

## Evaluation of Pharmacist-Provided Diabetes Care in a Hospital Re-admission Reduction Clinic

Meagan A. Williams, PharmD  
PGY-1 Ambulatory Care Pharmacy Practice Resident  
Virginia Commonwealth University Medical Center



**VCU** Medical Center

V I R G I N I A   C O M M O N W E A L T H   U N I V E R S I T Y

## Objectives

### Primary

- To evaluate the impact of pharmacist interventions on DM-related clinical markers in patients seen by CCT Pharmacy

### Secondary

- To characterize the type of DM-related pharmacist interventions made by CCT Pharmacy
- To evaluate DM-related ED visits and hospitalizations in patients seen by CCT Pharmacy




**VCU** Medical Center

VIRGINIA COMMONWEALTH UNIVERSITY

## Methods

- A retrospective case-control study
- This study has been approved by VCU IRB

Patient Selection Process	
<b>Inclusion Criteria</b>	<ul style="list-style-type: none"><li>■ Adults <math>\geq</math> 18 years of age</li><li>■ Enrollment in CCT Clinic <math>\geq</math> 12 months</li><li>■ Documented diagnosis of diabetes</li></ul>
<b>Exclusion Criteria</b>	<ul style="list-style-type: none"><li>■ Incarcerated and pregnant patients</li></ul>

 **VCU** Medical Center

VIRGINIA COMMONWEALTH UNIVERSITY

## Data Collection

### VCUHS Visit and Physician Data

- Health system cost and utilization data

### VCC Enrollment Data


- VCC enrollment and baseline patient information

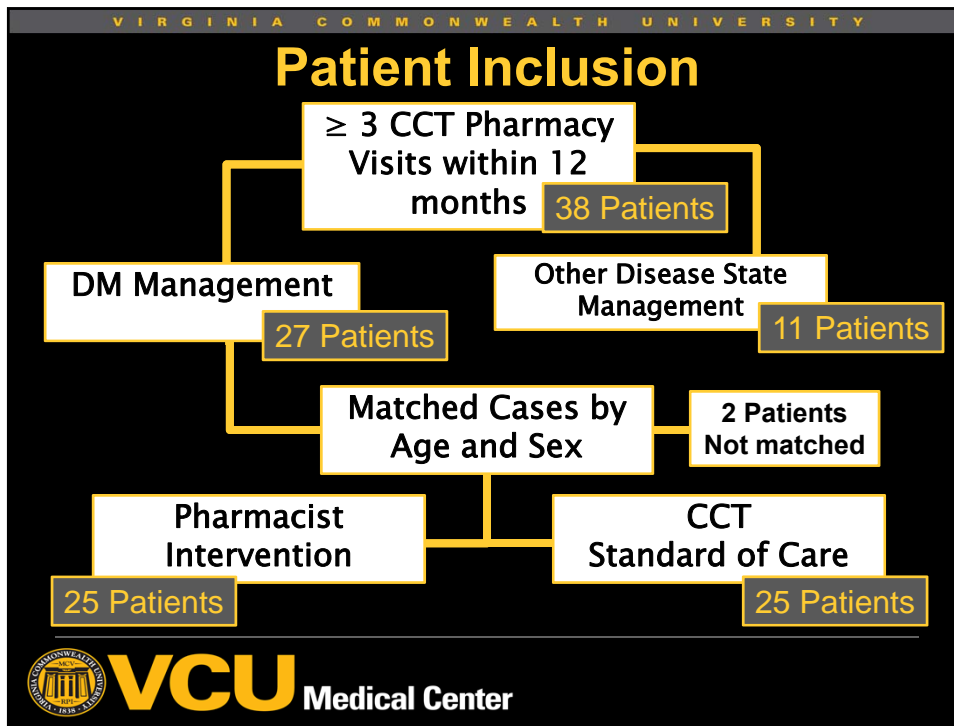
### Scheduling Data

- Arrived CCT Pharmacy visits

### Clinical Data

- EHR review for diabetes history, HbA1C, blood pressure, lipid panels and other clinical data

 **VCU** Medical Center



VIRGINIA COMMONWEALTH UNIVERSITY

## Baseline Characteristics: Demographics


	Pharmacist Intervention	CCT Standard of Care
<b>Age (yrs)</b>	53 (±7.01)	
<b>Male n(%)</b>	16 (64)	
<b>Female n(%)</b>	9 (36)	
<b>African American n(%)</b>	17 (68)	16 (64)
<b>Caucasian n(%)</b>	8 (32)	9 (36)

