharmacy offering
  - Traditional Pharmacy Services
  - Durable Medical Equipment
  - Oxygen therapy
  - Extensive compounding
  - Long term care services
  - Infusion – (sterile processing facilities)
  - MTM services
  - On site Diabetes Center

**Goals for CPF Grant Funding**




- Build a financially stable, interdisciplinary program around a Center of Excellence (COE) model in a community pharmacy.
- Goals for implementation:
  - Increase in the number of patients
  - Improved clinical outcomes
  - Increase in billable clinical services

**Necessity**




- Reason for a non-traditional solution:
  - One third party payers notified us that DSME is a covered benefit when it is provided by a licensed healthcare professional who is a CDE
  - However, a pharmacist in a pharmacy that is a CDE cannot be credentialed to provide these services.**

**Methods**




- The Diabetes Center set up a separate 'Clinic' to house all clinical services
- The Clinic used credentialed providers working for the clinic to bill as rendering providers

**Results from Increased Opportunities**



- 309 patients were seen at least once
- 120 graduates of the 10-hour DSME class
  - Average A1C drop from 1.29
  - Average BMI drop from 3.28
- Outcomes data has led to clinical pharmacist being offered 'provider status' by some commercial payers


### Limitations



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- Many commercial third party payers have different requirements for credentialing and for the amount of oversight for the rendering provider must provide.


### Conclusions



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- Creating an interdisciplinary team business model inside of a community pharmacy can increase:
  - The number of billable opportunities
  - Expand the quality of services
  - Attract new patients
  - Increase referrals from other providers


### Impact



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- The pharmacy has been able to increase the number of pharmacist hours dedicated to clinical services
- The pharmacy has seen an increase in the number of patients that have transferred prescriptions due to the offering of clinical services
- The pharmacists have seen an increase in their acceptance with local physicians as a result of these programs

### CPF Research Forum – Slide preparation guidance



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- Insert 8 – 10 slides
  - no more than 10 slides as total time 12 min (10 min presentation; 1 min questions; 1 min transition)
  - Objectives/ Methods
  - Results
  - Conclusions
  - Impact
    - How 'has or will' CPF funding of this project advance community pharmacy practice?
- You can cover the blue graphic on this slide if needed for figures and tables.
- Return slides to Anne Marie Kondic by close of business on Thursday, March 3<sup>rd</sup>
- Arrive to Room 302 by 10:50am ET on Saturday, March 5<sup>th</sup>. Session is from 11am – 12pm.
- Any questions contact Anne Marie at [amkondic@communitypharmacyfoundation.org](mailto:amkondic@communitypharmacyfoundation.org) or 312.498.3101 (mobile)

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## Community Pharmacist Provision of Preconception Care via Medication Therapy Management

Natalie A. DiPietro Mager, PharmD, MPH<sup>1</sup>  
David R. Bright, PharmD, BCACP<sup>2</sup>  
Dani Markus, PharmD, MBA<sup>3</sup>  
Lindsey Batz, PharmD, MPH<sup>3</sup>  
David M. Hartzell, PharmD, BC-ADM<sup>4</sup>  
James Gartner, RPh, MBA<sup>4</sup>


1. Ohio Northern University; 2. Ferris State University; 3. OutcomesMTM; 4. CareSource

## Objectives




- To raise awareness and educate community pharmacists about preconception care and how to provide preconception care via medication therapy management (MTM)
- To demonstrate the ability of a statewide network of community pharmacists to provide preconception care services through the MTM framework

## Methods




- A free, written 1-hour ACPE-approved continuing education program was developed
  - Focus: pharmacists, pharmacy technicians
  - The program was distributed electronically and posted online
  - The program is available at the following link: <http://www.raabecollegeofpharmacy.org/mtm/>

## Methods



- Targeted medication review (TMRs) were developed to provide patient education focused on 3 aspects of preconception care:
  - teratogenic medications
  - folic acid
  - MMR and/or hepatitis B vaccine(s)
- A sample of women aged 15-45 years enrolled in CareSource were eligible for the intervention
- Ohio pharmacists participating in the OutcomesMTM network completed the TMRs through the Connect platform
- The initial project launched November 21, 2015
  - An expansion began on February 18, 2016
- The project is IRB-approved

## Results




- As of February 3, 2016
  - 25 pharmacists have completed the CE program
  - Over 300 pharmacists have completed a TMR, as follows:
 

Pharmacy Type	Number
Regional Chain	52
Medium Chain	39
Large Chain	194
Independent	8
PSAO	17
<b>Overall</b>	<b>310</b>
  - Over 280 pharmacies have completed a TMR, as follows:
 

Pharmacy Type	Number
Regional Chain	48
Medium Chain	50
Large Chain	163
Independent	7
PSAO	20
<b>Overall</b>	<b>288</b>


