

# Medication Optimization Use Case

<b>EAST HAWAII HEALTH CLINIC (EHHC) • Hilo, Hawaii</b>	
<b>Focus Area</b>	Chronic disease model that incorporates the clinician providing medication management services into a primary care patient population. The chronic disease therapy model focuses on outcomes seen when the clinician provides medication management services for common primary care conditions such as cardiovascular disease, diabetes, etc.
<b>At-a-Glance</b>	<ul style="list-style-type: none"> <li>■ <b>Organization Type:</b> Rural Primary Care Teaching Clinic</li> <li>■ <b>Launch Date:</b> 2009</li> <li>■ <b>Payment and Funding Sources:</b> <ul style="list-style-type: none"> <li>▪ Multiple payers for patient care and single payor (University School of Pharmacy) for pharmacists.</li> </ul> </li> </ul>
<b>Organization Details</b>	This is a large team-based, rural health clinic with multiple practitioners including physicians, medical residents, nurse practitioners, clinical psychology fellows, pharmacists and medical, nursing and pharmacy students.
<b>Brief History of Medication Management Program, Scope of Services</b>	Clinical pharmacy faculty members from Daniel K. Inouye College of Pharmacy have been providing medication management services since August 2016. Two clinical pharmacist faculty provide services three days a week (total 1.2 FTE). The clinic also provides medication management services for other conditions, drug information questions and medication access concerns.
<b>Results &amp; Achievements</b>  <b>Focus on the Quadruple Aim</b> <ul style="list-style-type: none"> <li>▪ <i>Better Outcomes</i></li> <li>▪ <i>Cost Savings</i></li> <li>▪ <i>Patient Satisfaction &amp; Engagement</i></li> <li>▪ <i>Clinician Satisfaction</i></li> </ul>	<b>Better Outcomes</b> <ul style="list-style-type: none"> <li>■ At baseline, the patients had an average of 1.13 of the three goals met, improving to an average of 2.02 goals.</li> <li>■ Goal attainment by ABC goal (Baseline -&gt; end of study period)           <ul style="list-style-type: none"> <li>▪ <b>Hemoglobin A1C:</b> 9.4% -&gt; 7.6%</li> <li>▪ <b>Systolic BP:</b> 140 mmHg -&gt; 130.2mmHg</li> <li>▪ <b>Diastolic BP:</b> 79.2mmHg-&gt;76mmHg</li> <li>▪ <b>High intensity Statins:</b> 58-&gt;90</li> <li>▪ <b>Moderate Intensity Statins:</b> 38-&gt;46</li> <li>▪ <b>Low Intensity or no Statins:</b> 15-&gt;15</li> </ul> </li> </ul>

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<p><b>Patient Success Story</b></p>	<p>At EHHHC, a 45-year old female was referred to the clinical pharmacist for medication management services by her primary care provider. The patient had a past medical history of Type 2 Diabetes, hypertension and hypothyroidism. The patient’s A1C at time of referral was 10.1%, and she was on a diabetic regimen of metformin IR 500 mg BID, insulin glargine 20 units daily and insulin as part four units TID. The patient reported she did not tolerate higher doses of metformin in the past, having adherence problems with insulin as part frequency.</p> <p>Through medication management visits, the pharmacist educated her on medication use and diet/exercise and adjusted the medication regimen over time to an end regimen of metformin ER 1000 mg BID, insulin glargine 24 units daily and dulaglutide 1.5 mg weekly. A1C decreased to 6.8% in 6 months. The patient was excited with A1C decline and demonstrated improved adherence with medication therapy.</p>
<p><b>Team-Based Care Strategy</b></p>	<ul style="list-style-type: none"> <li>■ <b>Interprofessional Team Roles:</b> <ul style="list-style-type: none"> <li>■ The Daniel K. Inouye College of Pharmacy uses the East Hawaii Health Clinic as a primary care teaching clinic.</li> <li>■ The clinic is staffed by physicians, nurse practitioners, behavioral health specialists, nurses and clinical pharmacists.</li> <li>■ Learners at the clinic include: family medicine physician residents, clinical psychology fellows and medical, nursing and pharmacy students.</li> </ul> </li> <li>■ <b>Role of the Pharmacist:</b> <ul style="list-style-type: none"> <li>■ Scope of advanced practice: Collaborative practice agreements (CPAs) allow the clinician to provide medication management services.</li> <li>■ Pharmacy faculty are clinical pharmacists with board certification in ambulatory care (BCACP).</li> <li>■ The clinical pharmacists precept pharmacy students and educate medical residents on pharmacotherapy</li> </ul> </li> <li>■ <b>Care Delivery Modality:</b> <ul style="list-style-type: none"> <li>■ Primary visits are in-person appointments of approximately 40 minutes with a clinical pharmacist.</li> <li>■ Patients are then scheduled for follow-up visits with the appropriate clinician (physician, pharmacist, etc.).</li> </ul> </li> </ul>
<p><b>Patient Referral Criteria</b></p>	<ul style="list-style-type: none"> <li>■ <b>Eligible Patients:</b> Patients are either referred to the clinic for medication management services by their primary care provider due to uncontrolled diabetes or selected by a clinical pharmacist via EHR review. Those with uncontrolled chronic conditions or who may have potential polypharmacy problems are referred to the care team.</li> <li>■ <b>Medication Management Focus Description:</b> Patients seen by the care team are diabetes patients referred for not meeting “ABC” goals. The interprofessional care team with the clinical pharmacist as the medication expert is focused on improving patients’ A1C and blood pressure.</li> </ul>

