

2016 Pharmacist Role in Team-based Care for Diabetes and Hypertension

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Clinical Pharmacy Specialist Interventions in Pharmacist-led Ambulatory Diabetes Clinics

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Disclosure Statement

- **Christina Laird, PharmD**
- **I have no financial relationships or sponsorships to disclose**

Learning Objectives

- **Describe an example of diabetes care provided by pharmacists**
- **Review data that supports the impact of pharmacist managed diabetes clinics**
- **Identify state Collaborative Drug Therapy Management legislation**

Gulf Coast Veterans Health Care System General Information



Gulf Coast Veterans Health Care System General Information

- **Serves ~ 60,000 Veterans**
- **Mississippi, Alabama, Florida**
- **716 bed hospital in Biloxi, MS**
- **Four community based outpatient clinics (CBOCs)**

Joint Ambulatory Care Center (JACC) CBOC General Information



**Joint Ambulatory Care Center Facility
Pensacola, FL**

Joint Ambulatory Care Center (JACC) CBOC General Information

- 14 primary care physicians
- 19 specialties (1 endocrinologist)
- 14 primary care providers
- 4 clinical pharmacy specialists:
 - Anticoagulation
 - Diabetes
 - Lipids, pharmacotherapy
 - Home-based primary care

Patient Aligned Care Team (PACT) Model

- Patient Centered Medical home model
- Interdisciplinary team of providers:
 - Primary Care
 - Nursing
 - One clinical pharmacy specialist per 8 primary care providers



Patient Aligned Care Team (PACT) Model

Goals:

- Place patient care at the center of the relationship among physician and other health care team members
- Provide comprehensive, continuous, coordinated, high quality, efficient, and accessible care
- Targets management of chronic complex disease including diabetes

Clinical Pharmacy Specialist Services

- Clinical pharmacy specialists
- Midlevel providers
- Scope of practice
- Direct patient care

Clinical Pharmacy Specialist Services

Ambulatory specialty clinics at the JACC:

- Diabetes
- Lipid, Hypertension, Pain
- Anticoagulation
- Pharmacotherapy
- Hepatitis C
- Mental health
- Home based primary care

Clinical Pharmacy Specialist Services

Goals:

- Improve patient care / satisfaction
- Improve physician productivity / efficacy
- Cost savings

Pharmacist Scope of Practice Diabetes Clinic

- Initiate / renew / adjust medications
- Lab orders for therapeutic monitoring
- Obtain patient history, chart review, labs
- Medication reconciliation
- Monitor for adherence and ADRs

Pharmacist Scope of Practice Diabetes Clinic

- Conduct diabetic foot exams
- Make recommendations to providers
- Prescription counseling
- Arrange/schedule follow-up appointments
- Consults (nutrition, optometry, etc)

Diabetes Among the Veteran Population

- 2014: 6.6 million received VA Health Care
- 26% of veterans have a diagnosis of T2D
- Third most common diagnosis
- JACC: 5,000 patients with diabetes
- > 25% of pharmacy costs
- 1.7 million hospital bed days

Diabetes Among the Veteran Population

- Higher prevalence in Veterans (25%) vs general population (7.8%)
- Older, long standing diabetes, more comorbidities, lower sociodemographic characteristics
- The VA scored higher than Medicare on improved A1C, number of eye exams, lipid screenings, and preventative services offered

Pharmacist-Led Diabetes Clinic Appointment

- Recent changes in health
- Vital signs (weight, blood pressure)
- Diet, exercise, drinking, smoking habits
- Preventative care
- Medication reconciliation
- Hypoglycemic episodes
- Review blood glucose logs

Pharmacist-Led Diabetes Clinic Appointment

- Review labs
- Discuss medication changes
- Provide typed instructions of care plan
- Determine appropriate time for follow-up
- Clinic contact information
- Coordinate follow-up care

Pharmacist-Led Diabetes Clinic Metrics

Glycemic goals:

- Patient-specific A1C goal < 8%, < 7%
- Fasting blood glucose 80-130 mg/dL
- Post-prandial <180 mg/dL
- No hypoglycemic episodes

Pharmacist-Led Diabetes Clinic Metrics

Lipid Monitoring:

- Triglycerides < 150 mg/dL
- HDL > 40 mg/dL (men)
> 50 mg/dL (women)
- High intensity statin - LDL ↓ ~50%
- Total cholesterol < 200 mg/dL

Pharmacist-Led Diabetes Clinic Metrics

Other metabolic goals:

- Blood Pressure
 - Weight
- #### Reminders:
- Annual eye exam
 - Annual diabetic foot exam

Diabetes Metrics Tracked Per Primary Care Provider

- Glycemic: A1C > 9%
- Lipids: LDL < 100 mg/dL
- Blood Pressure < 140/90
- Weight: BMI, weight gain ≥ 7.5% or weight loss ≥ 7.5% over the past year
- Diabetes Medications:
 - Oral hypoglycemic medications
 - Insulin

Barriers to Optimal Diabetes Care Faced by Primary Care Providers

- Short visit times
- Complex comorbidities
- Growing patient census
- Infrequent patient contact between visits



Barriers to Optimal Diabetes Care Faced by Primary Care Providers

Patients with:

- Cognitive deficits
- Psychological barriers
- Poor disease state knowledge
- Poor medication knowledge
- No financial or insurance resources

Impact of clinical pharmacist intervention on diabetes-related outcomes in a military treatment facility.

