

Coordinated care and comprehensive medication management: *Case management's critical role*



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Chief Executive Officer
Commission for Case Manager Certification

Agenda

- Welcome and Introductions
- Learning Objectives
- **Patrice Sminkey**, CEO, the Commission
- **Terry McInnis**, MD MPH, President, Blue Thorn, Inc. Health Care Consulting
- Question and Answer Session

Audience Notes

- There is no call-in number for today's events. Audio is by streaming only. Please use your computer speakers, or you may prefer to use headphones.
- Please use the "chat" feature on the lower left-hand part of your screen to ask questions throughout the presentations. Questions will be addressed as time permits after both speakers have presented.
- A recording of today's session will be posted within one week to the Commission's website, <http://www.ccmcertification.org>
- One continuing education credit is available for today's webinar only to those who registered in advance and are participating today.

Learning Objectives Overview

After the webinar, participants will be able to:

- Review evidence indicating that patient-centered comprehensive medication management is critical for success in ACO and PCMH models for improving clinical outcomes;
- Discuss the role of the clinical pharmacist as a core team member and how this function aids the overall outcomes of patients and efficiency of the team;
- Examine how case managers/care coordinators can help identify patients in need of comprehensive medication management services;
- Review evidence that implementing comprehensive medication management (CMM) in coordinated care systems improves clinical outcomes and reduces total health care costs
- Describe via case examples how CMM is implemented in a variety of practice settings for managing complex patients.

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Introduction



Patrice Sminkey
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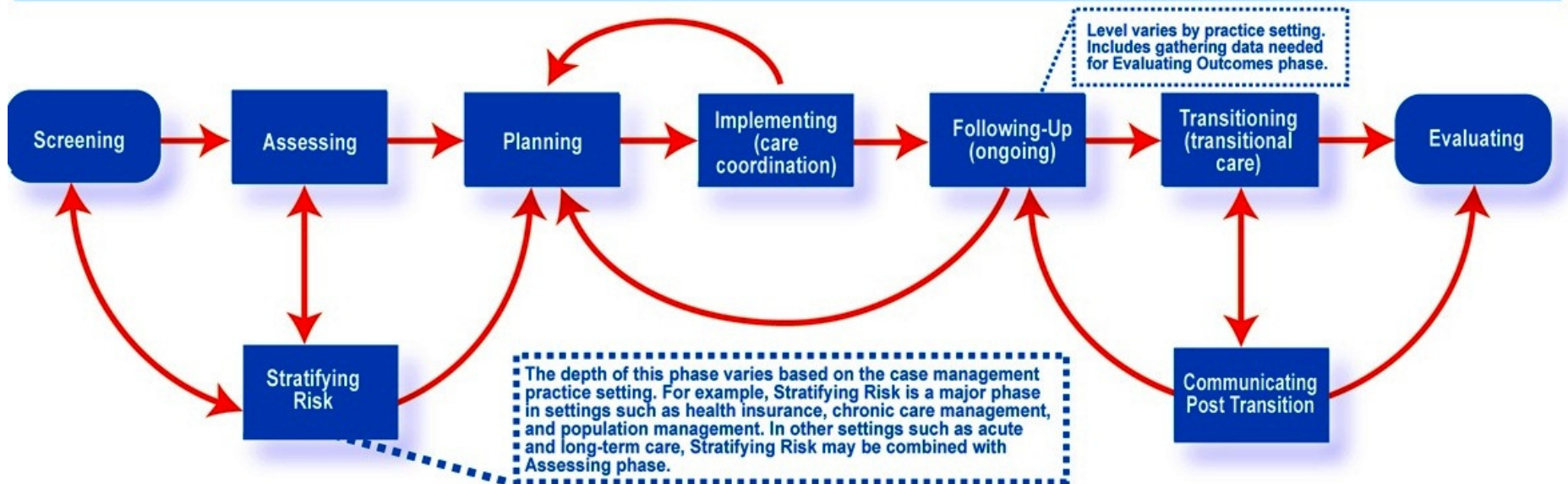
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Pharmacy and the case management process

CASE MANAGEMENT PROCESS High Level



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Pharmacists on the care team

- Medications typically part of the treatment plan
- Multiple co-morbidities = multiple medications
- Prescription drug use rises with age



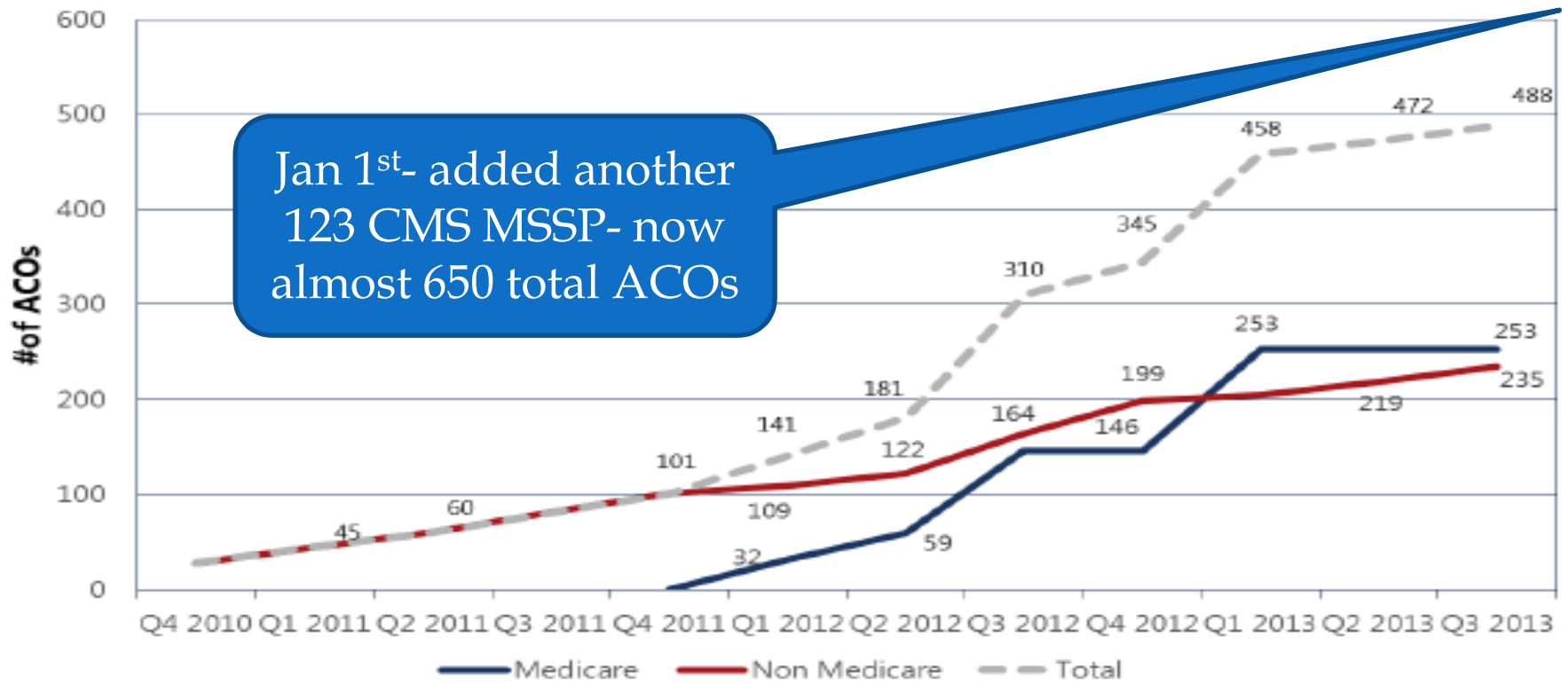
Coordinated care and comprehensive medication management: *Case management's critical role*