<p><b>Size of Medication Management Program</b></p>	<p><b>Number of:</b></p> <ul style="list-style-type: none"> <li>■ <b>Pharmacists:</b> 2             <ul style="list-style-type: none"> <li>▪ Pharmacist FTE: 1.2</li> </ul> </li> <li>■ <b>Practice Sites:</b> One clinic</li> <li>■ <b>Support Staff:</b> Clerical staff, behavioral health experts, students and residents assist with both physician and pharmacist appointments</li> <li>■ <b>Unique Patients Using Services:</b> <ul style="list-style-type: none"> <li>▪ 337 patients</li> <li>▪ 1,600 visits</li> </ul> </li> </ul>
<p><b>Program Success Factors</b></p>	<ul style="list-style-type: none"> <li>■ <b>Expanded Roles and Responsibilities of the Pharmacist</b> <ul style="list-style-type: none"> <li>▪ Broad collaborative practice agreements</li> <li>▪ Utilization of all staff effectively so the clinician focuses on patient care</li> <li>▪ Consistent care process and follow-up</li> <li>▪ Advanced training and credentialing</li> </ul> </li> <li>■ <b>Convenient Patient Access and Simple Program Entry</b> <ul style="list-style-type: none"> <li>▪ Identification of high-risk patients to benefit from medication management services (e.g., diabetes and comorbid conditions, polypharmacy/medication complexity, physician selection and referral)</li> <li>▪ Multiple care delivery modalities (e.g., in-person, telemedicine)</li> </ul> </li> <li>■ <b>Leverage Medication Management Services to Achieve the Quadruple Aim</b></li> <li>■ <b>Demonstrate Efficiency and Effectiveness of Cross-Setting Team-Based Care</b> <ul style="list-style-type: none"> <li>▪ High-risk patients identified either by clinicians or by records review are chosen to reduce risk of cardiovascular and other comorbid conditions and reducing those risk factors will result in improved outcomes.</li> </ul> </li> <li>■ <b>Demonstrate and Articulate the Value of Medication Management Services</b> <ul style="list-style-type: none"> <li>▪ Measurement and reporting sustain long-term clinician and program viability.</li> </ul> </li> </ul>
<p><b>Next Steps, Future Goals</b></p>	<ul style="list-style-type: none"> <li>■ Several next steps and opportunities for program improvement were identified. The EEHC clinical pharmacists will begin:             <ul style="list-style-type: none"> <li>▪ Providing educational sessions and brief in-service topics to the other clinicians that are helpful in increasing referrals</li> <li>▪ Utilizing clerical staff to coordinate patient scheduling</li> <li>▪ Reviewing other clinicians' patient schedules for the next day as a way to identify patients that may benefit from medication management services</li> </ul> </li> <li>■ Opportunities for program improvement include:             <ul style="list-style-type: none"> <li>▪ Aligning financial incentives</li> <li>▪ Improving patient awareness of the medication management program</li> <li>▪ Standardizing efficacy measurement for non-diabetes conditions</li> </ul> </li> </ul>

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<b>References</b>	Prudencio J, Kim M. Diabetes-related patient outcomes through comprehensive medication management delivered by clinical pharmacists in a rural family medicine clinic. <i>Pharmacy</i> 2020; 8:115.
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