

# Improving Medication Use Lowering Health Care Costs

## ***Potential Medication Therapy Management Impact: \$30 Billion in Savings***

The entire equivalent of the U.S. population pass through a pharmacy each week. Their accessibility, training, and the fact that medications are our most important weapon in the fight against chronic disease place pharmacists in a critical role to reform healthcare in this country. The information below demonstrates possible savings if pharmacist clinical services were more widely available.

### ***Diabetes Costs***

There are 23.6 million people in the United States, or 8% of the population, who have diabetes. The total prevalence of diabetes increased 13.5% from 2005-2007. Cost of diabetes is \$174 billion. Pharmacist programs such as The Asheville Project<sup>1</sup> and The Diabetes Ten City Challenge<sup>2</sup> have the potential to save \$1000/patient/year or \$23 billion per year.

### ***Cardiovascular Costs***

Estimates for the year 2006 are that 80,000,000 people in the United States have one or more forms of cardiovascular disease (CVD). The cost of CVD and strokes in the United States in 2009 is estimated to be \$475.3 billion (according to the American Heart Association and the National Heart, Lung, and Blood Institute). Asheville Project - Cardiovascular results showed a decrease in health plan expenditures of \$628 per patient. Potential savings across the entire population could be as high as \$5 billion.

### ***Asthma Costs***

22.8 million people currently have asthma, with direct costs estimated to be \$14.7 billion. The Asheville Project - Asthma saved \$725/patient/year. Potential savings across this population could be as high as \$1.6 billion.

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#### ***For additional information, please contact:***

Kristina E. Lunner, Vice President, Government Affairs

American Pharmacists Association • 2215 Constitution Avenue, NW • Washington DC 20037-2985  
800/237-APhA (2742) • 202/429-7507 • 202/497-5953 (c) • 202/429-6300 (f) • [klunner@aphanet.org](mailto:klunner@aphanet.org)

## ***Identified Problems: Medication Use & Chronic Disease***

Medications are the first line of defense and have been proven to be our most important weapon in the fight against most diseases, especially chronic diseases. Unfortunately, improper medication use has been estimated to cost our nation \$177 billion annually in total direct and indirect healthcare costs.<sup>3</sup> Poor adherence to medications causes approximately 125,000 deaths each year, and costs at least \$75.6 billion annually.<sup>4</sup>

A 2007 Milken Institute Report showed that the cost of treating the top seven chronic diseases were \$277 billion. The impact of lost workdays and lower productivity resulted in an annual economic loss in the U.S. of over \$1 trillion for 2003. The report stated that **reasonable improvements in preventing and managing chronic disease could reduce the economic costs of disease in the U.S. by 27% or \$1.1 trillion.** (\$905 billion from gains in productivity and \$218 billion from reduced treatment spending.)

## ***Proven Solutions: Utilize the Clinical Skills of Pharmacists***

Leverage the lessons learned from public and private sector programs that effectively utilize pharmacist clinical services in a collaborative care model to improve patient health outcomes and reduces overall healthcare costs. Employ pharmacists' medication expertise and accessibility to fully optimize medication therapy.

- Include pharmacists in any integrated care model; ensure that financial models neither prohibit nor discourage their involvement.
- Include pharmacists in transition of care activities.
- Ensure HIT is interoperable and provides pharmacists the data necessary to provide medication therapy management (MTM)<sup>5</sup> services.
- Provide MTM services in any health plan, regardless of its financing, as part of a comprehensive pharmacy benefit.
- Conduct an MTM grant program to help to determine best practices for certain patient populations.
- Include pharmacists in workforce strategies.

## ***Expected Results***

- 1) Improved quality of care and increased likelihood to meet desired health outcomes.
- 2) Improved medication management, including medication compliance.
- 3) Increased prevention and wellness activities such as health screenings and immunizations.
- 4) Reduced hospital readmissions due to medication misuse.
- 5) Improved care for patients transitioning between care settings.
- 6) Slowed rate of growth in health care costs, resulting in savings in projected spending

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## Supportive Data

*Every dollar spent on pharmacists' patient care services realizes health care savings of \$16.70.<sup>6</sup>*