**Terry McInnis, MD MPH
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Growth in ACOs- >20 million lives

Growth of ACOs Over Time Medicare vs. Non-Medicare



What is an Accountable Care Organization or ACO?

“Simply stated, an ACO is a group of health care providers who agree to take on a shared responsibility for the care of a defined population of patients while assuring active management of both the quality and cost of that care.”¹

¹From AAFP Website- <http://www.aafp.org/online/en/home/practicemgt/specialtopics/designs/practiceaffiliationoptions/faq.html>

The facts

Summary of Key Data on Cost Outcomes from Patient-Centered Medical Home Interventions

Group Health Cooperative of Puget Sound

- 29% Reduction in ER visits and 11% reduction in ambulatory sensitive care admissions.
- Additional investment in primary care of \$16 per patient per year was associated with offsetting cost reductions, with the net result being no overall increase in total costs for pilot clinic patients.

Community Care of North Carolina

- 40% decrease in hospitalizations for asthma and 16% lower ER visit rate; total savings to the Medicaid and SCHIP programs are calculated to be \$135 million for TANF-linked populations and \$400 million for the aged, blind and disabled population.

Genesee Health Plan HealthWorks PCMH Model

- 50% decrease in ER visits and 15% fewer inpatient hospitalizations, with total hospital days per 1,000 enrollees now cited as 26.6 % lower than competitors.

Colorado Medicaid and SCHIP

- Median annual costs \$785 for PCMH children compared with \$1,000 for controls, due to reductions in ER visits. and hospitalizations. In an evaluation specifically examining children in Denver with chronic conditions, PCMH children had lower median costs (\$2,275) than those not enrolled in a PCMH practice (\$3,404).

Johns Hopkins Guided Care PCMH Model

- 24% reduction in total hospital inpatient days, 15% fewer ER visits, 37% decrease in skilled nursing facility days.
- Annual net Medicare savings of \$1,364 per patient and \$75,000 per Guided Care nurse deployed in a practice.

Case manager's role in medication management

- ▣ What is comprehensive medication management?
- ▣ Why is comprehensive medication management critical in care coordination?
- ▣ Which of my patients is in need of comprehensive medication management?
- ▣ How do I know if a pharmacist (or other provider) is delivering this level of service?

Medications and chronic disease facts

- 1 out of 10 Americans (children and adults) take 5 or more prescription medications¹
- ~ 40% of Americans over age 65 take 5 or more prescription medications¹
- Medicare beneficiaries with 5 or more chronic conditions²
 - See an average of 13 different physicians
 - Have 50 different prescriptions filled each year
 - Medicare beneficiaries with 4 or more chronic conditions are 99 times more likely to have a preventable hospitalization than someone without a chronic condition
- 75% of all physician office visits result in a prescription given with 2.6 billion prescriptions written in 2010³
- In 2009–2010, 21% of adults aged 45–64 and 45% of adults aged 65 and over had been diagnosed with two or more of nine common chronic conditions⁴

¹ CDC/NCHS, *Health, United States, 2012*, Figure 16 (table 91 exl file). Data from the National Health and Nutrition Examination Survey.

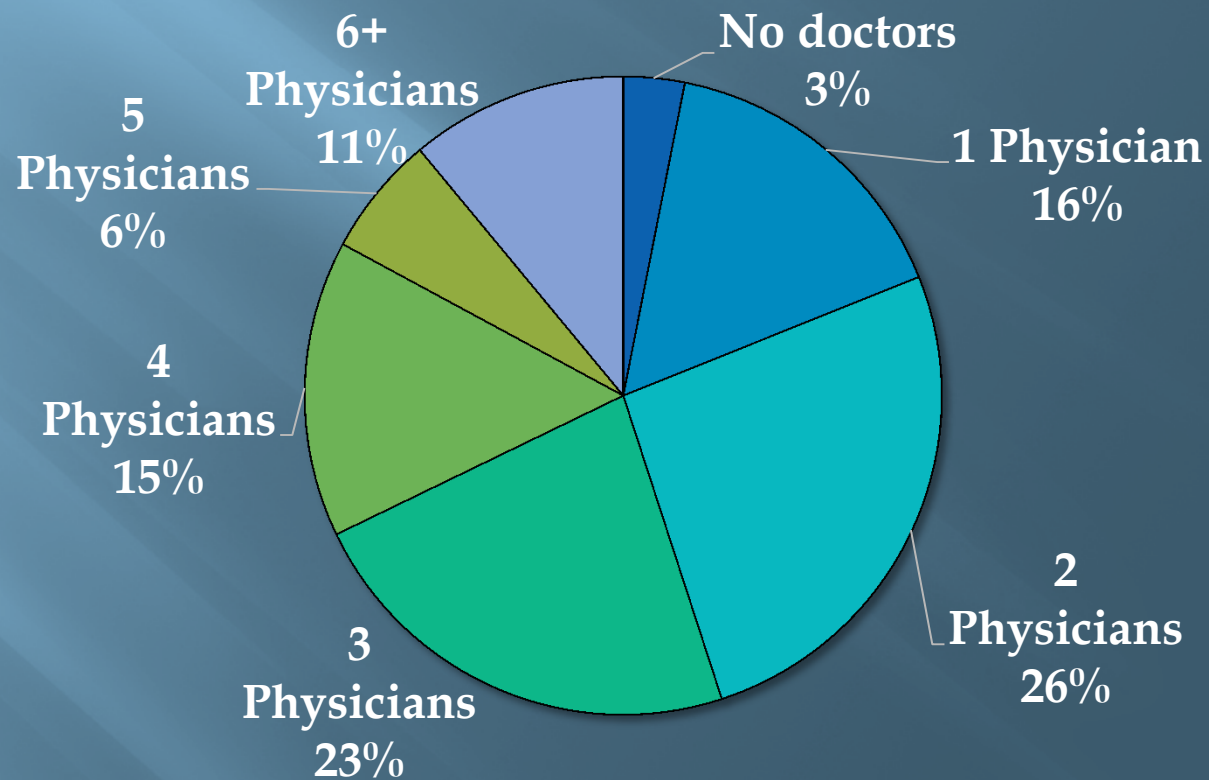
<http://www.cdc.gov/nchs/hus/contents2012.htm#fig16> and <http://www.cdc.gov/nchs/data/hus/hus12.pdf#091> ² “The Future of Medicare:

Recognizing the Need for Chronic Care Coordination, Serial No. 110-7, pp. 19-20 (May 9, 2007) -<http://www.aging.senate.gov/publications/592007.pdf>

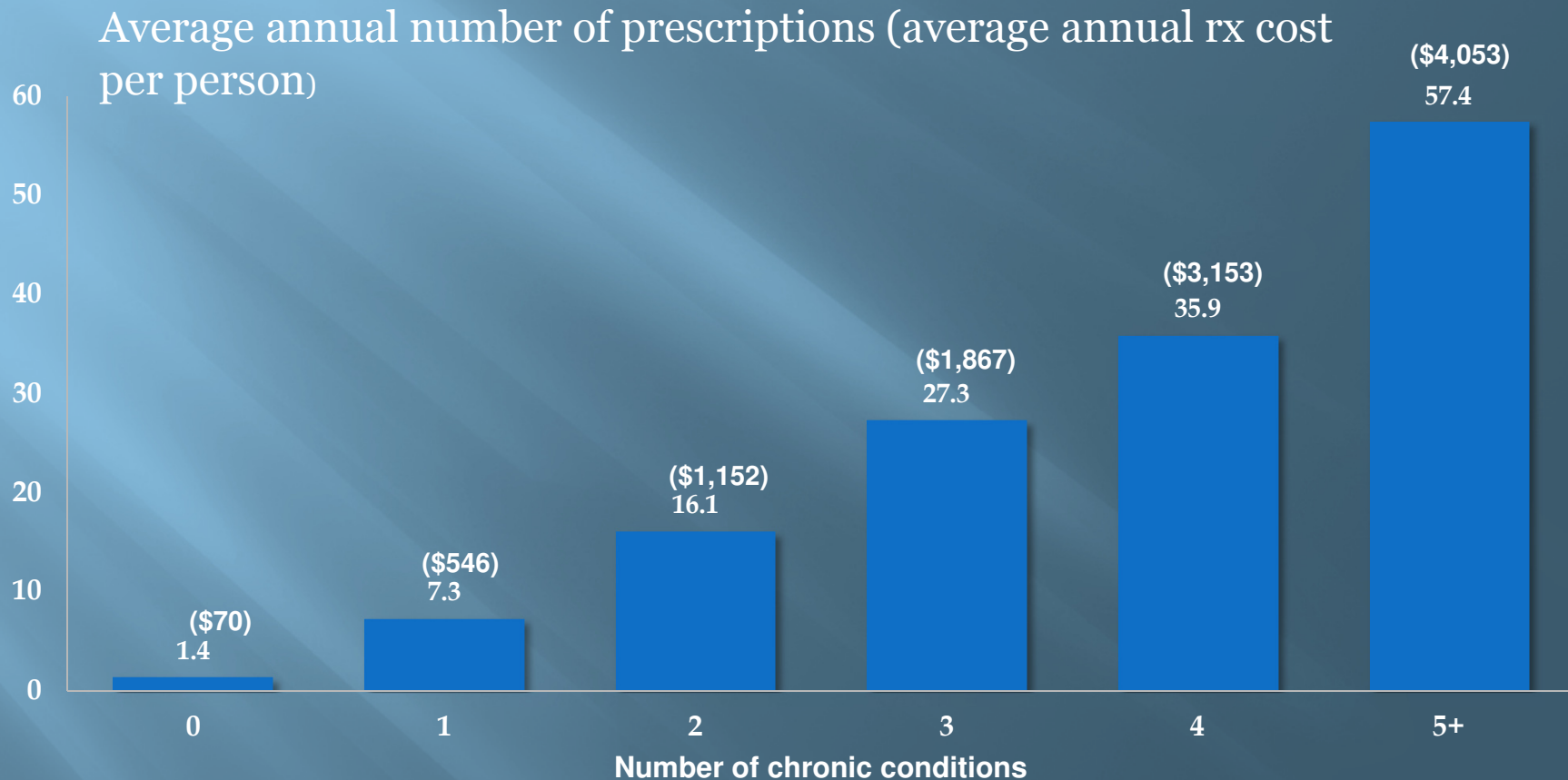
³ Source: [National Ambulatory Medical Care Survey: 2010 Summary Tables, tables 22, 23, 24](#) and <http://www.cdc.gov/nchs/fastats/drugs.htm> ⁴ NCHS Data Brief no. 100 July 2012 CDC <http://www.cdc.gov/nchs/data/databriefs/db100.htm>

More than half the people with serious chronic conditions use three or more different physicians