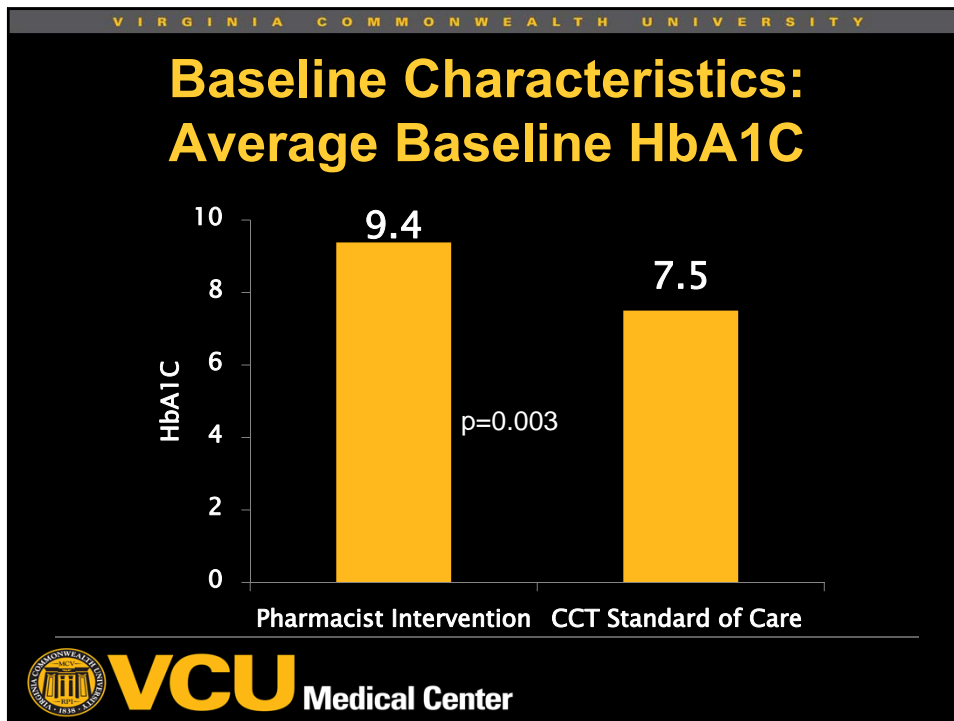
**VCU** Medical Center

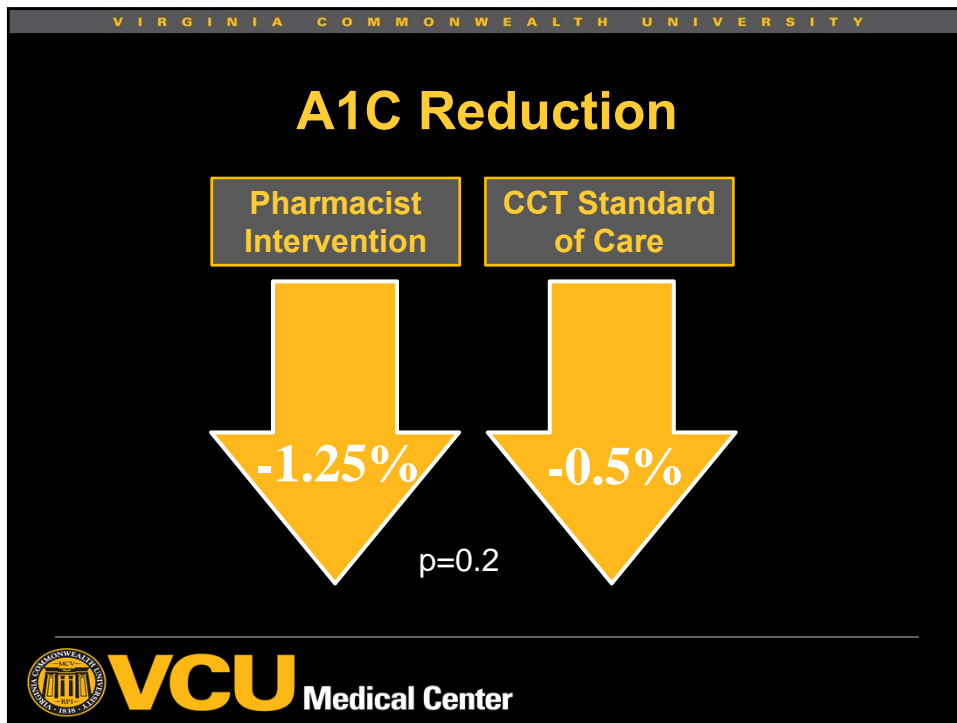
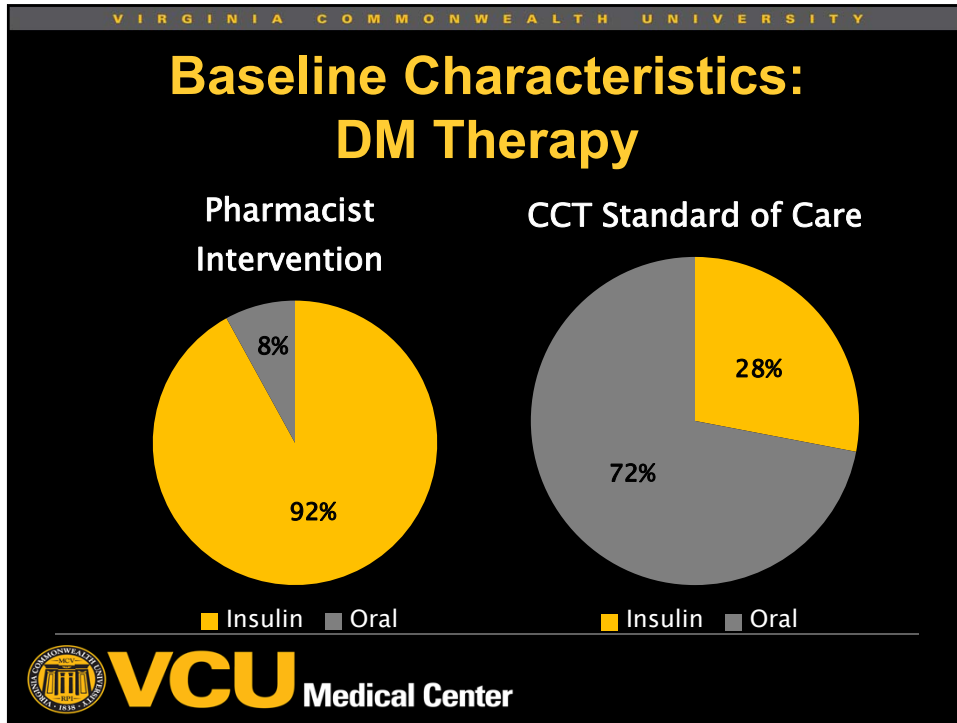
VIRGINIA COMMONWEALTH UNIVERSITY

### Baseline Characteristics: Clinical Data

	Pharmacist Intervention n(std. dev)	CCT Standard of Care n(std. dev)
<b>BMI</b> (kg/m <sup>2</sup> )	36 (9.6)	32 (6.3)
<b>SBP</b> (mmHg)	138 (18.6)	135 (18.2)
<b>DBP</b> (mmHg)	80 (9.3)	81 (8.5)
<b>LDL</b> (mmol/L)	112 (48.3)	104 (53.4)
<b>HDL</b> (mmol/L)	45 (13.3)	39 (9.7)
<b>TG</b> (mmol/L)	224 (190.4)	146 (91.4)

 **VCU** Medical Center





VIRGINIA COMMONWEALTH UNIVERSITY

## Pharmacy Interventions

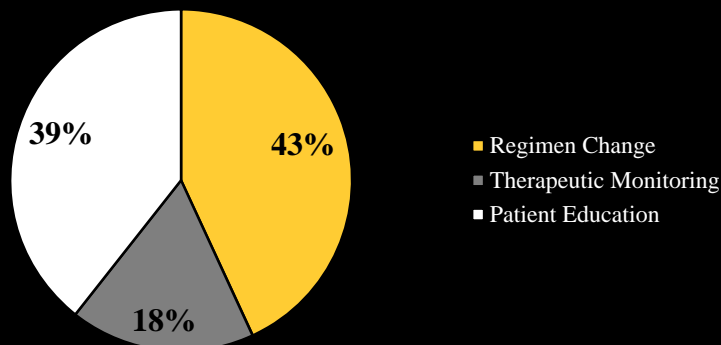
- 116 CCT Pharmacy visits identified
- Pharmacists provided at least one intervention at every CCT Pharmacy visit
- 320 CCT Pharmacy interventions identified
- On average CCT pharmacists provided 2.75 interventions per visit