## Results



- Completion and success rate of TMRs by type
 

Needs Patient Education: Teratogenic Medications	Needs Patient Education: Folic Acid	Needs Patient Education: Hepatitis B and/or MMR Vaccines
355 Completed TMRs	471 Completed TMRs	191 Completed TMRs
190 (54%) Successful TMRs	267 (57%) Successful TMRs	125 (65%) Successful TMRs


## Results



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- Qualitative feedback has been received by some pharmacists when completing TMRs
  - Examples:
    - Patient received first dose of hepatitis B vaccine in pharmacy that day after receiving patient education from the pharmacist
    - Patient requested the pharmacist to contact physician for prescription for folic acid after receiving patient education from the pharmacist
    - Patient initiated folic acid after receiving patient education from the pharmacist
- Final determination of results will occur after a quantitative analysis of outcomes of pharmacists' interventions


## Conclusion



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- Hundreds of pharmacists in hundreds of different pharmacies across Ohio were rapidly engaged in the provision of a preventive service not previously documented at this scale
- Provision of preconception care via MTM can be implemented in any community pharmacy with minimal training and support


## Impact



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- To our knowledge, this is the first project to determine the feasibility of pharmacists providing preconception care using MTM and billing a third party for services
- Results of this project may provide justification for additional payers to reimburse for similar MTM services
- Through demonstrating the impact on preconception care, the role of the community pharmacist may continue to expand to include provision of additional preventive care services

## Questions?



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**Thank you!**  
Natalie A. DiPietro Mager  
n-dipietro@onu.edu

- Funding and Acknowledgments
  - This project was funded in part through a grant from the Community Pharmacy Foundation (grant #152)
  - The following are acknowledged for their contributions to this project:
    - Anne Marie Kondic, PharmD, & the Community Pharmacy Foundation
    - Erin Brigham, MPH, Research Lead, Healthcare Research, CareSource
    - Bob Gladden, Vice President, Analytics, CareSource
    - Kristina Rossi, PhD, Director, Healthcare Research, CareSource
    - Colleen Reagan, MA, Senior Associate, Client Services, OutcomesMTM

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## Evaluation of Community Pharmacist-Managed Transitions of Care on Hospital Readmission Rates

Rachel I Smith<sup>1</sup> PharmD, Craig Otting<sup>1</sup> PharmD,  
Joshua Feldmann<sup>2</sup> PharmD, Beth Engel<sup>1,2</sup> PharmD,  
Matthew Witry<sup>2</sup> PharmD, PhD


<sup>1</sup>Mercy Family Pharmacy, <sup>2</sup>The University of Iowa College of Pharmacy

Objective



- To evaluate the effect of community-pharmacist managed transitions of care on 30-day readmission rates for patients identified to be at high risk for hospital readmission.

Methods



Patients evaluated upon hospital admission by nursing staff using BOOST risk assessment tool on medical, surgical and skilled floors.  
*\*Inclusion criteria: polypharmacy, high-risk medications, degree of frailty, ADL or IADL, poor health literacy*

Patients interviewed by study pharmacist. Highest risk patients seen with high priority. Medication-related interventions documented.  
*\*Interventions: compliance, safety, class, reconciliation*

Hospital stay information sent to patient's routine retail pharmacy upon discharge for follow-up by telephone at 8 and 25 days post hospital discharge.

Retrospective 30-day readmission rates were collected from the Mercy electronic health record and compared using chi square tests.

Results




Figure 1: Risk Factor(s) per Patient

Risk Factor(s)	Percentage
1 risk factor	67.7%
2 risk factors	22.3%
3 risk factors	5.7%
4 risk factors	4.3%


Figure 2: High Risk Medication(s) per Patient

High Risk Medication(s)	Percentage
0 med	75.6%
1 med	22.3%
2 med	1.4%
3 med	1.4%
4 med	6.7%
5 med	24.4%
6 med	4.3%

Figure 3: Pharmacist Intervention(s) per Patient

Pharmacist Intervention(s)	Percentage
0 interventions	75.0%
1 intervention	25.0%
2 interventions	16.6%
3 interventions	38.4%
4 interventions	5.0%
5 interventions	0.2%
6 interventions	1.9%

Results




- Thirty day readmission rates were collected for high risk patients that were seen by the community pharmacist and high risk patients identified but not seen

Group	N	Number readmitted	30 day readmission rate
High Risk Patients Seen	497	58 hospital readmissions (within 30 days)	11.7%
High Risk Patients Not Seen	430	92 hospital readmissions (within 30 days)	21.4%

p<0.01


Conclusion



- This care model led to medication-related interventions. High risk patients receiving this care were half as likely to be readmitted within 30 days (p<0.01)
- Limitations: Patients were not randomized to the intervention.




**Impact**



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- This care model led to community pharmacists connecting with their patients post discharge
- This connection serves two purposes:
  - Improved patient health (decreased readmissions)
  - Improved pharmacist-patient engagement in the community

**Impact**



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- Subsequent analyses will describe pharmacist-provided interventions and will estimate the financial impact of the model
- These analyses will contribute to the impact of this care model on community pharmacy practice