1 in 10 see more than 6 different physicians



People with multiple chronic conditions fill more prescriptions



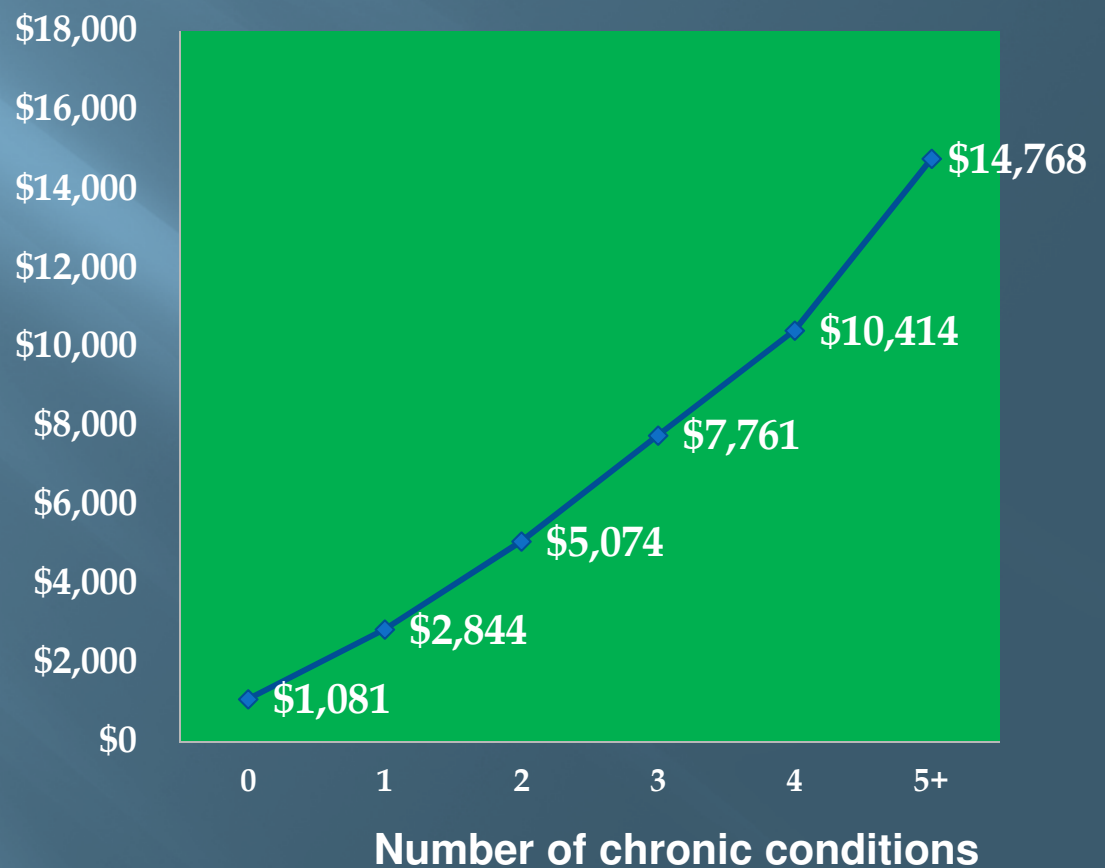
Source: Medical Expenditure Panel Survey, 2006 Charts from the Robert Wood Johnson Foundation: <http://rwjf.org/pr/product.jsp?id=50968>

Health care spending increases with the number of chronic conditions

Compared to individuals with no chronic conditions:

- Spending is almost 3 times greater for someone with a chronic condition
- Spending is over 7 times greater for someone with three chronic conditions
- Spending is almost 15 times greater for someone with five or more chronic conditions

Average per capita health care spending



Source: Medical Expenditure Panel Survey, 2006

Charts from the Robert Wood Johnson Foundation: <http://rwjf.org/pr/product.jsp?id=50968>

Comprehensive medication management – critical in preventable adverse events

- ▣ Office of Inspector General Report on Preventable Serious Adverse Events in Hospitalized Medicare Patients¹
 - Cited medication errors as top preventable cause of serious adverse events
- ▣ Avoidable hospital readmissions
 - Medication errors/ lack of reconciliation cited as a top cause of avoidable readmissions
- ▣ Attention to medication management is becoming more critical for providers/hospitals with CMS and commercial carriers lack of willingness to pay for “avoidable readmissions”

¹oig.hhs.gov/oei/reports/oei-06-09-00090.pdf

What is the cost of all drug related problems in ambulatory settings? (2004–2008 est.)

- The cost of all drug related problems in the ambulatory setting including untreated indication, improper drug selection, sub-therapeutic dosage, failure to receive drugs, overdose, adverse drug events, drug interactions, and drug use without indication
 - \$290 billion per year in avoidable medical spending (13 percent of total health care expenditures)!
 - Contributes to as many as 1.1million deaths annually!¹
- Given these facts- the savings in avoidable medical spending with appropriate medication use- could pay for over 90% of the \$325 billion (2012) spent on medications in the US, while saving many lives.²

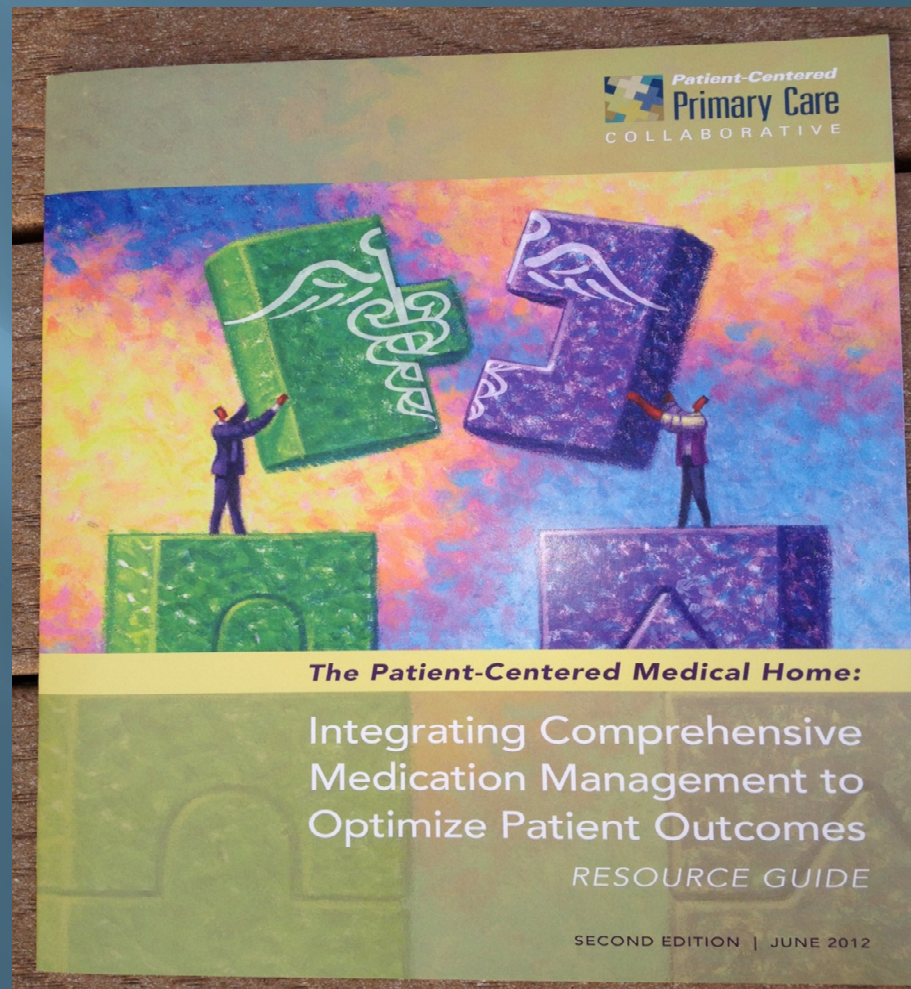
¹ "Thinking Outside the Pillbox A System-wide Approach to Improving Patient Medication Adherence for Chronic Disease" NEHI Research Brief - appendix 1 - August 2009 accessed 11/28/2011

http://www.nehi.net/publications/44/thinking_outside_the_pillbox_a_systemwide_approach_to_improving_patient_medication_adherence_for_chronic_disease

² IMS Institute- IMS Health Study Points to a Declining Cost Curve for U.S. Medicines in 2012- see reference in notes

The PCPCC defines comprehensive medication management (CMM)

- ❑ The PCPCC Guide defines comprehensive medication management in the patient centered medical home
- ❑ AHRQ Innovation Center- Quality Toolkit
- ❑ 2nd Revision with Appendix A- “Guidelines for Practice and Guidelines for Documentation



Steps to achieve comprehensive medication management

- 1) Identify patients that have not achieved clinical goals of therapy
- 2) Understand the patient's personal medication experience/history and preferences/beliefs
- 3) Identify actual use patterns of all medications including OTCs, bioactive supplements, and prescribed medications
- 4) Assess each medication for appropriateness, effectiveness, safety (including drug interactions) and adherence (in that order) focused on achievement of the clinical goals for each therapy

Steps to achieve comprehensive medication management

- 5) Identify all drug therapy problems (the gap between current therapy and that needed to achieve optimal clinical outcomes)
- 6) Develop a care plan addressing recommended steps including therapeutic changes needed to achieve optimal outcomes
- 7) Patient agrees with and understands care plan which is communicated to the prescriber/provider for his/her consent/support

Steps to achieve comprehensive medication management

- 8) Document all steps and current clinical status vs. goals of therapy
- 9) Follow-up evaluations with the patient are critical to determine effects of changes, reassess actual outcomes, and recommend further therapeutic changes to achieve desired clinical goals/outcomes
- 10) A reiterative process - care is coordinated with other team members and personalized (patient unique) goals of therapy understood

The Case Management Knowledge Framework– CCMC– Looks a Lot Like the CMM 10 Steps!

1. Screening	6. Following up
2. Assessing	7. Transitioning (transitional care)
3. Stratifying risk	8. Communicating Post Transition
4. Planning	9. Evaluating
5. Implementing (care coordination)	The overall process is iterative and cyclical; the phases are revisited as necessary until the desired outcomes are achieved

Patient appointment summary combined dataset

- ▣ 42,746 appointments with 15,426 patients
- ▣ Average number of medications taken by each patient: 14.6
- ▣ Average number of medical conditions per patient reviewed by the pharmacist: 7.2
- ▣ Ave. cost of the service per encounter- \$81.97 with 2.77 encounters/patient

Comprehensive medication management combined dataset¹

- These data are de-identified from 3 different practice settings:
 - Clinical pharmacist in an advanced large integrated delivery system delivering face-to-face services and some telephonic services for Medicaid, Commercial, and self-pay patients (67% of the data)
 - Clinical pharmacists in a community setting both face-to-face and telephonic in collaboration with a Part D MTM Medicare health plan sponsor and local providers (14% of the data)
 - Clinical pharmacists delivering telephonic services to patients for multiple client payers- mostly commercial and employer (19%)

¹ Pharmacists utilized the Assurance IT electronic therapeutic record system and training through Medication Management System, Inc.- www.medsmanagement.com The practice of comprehensive medication management was consistent with that described in the PCPCC Resource Guide- Integrating Comprehensive Medication Management to Optimize outcomes <http://www.pcpcc.net/files/medmanagement.pdf>

Drug therapy problems-- combined dataset

		<u>Number of DTP</u>	
Indication	Unnecessary Drug Therapy	4387	5%
	Needs Additional Drug Therapy	25,898	30%
Effectiveness	More Effective Drug Available	5785	7%
	Dosage Too Low	21,434	25%
Safety	Adverse Drug Reaction	8860	10%
	Dosage Too High	6168	7%
Compliance	Noncompliance	<u>1342</u>	<u>16%</u>
Total		85,957	

