

### Identifying pharmacy characteristics associated with effective implementation of a Medicaid community pharmacy care management intervention

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## Background

- More than 250 NC community pharmacies are participating in a pharmacy care management network (NC-CPESN).
- Pharmacies in the network offer enhanced services, such as a comprehensive medication reviews (CMR), and coordinate care with other providers.
- Few studies have examined the organizational factors that contribute Pa to successful implementation of pharmacy care management interventions.
- Effective implementation is driven by an organization's implementation climate or the extent to which an intervention is rewarded, supported, and expected in a pharmacy.
- Implementation effectiveness is influenced by innovation-values fit or employees perceptions about how well an intervention aligns with the pharmacy's values.

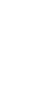
# **Objective**

To identify pharmacy characteristics associated with effective implementation of a Medicaid community pharmacy care management intervention.

# Methods

- We conducted bivariate analyses to compare the sample characteristics between <u>implementers</u> (completed  $\geq$  1 CMR during 2016 for high-risk patients) and non-implementers (no completed CMR during 2016 for high-risk patients).
- We conducted a multivariate hurdle regression to model the likelihood that a pharmacy completed a CMR during 2016 for high-risk patients (implementation) and to model how many CMRs were delivered during 2016 to high-risk patients (program reach).







### Table 1. Pharmacy characteristics associated with effective implementation

Characteristics	<b>Descriptive statistics</b> Mean (SD) or %	Equ Imp AM
Key independent variables		
Implementation climate	8.37 (5.087)	2.6
Innovation-values fit	12.51 (3.231)	2.1
Patient needs and resources		
Rural location	23.56	-0.7
Clinical factors	35.08 (29.8)	-0.0
Social factors	45.01 (31.8)	-0.0
340B participation	36.76	5.7
Proportion of high-risk patients	0.40 (0.16)	0.0
Log of high-risk patients		
Available resources		
Clinical pharmacist	19.37	9.8
Total number of staff	12.30 (7.525)	-0.3
Pharmacy student or resident	21.99	6.8
Access to knowledge and		
information		
Experience with NC-	31.38 (8.249)	0.4
CPESN (months)		
Past performance with NC- CPESN	0.02 (0.0)	0.4
Medicare Part D MTM	86.39	18.
Structural characteristics		
Independent pharmacy	43.46	4.14
Low prescription volume	34.55	1.0
Established pharmacy	30.77	2.0
Alpha		
Constant		-21
Observations		180

Significance of hurdle regression: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001, a. AME, average marginal effect, b. Effect sizes for equation 1 model are in percentage points; for example, 9.86 for presence of clinical pharmacist indicates that the probability of implementing NC-CPESN was 9.86 percentage points higher for pharmacies that have a clinical pharmacist

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uation 1:
plementation
/IE<sup>a,b</sup> (SE)
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.65 (1.85 X 10<sup>3</sup>)\*\*\* .17 (1.041 X 10<sup>2</sup>)\*

.77 (0.016)  $.04 (3 \times 10^4)$  $.06 (3 \times 10^4)$ .70 (3.50 X  $10^2$ )\* .00 (0.00)\*

.86 (4.75 X 10<sup>2</sup>)\*  $.31 (2.6 \times 10^3)$  $.86 (6.37 \times 10^2)$ 

.43 (1.3 X 10<sup>3</sup>)\*\*

.46 (1.3 X 10<sup>2</sup>)\*\*\*

.73 (6.246 X 10<sup>2</sup>)\*\*

4  $(2.02 \times 10^2)^*$ 0.032) 0.015

.04 (4.79)\*\*\*

Equation 2: **Program Reach** AME<sup>a</sup> (SE)

5.05 (1.5)\*\* 11.79 (3.170)\*\*\*

-12.81 (4.658)\*\* -0.14 (0.11) -0.10 (0.10) 12.80 (5.760)\*

(exposure)

32.33 (10.670)\*\*\* -1.98 (0.550)\*\*\* 14.55 (7.273)

1.57 (0.610)\*\*\*

0.10 (0.031)\*\*\*

28.05 (13.83)\*

0.43 (5.6) 7.23 (7.21) 4.14 (7.46) 0.56 (7.08 X 10<sup>2</sup>)\*\* -14.03 (1.383)\*\*\* 104

### Results

- A significantly higher mean implementation climate and innovationvalues fit score
- Were more likely to have a clinical pharmacist on staff
- Were more likely to participate in the Medicare Part D Medication Therapy Management program

- Implementation climate and innovation-values fit score
- Having a clinical pharmacist on staff
- Participation in Medicare Part D Medication Therapy Management and 340B Drug Pricing Program

# Implications

- Community pharmacies should develop strategies, such as rewarding and recognizing staff, to strengthen implementation climate for pharmacy care management.
- Community pharmacies should also develop strategies for strengthening innovation-values fit, such as leadership communication of how pharmacy care management programs fit with the pharmacy's mission.
- Community pharmacies' prior experience with medication therapy management may positively affect implementation of pharmacy care management programs.

Funding Opportunity Notice: The project described was supported by Funding Opportunity Number 1C12013003897 from the U.S Department of Health and Human Services, Centers for Medicare & Medicaid Services and a grant from the Community Pharmacy Foundation (71560). General Disclaimer: The contents provided are solely the responsibility of the authors and do not necessarily represent the official views of HHS or any of its agencies.

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From the <u>bivariate analyses</u>, we found that implementers had:

From the hurdle regression, we found that the following factors were positively associated with implementation and program reach: