Interprofessional Outpatient Clinic Polypharmacy Management

Brett Hoffecker, MD
University of Kansas School of Medicine – Wichita
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Objectives

Demonstrate the role of the pharmacist in outpatient chronic disease management and polypharmacy use

Discuss the interprofessional Clinician / Pharmacist relationship

Identify effects on patient outcomes
<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose/Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorthalidone</td>
<td>12.5 mg Daily</td>
</tr>
<tr>
<td>Losartan</td>
<td>50 mg Daily</td>
</tr>
<tr>
<td>Rosuvastatin</td>
<td>40 mg Daily</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>100 mg TID</td>
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<tr>
<td>Linagliptin</td>
<td>5.0 mg Daily</td>
</tr>
<tr>
<td>Insulin Glargine</td>
<td>13.0 units qHS</td>
</tr>
<tr>
<td>Insulin Aspart</td>
<td>3.0 units TIDAC</td>
</tr>
<tr>
<td>Albuterol</td>
<td>90 mcg/inh q4hr PRN</td>
</tr>
<tr>
<td>Omeprazole</td>
<td>40 mg Daily</td>
</tr>
<tr>
<td>Sucralfate</td>
<td>QIDACHS</td>
</tr>
<tr>
<td>Loperamide</td>
<td>2 mg q4hr PRN</td>
</tr>
<tr>
<td>Hydrocodone/acetaminophen</td>
<td>10 mg-325 mg q6hr PRN</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>1000.0 mcg Daily</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>500 mg Daily</td>
</tr>
<tr>
<td>Cetirizine</td>
<td>10 mg Daily</td>
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</tbody>
</table>

**63 yo AA Male**

Poorly controlled DM2

Lower extremity edema

CKD Stage 3

Alcohol abuse

HTN

Chronic pain on narcotics

HLD

Tobacco use

Anemia of chronic disease

Depression

Peripheral neuropathy

Poor adherence
Extreme fluctuations in symptoms, poor understanding of how/when/which medications to take, hypoglycemic episodes

Started meeting with our clinic pharmacist who initially spent an hour reviewing meds and counseling

Found to have expired meds, overdosing, not taking as prescribed, multiple drug side effects and interactions

Next Several Months

Consolidated med list  Adherence Improved  Symptoms Improved  A1C decreased 9.5% to 6.1%
73 yo AA Male

Uncontrolled type 2 DM

HTN

CAD and MI w/ stents

Obesity

Asthma

Atorvastatin 40 mg Daily

Lisinopril-hydrochlorothiazide 20 mg-25 mg Daily

Metformin 1000 mg BID

Metoprolol tartrate 100 mg BID

Amlodipine 10 mg Daily

Clopidogrel 75 mg Daily

Glyburide micronized 6mg BID
Uncontrolled symptoms and A1C 10.8%

Started meeting with our clinic pharmacist weekly after the 2nd visit

Found to have lack of understanding of chronic disease, diet and exercise with poor adherence

Next Couple Months

Concerns with insulin use as a truck driver

Changed to Liraglutide (Victoza)

Patient education: chronic disease, meds, diet and exercise

Address barriers to care (cost of meds/needles)

Improved symptoms and medication adherence
55 yo Hispanic Male

- Uncontrolled type 2 DM
- Peripheral neuropathy
- Diabetic foot ulcer
- HTN
- Morbid obesity
- Chronic back pain

Medications:
- Aspirin 81 mg Daily
- Atorvastatin 40 mg Daily
- Enalapril 5 mg Daily
- Hydrochlorothiazide 12.5 mg Daily
- Insulin glargine 50 units daily
- Metformin 1000 mg BID
A1C 13.6% to 6.9% then up to 8.3%
BMI increased from 44 to 48
Began involving our clinic pharmacist on a regular basis
Identified lack of understanding, demotivation, uncontrolled symptoms

Next Couple Months

Education: obesity, nutrition, chronic disease, DM
Made insulin changes
Close follow up with phone and office visits
Accountability and coaching
Improved symptoms and medication adherence
Pharmacist skill sets

- Comprehensive medication reviews
- Education/accountability/coaching
- Decreasing/overcoming cost and logistical barriers
- Parameters of medication management
- Optimizing initial physician orders in collaboration
- Discussing recommendations/modifications with physicians
- Documenting interval patient adherence

Transition from residency to community setting

Can do in many settings, not only rural and residencies
Pharmacist Involvement

- Communication
- Location
- Access to EMR
- Reimbursement
- Pharmacy student involvement
- Quality improvement projects
- Collaborative practice agreements (CDTM-collaborative drug therapy management)

Collaboration

Kansas passed new law in 2014 for physician/pharmacist allowing collaboration practice agreements

Physician can refer patients to pharmacist (Can get INR checked at pharmacy and have coumadin adjusted).

Reimbursement methods not well established

Regulations are still being developed
Outcomes

- Optimizing patient care
- Increasing clinician efficacy and efficiency
- Close follow up and evaluation of adherence
- Helping physicians reach objectified markers
- Collaboration between clinicians and pharmacists

"If you don't have enough time, then you need a bigger team."
~ Loral Langemeier