Only 16% of all drug therapy problems were "Adherence" related

Pharmacists utilized the Assurance IT electronic therapeutic record system and training through Medication Management System, Inc.-

www.medsmanagement.com

Drug therapy problems combined dataset-

85,957 drug therapy problems were identified and resolved

14,744 patients (94%) had ≥ 1 drug therapy problem

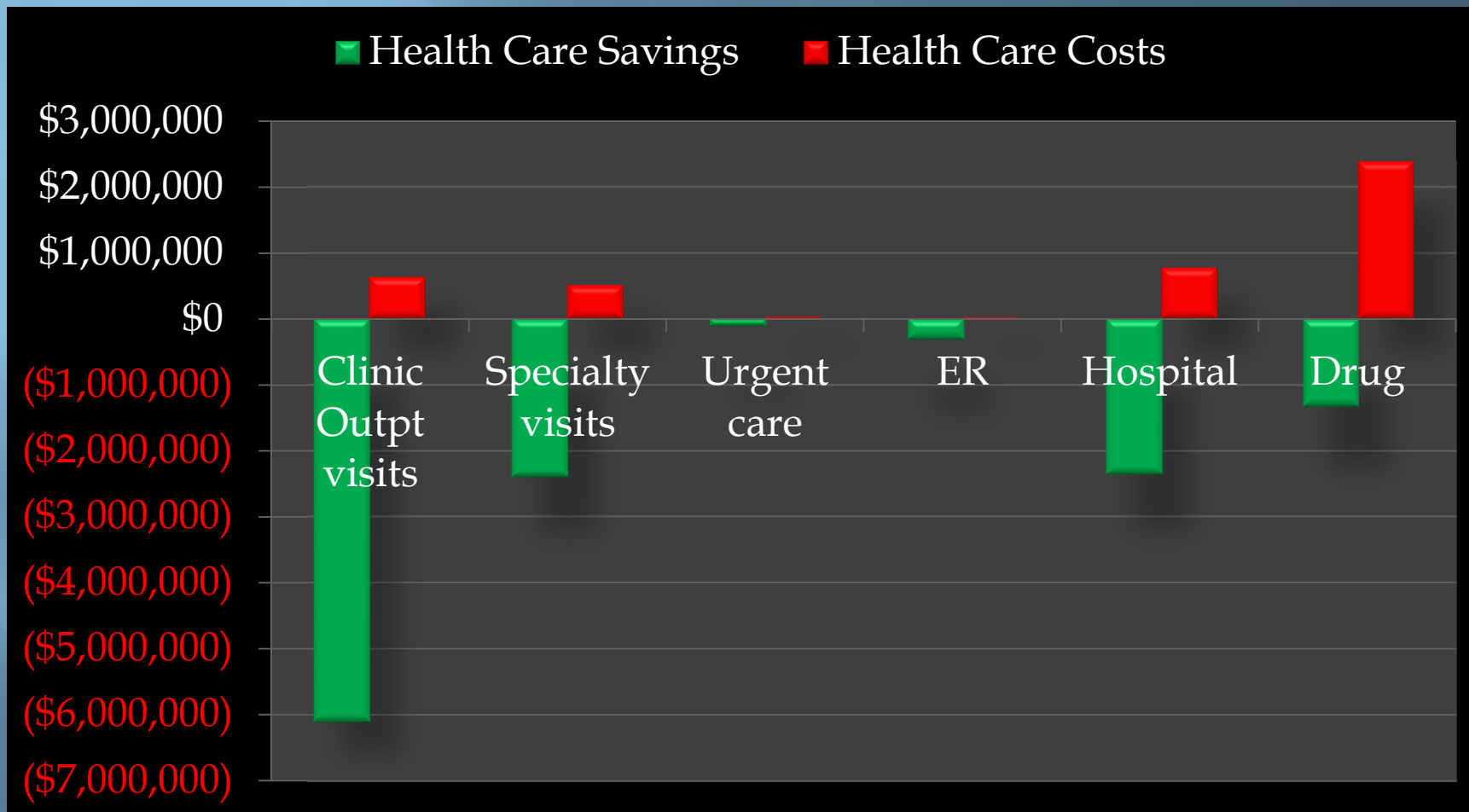
9904 patients (64%) had ≥ 3 drug therapy problems

6185 patients (40%) had ≥ 5 drug therapy problems

2212 patients (14%) had ≥ 10 drug therapy problems

Patients averaged 5.6 drug therapy problems each!

Drug costs increase appropriately as other costs decrease—combined dataset



CMM diabetic patients – % at goal on latest encounter – combined dataset

	Percent at goal (Latest)	90th Percentile HEDIS PPO 2010 Commercial	90th Percentile HEDIS HMO 2010 Medicare
Systolic	79%	71%	75%
Diastolic	93%	71%	75%
HbA1C	77%	67%	80%
Total Cholesterol	86%	No measure	No measure
LDL	75%	51%	65%
HDL	58%	No Measure	No measure
Triglycerides	57%	No Measure	No measure

NCQA- The State of Healthcare Quality 2011- Appendix 14B/16A-<http://www.ncqa.org/tabid/836/Default.aspx>
 Pharmacists utilized the Assurance IT electronic therapeutic record system and training through Medication Management System, Inc. www.medsmanagement.com The practice of comprehensive medication management was consistent with that described in the PCPCC Resource Guide- Integrating Comprehensive Medication Management to Optimize outcomes <http://www.pcpcc.net/files/medmanagement.pdf>

Overall health care savings/costs- 15,426 patients and 42,746 encounters combined dataset

- ▣ Estimated medication cost increase=
\$1,054,696 (\$68 per patient)
- ▣ Estimated medical cost savings=
\$10,528,608 (\$683 per patient)
- ▣ Combining medication and health care utilization
overall cost savings = \$ 9,473,912
 - \$222 per patient encounter
 - \$614 per participating patient
- ▣ Total cost of the CMM services= \$3,503,889
 - Average cost of service \$81.97/encounter

Overall health care savings/costs- 15,426 patients- bottom line! Combined dataset

- ▣ Total savings- \$5,970,023
 - Combining medication and health care utilization overall cost savings (-)Total cost of the CMM services (\$ 9,473,912- \$3,503,889)
 - \$387 savings per patient
 - \$140 savings per encounter

- ▣ ROI= 2.7-1

18 of the 33 ACO quality of care metrics depend on appropriate medication use to achieve goals!

- ▣ All condition readmissions
- ▣ Ambulatory sensitive readmissions
 - Copd, chf
- ▣ Medication reconciliation - post discharge
- ▣ Immunizations-
 - Influenza, pneumococcal
- ▣ Tobacco use assessment and cessation intervention
- ▣ Diabetes
 - HbA1c control (<8%), poor control (>9%), LDL (<100), BP (<140/90), and aspirin use
- ▣ Hypertension- control
- ▣ Ischemic vascular disease
 - LDL control (<100), use of aspirin or another anti-thrombotic
- ▣ Heart failure- beta-blocker for LVSD
- ▣ Coronary artery disease (CAD)
 - Drug therapy for LDL cholesterol, composite score- ACE or ARB for patients with CAD and diabetes and/or LVSD

Effect of a Pharmacist Intervention on Clinically Important Medication Errors After Hospital Discharge

A Randomized Trial

Patients: Adults hospitalized with acute coronary syndromes or acute decompensated heart failure.

