Clinical and Safety Outcomes and Racial Analysis of Eligibility for a Medicare Medication Therapy Management Program

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(ARS Response Card: Channel 51)

Disclosure

"Erwin Jeong declares no conflicts of interest or financial interests in any product or service mentioned in this presentation, including grants, employment, gifts, stock holdings, or honoraria."

Learning Objectives

At the completion of the presentation, the participant will be able to:

- Determine what outcome measures could be used to assess a Medicare MTM program
- Identify clinical and safety outcomes to assess the quality of the Medicare MTM program

Poll Question

Who is primarily responsible for managing your Medicare MTM patients?

Pharmacists

Physicians

Nursing

Other healthcare team members

Goal of a MTM Program

To optimize therapeutic outcomes through improved medication use and to reduce the risk of adverse events

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003. H.R. 1-21. Jan 2003.

Outcomes Measured by Payers

- No. of med-related problems resolved
- Med over/under utilization
- Duplications resolved
- Drug interactions identified/resolved
- Overall med costs
- Overall healthcare costs
- Cost associated with adverse drug events
- Quality measures (HEDIS)
- No. of high-risk meds
- Generic utilization
- Formulary utilization
- Non treated conditions identified
- Alignment of therapy to guidelines
- Improved adherence
- Improved med understanding
- Member satisfaction

Source: APhA MTM Digest (Mar 2011)

Kaiser Permanente, California

- Integrated healthcare delivery system
  - Kaiser Foundation Health Plan, Inc.
  - Kaiser Foundation Hospitals
  - Permanente Medical Groups

- 6.8 million members
  - 804,000 Medicare members
    - 2010: 40,000+ eligible for MTM
- 35 hospitals
- 356 medical offices
- 12,300 physicians
- Electronic medical record (EMR)

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Medicare MTM Program

- 2010 MTM Description
  - Multiple chronic conditions: 3
    - bone disease-osteoporosis; chronic heart failure; diabetes mellitus; dyslipidemia; stroke; coronary artery disease; peripheral artery disease
  - Multiple covered Part D drugs: 5
    - antihyperlipidemics; antihypertensives; insulins; oral hypoglycemics; osteoporosis agents
  - Incurred cost for covered Part D drugs: > $3000

- Service provided by clinical ambulatory care pharmacists and support staff
  - Telephonic service