- **Minnesota MTM Care Program:** estimated annual cost savings amount of \$403.30 per patient for MN adults achieving the “optimal care” benchmark for diabetes. Even though a cause and effect relationship cannot be firmly established, potential annual cost savings among the 41 MTMS (medication therapy management services) recipients with diabetes achieving optimal care would be \$15,325.<sup>7</sup> **Pharmacist-provided MTMS decreased health care costs from \$11,965 to \$8,197 per patient per year.<sup>8</sup>**
- **The Asheville Project:** improved A1C (blood glucose) levels, lower total health care costs, and fewer sick days. Due to its success, the Project was expanded to include cardiovascular disease, asthma and depression.
- **Diabetes Ten City Challenge (DTCC):** average total health care costs were reduced annually by \$1,079 per patient compared to projected costs if the DTCC had not been implemented; improvements in key clinical measures, including A1C, cholesterol and blood pressure; increases in preventive care measures, including the number of people with current influenza vaccinations, eye exams and foot exams.<sup>9</sup>
- **Midwest Business Group on Health:** in just one year, the employers' return on investment in actual savings per participant was \$1,467 or \$126,162 for all 86 participants compared to the projected costs for diabetics not in the program. Average total health care costs for participants declined by almost \$625.<sup>10</sup>
- **Department of Veterans Affairs (VA):**
  - **By extrapolating the average salary data for pharmacist,** the VA expects to see a \$368,000 savings from each pharmacist by providing clinical pharmacy services.<sup>11</sup>
  - **San Diego VA Facility Emergency Department Interventions:** \$3 was saved for every \$1 invested in prevention of adverse events, recognition of serious allergic reactions, formulary management and inventory control. Estimated cost avoidance at six months was \$845,592, and at twelve months was \$1,691,184.<sup>12</sup>
  - **Various VA Settings:** 92% of pharmacist recommendations were accepted by prescribers, which led to improved clinical outcomes in over 30% of the patients in each setting, avoided harm in 90% of the cases. Total savings was \$420,155.<sup>13</sup>
- **Literature Review:** A systematic literature search was conducted to identify published economic evaluations of pharmacist clinical services. Among studies reporting data necessary to determine a benefit-to-cost ratio (n=15), the pooled median value was 4.81:1—meaning that for every \$1 invested in pharmacist clinical services, \$4.81 was achieved in reduced costs or other economic benefits.<sup>14</sup>
- **Limited Health Literacy in Ambulatory Care Settings:** annual savings attributable to pharmacists include \$3.5 billion in hospital cost avoidance by coordinating medications from multiple prescribers.<sup>15</sup>
- **Anticoagulation Clinic:** annual savings attributable to pharmacists include more than \$1,600 in direct health care costs per patient at a pharmacist-run anticoagulation clinic, compared to usual medical care.<sup>16</sup>
- **Community Pharmacies:** Pharmacist interventions for nearly 24,000 patients during a 7-year duration prevented over \$7.1 million in additional health care expenses by avoiding costly hospital admissions, emergency room visits, unnecessary prescriptions and expensive medications.<sup>17</sup>
- **Pharmacies in Grocery Stores:** Internal data demonstrates a cost savings of \$24 to the health care system for \$1 spent on pharmacist-based medication therapy management programs.<sup>18</sup>

# Others See the Value of Pharmacist Clinical Services

**Agency for Healthcare Research and Quality (AHRQ):** "...Pharmacists were most likely to prevent the errors from reaching the patients (40 percent of intercepted medication errors), while physicians and patients were almost equally likely to intercept the medication error (19 percent and 17 percent of intercepted errors, respectively)."<sup>19</sup>

**Centers for Medicare and Medicaid Services (CMS):** "... we believe that MTMP [medication therapy management programs] must evolve and become a cornerstone of the Medicare Prescription Drug Benefit."<sup>20</sup> More recently, CMS stated that in their ongoing attempt "to maximize access to MTM", that the Agency wants to "raise the level of the MTM interventions offered to positively impact medication use."<sup>21</sup>

**George Halverson, Chairman and CEO of Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals:** "...because pharmacists are the most underutilized resource in health care, use[d] pharmacists to help advise if patients were not taking the drug, what the right drug would be, and the result of that was 73% reduction in deaths for heart disease and coronary heart disease for the entire heart population that we have in Colorado."<sup>22</sup>

**Institute of Medicine (IOM):** "...because of the immense variety and complexity of medications now available...the pharmacist has become an essential resource...and thus access to his or her expertise must be possible at all times."<sup>23</sup>

**Kendall Powell, Chairman and CEO of General Mills:** "No one understands these medications. They are too complex. We have white collar, professional, highly educated people at General Mills who do not know how to follow their meds. And so what we're doing now – again on this prevention tact – is we're sitting them down with a pharmacist. For as long as they need to, to understand what they're taking, why, the consequences of withdrawal, all the interactions. And again it makes a huge difference in the management of chronic disease."<sup>24</sup>

**Medicare Payment Advisory Commission (MedPAC):** "...a Medicare medical home would be responsible for monitoring its patients' medications. Medical homes should conduct periodic reviews of a patient's regular medications in addition to reviews immediately after an acute event, such as a hospitalization... Ideally, these medication reviews would be coordinated with a pharmacist."<sup>25</sup>

**New York Times:** "At this point in the health reform process, it's all about the numbers. While the Congressional Budget Office has begun to score health reform proposals to help calculate the price tag for reform, it hasn't scored the potential savings to the federal government of chronic disease prevention and management programs. It's admittedly difficult to quantify the long-term impact of prevention initiatives, but we are seeing more and more evidence from smaller-scale programs like the Ten City Challenge of the potential economic impact of such coordinated approaches. We believe such programs are critical long-term investments that will help bend the curve and also improve and save lives."<sup>26</sup>

## (Endnotes)

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- 2 Accessed July 2, 2009 at [http://www.aphafoundation.org/programs/Diabetes\\_Ten\\_City\\_Challenge/](http://www.aphafoundation.org/programs/Diabetes_Ten_City_Challenge/)
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- 21 HIMSS09 Keynote Address, accessed May 18, 2009 at <http://www.himssconference.org/general/videos.aspx>
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