Ann Pharmacother. 2012 March;46:353-7.

Pharmacist-Led Diabetes Clinic

Setting: Womack Army Medical Center Fort Bragg, NC

Design: Retrospective chart review

Model: Collaborative (PharmD, MD)

Objective: Evaluate T2D outcomes associated with care by PharmD vs traditional management

Pharmacist-Led Diabetes Clinic

Patients: N = 188

Outcome: A1C, blood pressure, LDL

Secondary: Percentage of patients who achieved ADA treatment goals

Inclusion: Age 28-86 years old
Two A1C measurements
At least one A1C value of $\geq 9\%$

Baseline Characteristics

	Pharmacist	Control	p Value
Participants, n	98	90	
Age, y, mean (SD)	63.6 (12.7)	55.6 (11.7)	0.093
Age, y, n (%)			
20-39	5 (5.1)	6 (6.7)	
40-49	8 (8.2)	18 (20.1)	
50-59	21 (21.4)	33 (36.7)	
60-69	29 (29.6)	22 (24.4)	
≥ 70	35 (35.7)	11 (12.2)	
Sex, n (%)			0.741
female	47 (48.0)	41 (45.6)	
male	51 (52.0)	49 (54.4)	
BMI, kg/m ² , mean (SD)	32.9 (6.8)	32.8 (6.9)	0.302
BMI, kg/m ² , n (%)			
underweight (<18.5)	1 (1.0)	0 (0)	
normal (18.5-24.9)	10 (10.2)	13 (14.4)	
overweight (25.0-29.9)	20 (20.4)	23 (25.6)	
obese (≥ 30.0)	67 (68.4)	53 (59.0)	
Blood pressure, mm Hg			
systolic, mean (SD)	133.0 (16.8)	132.9 (13.3)	0.024
diastolic, mean (SD)	69.8 (11.1)	75.3 (8.6)	0.099
LDL-C, mg/dL, mean (SD)	97.6 (23.8)	100.2 (47.8)	0.056
Hemoglobin A1C, %, mean (SD)	8.7 (2.3)	9.1 (2.2)	0.505

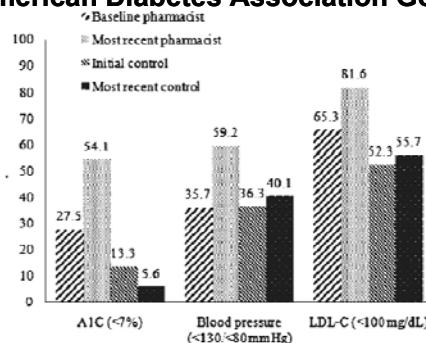
Primary End Points

	Initial		Most Recent	
	Pharm	Control	Pharm	Control
A1C (%)	8.7 (2.5)	9.7 (2.2)	7.1 (1.5)	9.9 (1.7)
SBP	133 (16.8)	132.9 (13.3)	124 (15.2)	131.3 (14.7)
DBP	69.8 (11.1)	75.3 (9.6)	68.4 (9.7)	76.8 (8.7)
LDL-C	87.6 (33.8)	109.2 (47.8)	71.3 (28)	104 (44.1)

Primary End Points

	Change		P-value
	Pharm	Control	
A1C (%)	-1.6	0.8	<0.001
SBP	-9.0	-1.6	0.001
DBP	-1.4	1.5	0.038
LDL-C	-16.3	-5.2	0.048

Percentage of Patients that Achieved American Diabetes Association Goals



Collaborative Practice

U.S. Collaborative Practice Map 2012



Importance to Alabama Public Health

- High prevalence of diabetes
- Overburdened health care system
- Reduction in health budget
- Limited access to primary care providers

Importance to Alabama Public Health

- Poor control can lead to increased costs:
- Nephropathy
 - Neuropathy
 - Retinopathy
 - Diabetic foot infections
 - Cardiovascular disease

State Legislation

- House Bill 494
- Introduced April 14, 2015
- Sponsored by Ronald Johnson (R-33)
- Formally authorizes collaborative practice agreements between pharmacists and physicians
- Referred to House of Representatives committee on Health

Potential CDTM Delegated Functions

- Perform patient assessments
- Select, initiate, monitor, continue, and adjust medication regimens
- Order laboratory tests related to medication monitoring
- Immunize for preventative care

Potential CDTM Delegated Functions

Dependent on:

- Training, education, experience, certification
- Physician needs and willingness

Resources

Alabama Pharmacy Association

– <http://www.aparx.org/>

Alabama Society of Health Systems Pharmacists

– <http://www.alshp.org/>

Alabama Department of Public Health

– <http://www.adph.org/Default.asp>

Centers for Disease Control

– http://www.cdc.gov/dhdsp/pubs/docs/Translational_Tools_Pharmacists.pdf

Resources

Certified Diabetes Educator

– <http://www.ncbde.org/>

Board Certifications :

– <http://www.bpsweb.org/>

APhA training certificates:

– <http://www.pharmacist.com/pharmacist-patient-centered-diabetes-care>

Delivering Medication Therapy Management Services

– <http://www.pharmacist.com/delivering-medication-therapy-management-services>