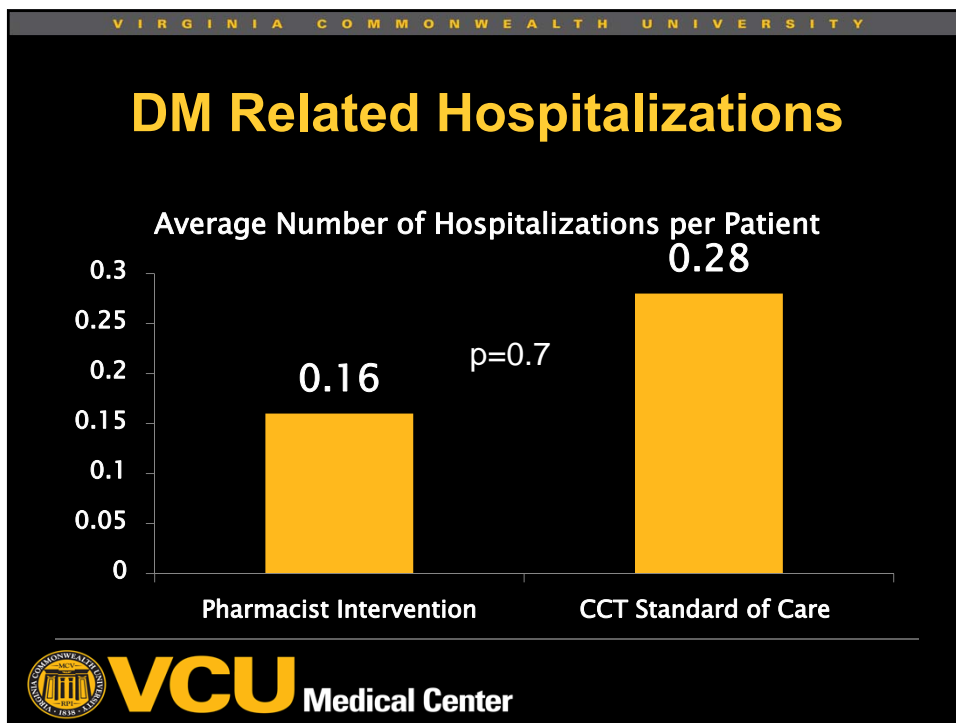
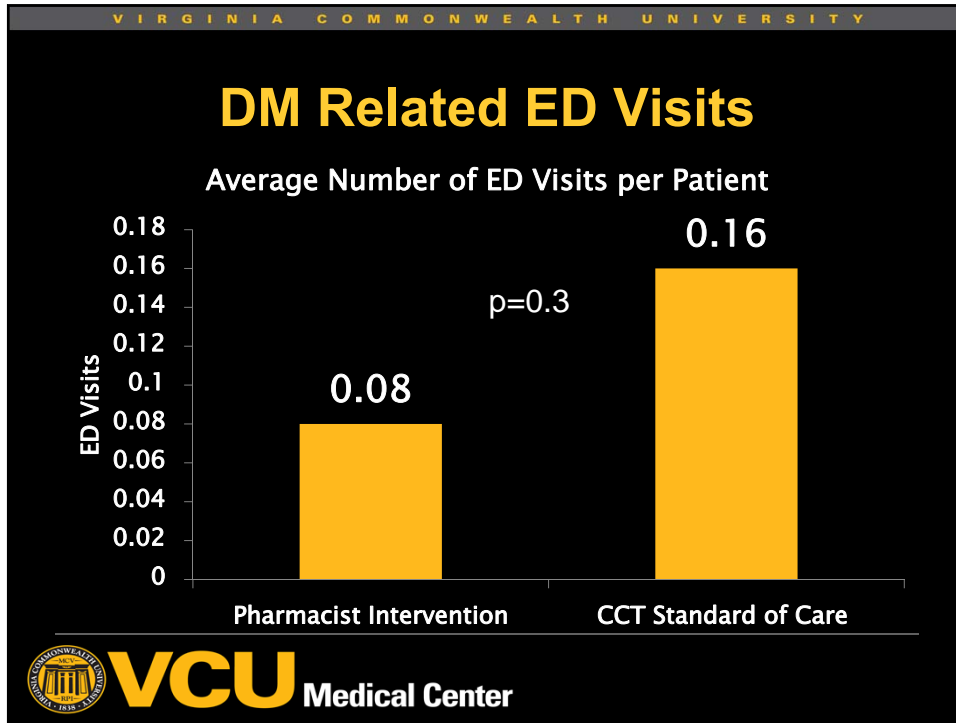


VIRGINIA COMMONWEALTH UNIVERSITY

## Classification of Interventions

Interventions





VIRGINIA COMMONWEALTH UNIVERSITY

## Limitations

- Retrospective, medical record review may lead to incomplete or inaccurate documentation
- Patient specific outcomes may not be directly related to CCT Pharmacy interventions
- High-risk patient population



VIRGINIA COMMONWEALTH UNIVERSITY

## Summary of Interprofessional Interventions

	Dr. Grady	S. Jones	Dr. Bohannon	In-house Pts	CCT Pharmacy
# visits	7	8	3	3	15
Med Errors	4	7	1	2	6
DRPs	5	6	3	1	7
Interventions	19	20	4	7	18
Education	4	8	3	2	15





VIRGINIA COMMONWEALTH UNIVERSITY

## Conclusions

- Patients seen by CCT Pharmacy had a reduction in A1C over 12 months
- CCT Pharmacy is an integral part of the CCT Team, providing on average 2.75 interventions per visit
- There was no difference in the amount of DM-related ED visits or hospitalizations between the two groups identified



**VCU** Medical Center