Intervention: Pharmacist-assisted medication reconciliation, inpatient pharmacist counseling, low-literacy adherence aids, and individualized telephone follow-up after discharge.

Results: Among 851 participants, 432 (50.8%) had 1 or more clinically important medication errors; 22.9% of such errors were judged to be serious and 1.5% life-threatening. Adverse drug events occurred in 258 patients (30.3%) and potential ADEs in 253 patients (29.7%). The intervention did not significantly alter the per-patient number of clinically important medication errors (unadjusted incidence rate ratio, 0.92 [95% CI, 0.77 to 1.10]) or ADEs

Conclusion: Clinically important medication errors were present among one half of patients after hospital discharge and were not significantly reduced by a health-literacy-sensitive, pharmacist-delivered intervention.

“Staying on medication may not translate to avoiding readmission” *Duke News*, Nov. 18, 2013

- “A targeted effort to help high-risk heart failure patients stay on their medications did improve adherence to drug regimens, but had surprisingly little effect lowering hospital readmission rates, according to a study at Duke Medicine.
- This was a study at Duke called CHIME, for Chronic Heart Failure Intervention to Improve Medication Adherence
- “The approach was successful, Granger reported. Patients who received the intervention were four times as likely to adhere to their medication regimens vs the comparison group.”
- But when the researchers looked at the hospital readmission rate, they found that readmissions were not significantly different between the two groups
- “We were surprised by this, and it’s leading us to dig into what is going on,” Granger said.

Why is med rec and adherence falling short? A case example

You have a patient with CHF, diabetes, HTN, and depression who was just discharged from the hospital

- ▣ What happens to the diet from the hospital to home-strict diet in hospital to home potato chips and doughnuts?
 - Did the diuretic needs just change?
 - Did the insulin needs just change?
- ▣ Do they take only the meds at discharge, switch back to the meds at home, or some combination of both?
(Neither will be effective in this scenario)
- ▣ Problem: Med rec and adherence don't address the clinical changes that are occurring. This patient is at risk of weight gain and poor blood sugar control with readmission.

Why is medication management needed in the PCMH/ACO?

Comprehensive medication management has been shown to facilitate the efficiency and effectiveness of the PCMH team in improving patient clinical outcomes, reducing morbidity and mortality, while lowering total healthcare costs.

Medication management is even more essential when multiple providers/prescribers are involved with complex patients

These are exactly the patients that you case manage!

Patient feedback

“I think this should be part of your primary care visit. This would benefit both Mayo & the patient to coordinate all meds prescribed from various physicians.”

“I think this service should be available to every patient. It was probably one of the most helpful appointments I have ever had.”

MAYO Clinic Comprehensive Medication Management Patients

Used with permission- Laura O'Dell PharmD- MTM Supervisor MAYO

MA House bill- Patient advocates request CMM

10/29/2013

House Chairman, Representative Jeffrey Sanchez and
Senate Chairman, Senator John Keenan
Joint Committee on Public Health
Boston, MA 02133

RE: House Bill 3506-Chronic Disease Care Coordination

We are a group of voluntary health and advocacy organizations serving people with chronic conditions in Massachusetts. We are writing to urge you to support House 3506, a bill filed by Committee on Health Care Financing House Chairman Steven M. Walsh to reduce the impact of chronic disease in Massachusetts by improving care coordination.

...“The plan should also include Comprehensive Medication Management (CMM) because most patients suffering from chronic disease take multiple medications prescribed by different physicians. Studies have shown that **coordinating medication both improves clinical outcomes and reduces health care costs**. One study found that CMM saved \$614 per patient.”

Diverse patient advocates want CMM – MA bill supporters



Take Control. We Can Help.™
Stephen Evangelista
Chief Executive Officer
Arthritis Foundation, New England Region
Newton



Marc Hymovitz
Director, Government Relations & Advocacy
Framingham



Debra Saryan,
Executive Director
Asthma & Allergy Foundation of New
England
Needham



Casey Harvell
Director, Public Policy, MA
American Lung Association of the Northeast
Waltham



Jaime Sullivan
Director of Public Policy & Advocacy
COPD Foundation



Leslie Brody
President & Chief Executive Officer
Epilepsy Foundation New England
Serving MA, RI, NH & ME



Lynne Morin
Senior Manager, Field Advocacy &
Outreach
Leukemia & Lymphoma Society, MA
Chapter
Natick



Beverly Goodell
Director of Events
Lupus Foundation of New England
Framingham

MAMH

Massachusetts Association for Mental Health
Tim O'Leary
Deputy Director
Massachusetts Association for Mental
Health
Boston



Case Managers are key for assuring patients medications are comprehensively managed

- ▣ Advocate and help implement a systematic approach to medication management for high risk patients - you know who they are
 - Watch out for patient clinical condition and medication changes through transitions- make sure outcomes are optimized by appropriate use of medications
- ▣ Utilize the PCPCC Guide as a framework – Appendix A has Guidelines for Practice and Guidelines for Documentation
- ▣ Recognize the role that clinical pharmacist as a critical team member can play when delivering this level of service and begin to demand that level of care for your clients in coordinated care systems
- ▣ You can be transformational in educating others on the need for a comprehensive medication management approach and successfully identifying high risk patients for these services
 - Remember the last step - it is reiterative- not a one and done- patients needs change continually

Thank you!

PCPCC Resource Guide- Integrating Comprehensive Medication Management to Optimize Patient Outcomes 2012

<http://www.pcpcc.org/guide/patient-health-through-medication-management>

For additional information on the training and IT platform utilized in several of these studies originally developed by the Univ. of Minnesota School of Pharmacy visit- Medication Management Systems, Inc. (Dr. McInnis is a Medical Consultant for MMS)

www.medsmanagement.com

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Disclosures - Blue Thorn Inc. and Dr. Terry McInnis actively consult and present nationally for many organizations including professional pharmacy, medical, pharmaceutical company, universities, health care systems, and medication management solution providers

Question and Answer Session



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Thank you!

- Please fill out the survey after today's session
- Those who signed up for Continuing Education will receive an evaluation from the Commission.
- A recording of today's webinar and slides will be available in one week at www.ccmcertification.org



Appendix: Additional Data



Terry McInnis, MD MPH
President- Blue Thorn, Inc.
Health Care Consulting

University of Colorado- Family Medicine

"I fully endorse clinical pharmacists as part of the best and most advanced PCMH teams. We use them here (Colorado) and recommend them everywhere"

Frank Verloin deGruy III, MD, MSFM
Woodward-Chisholm Professor and Chair
Department of Family Medicine
University of Colorado School of Medicine
Anschutz Medical Campus- 2012

Dr. deGruy is a visionary primary care leader and educator in team-based care with NCQA level 3 PCMH Practices

Permission given to Dr. T. McInnis to use quote - from email correspondence September 2012

The Minnesota MTM experience

Patients targeted

- *1 of 12 chronic conditions in adults 18-64 and*
 - *2 or more health care claims (related to those conditions) in the last 12 months*
-
- ▣ 285 MTM patients and 252 comparison group – all BCBS Minnesota health plan members
 - Fairview Health System clinics and MTM pharmacists
 - 6.4 medical conditions and 7.9 drug therapies per MTM patient

Isetts, et al. *J Am Pharm Assoc.* 2008;48(2):203-211)

Minnesota MTM Process of Care Overview

- Patient-centered with a clinical pharmacist
- Consistent and systematic process that:
 - Assessed all of the patient's drug-related needs
 - Identified drug therapy problems
 - Established therapeutic goals
 - Designed a medication therapy care plan
 - Conducted follow-up visits to evaluate progress
 - Communicated information to the patient's physician or provider
- Linked Medication use to clinical outcome improvement

The Minnesota experience: 637 drug therapy problems identified

Indication	Needs additional drug therapy	34 %
	Unnecessary drug therapy	6%
Effectiveness	Ineffective drug	12%
	Dosage too low	20%
Safety	Adverse drug reaction	14%
	Dosage too high	4%
Compliance	Noncompliance	<u>10%</u>
		100%

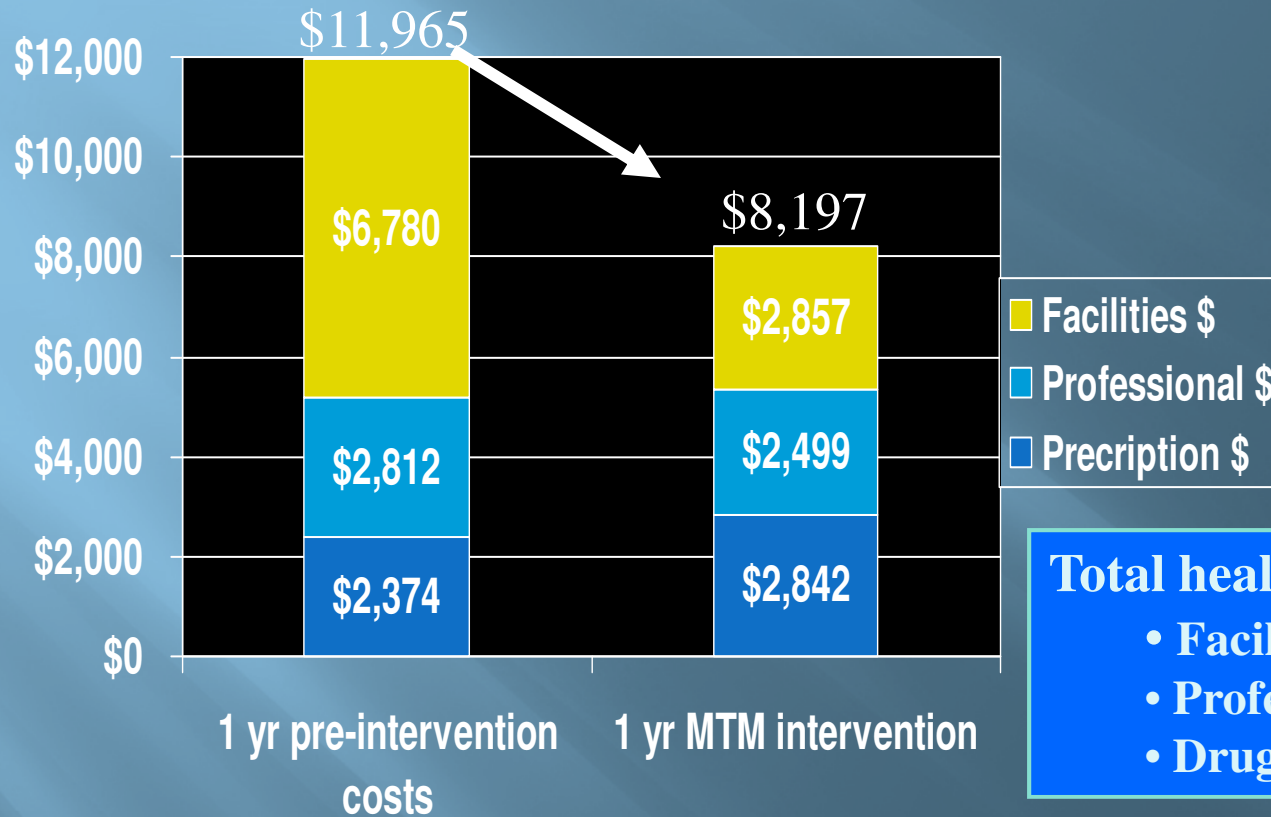
Source: Isetts, et al. J Am Pharm Assoc. 2008;48(2):203-211

Clinical Outcomes of Minnesota MTM Services:

- ▣ Clinical results improved!
 - Goals of therapy improved from baseline 76% to 90% after MTM
 - 2.2 drug therapy problems per patient identified and resolved – 78% resolved without MD
 - HEDIS® hypertension criteria achieved in 71% of MTM patients versus 59% comparison group
 - HEDIS® cholesterol criteria achieved in 52% of MTM patients versus 30% comparison group

Isetts, et al. *J Am Pharm Assoc.* 2008;48(2):203-211)

Economic outcomes of Minnesota MTM: Target disease, then optimize drug therapy



Total health care cost: -31.5%

- Facility costs -57.9%
- Professional costs -11.1%
- Drug costs +19.7%

MTM services provided a 12:1 ROI