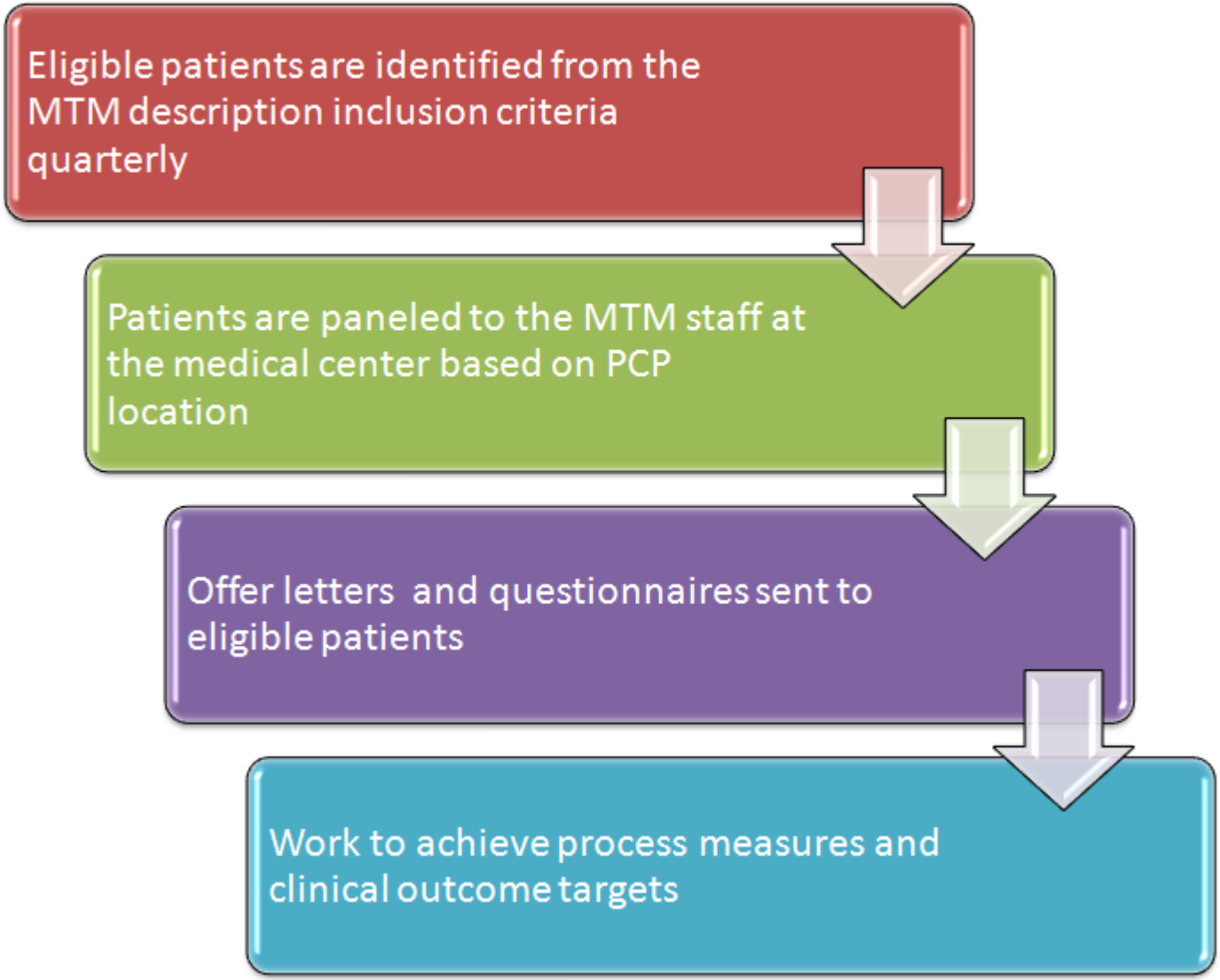
Collaboration with Physicians

- Clinical pharmacists work under collaborative practice agreements with physicians
  - Patient specific authorization requested
    - If authorization is not received or not approved, recommendations are made
  - Allows for initiation, titration, discontinuation of drug therapy, ordering labs relating to drug therapy, etc.

Collaboration with Others

- Team work approach with various members of the healthcare team to improve the outcomes of our patients

Process



Targeting the Eligible Population

Pharmacy and medical data are used to “target” specific populations

Report on Your Existing Data

- Demographic data (age, gender, ethnicity/race, etc)
- Enrollment or process measures (Comprehensive Medication Reviews, Disenrollment, Long Term Care)
- Outcome measures

Demographic Data


HSR Health Services Research

DOI: 10.1111/j.1475-6773.2010.01118.x
RESEARCH ARTICLE

Public Programs

Disparity Implications of Medicare Eligibility Criteria for Medication Therapy Management Services

Junling Wang, C. Daniel Mullins, Lawrence M. Brown, Ya-Chen Tina Shih, Samuel Dagogo-Jack, Song Hee Hong, and William C. Cushman

(Health Services Research. 2010; 45(4): 1061-1082)

- Objective: To determine if there were racial and ethnic disparities in meeting eligibility criteria for MTM services provided for Medicare Part D beneficiaries in 2006
- Findings: Hispanic and African Americans were less likely to meet MTM eligibility

- CMS communication in April 2011
  - Encouraged plans to evaluate targeting criteria and determine if any disparities exists in their MTM programs

Analysis of Our Ethnicity/Racial Data

- Collected ethnicity data from our EMR for patients eligible for the 2010 MTM program and the Medicare population
  - Ethnic designation was available in about 74% of patients
- Assessed the number of patients eligible for MTM compared to the total for the 3 ethnic/racial categories
- Results:

Ethnicity	Total	Not Eligible	Eligible	Percent	Odds Ratio (95% CI)
Black	45,197	39,968	5,229	11.6%	1.63 (1.58,1.69)
Hispanic	34,775	31,256	3,519	10.1%	1.40 (1.35,1.46)
White	349,866	323,884	25,982	7.4%	Reference

- Conclusion: We did not find ethnic/racial disparity for MTM eligibility in the black and Hispanic populations compared to whites

What Else Can Be Measured?

- Process measures are well defined by CMS
    - Eligible patients; Disenrollment (by reason); CMRs (offered vs received)
- Data available in the patient level file each plan submits
    - LTC patients
    - Number of Targeted Medication Reviews
    - Number of prescriber interventions
    - Number of changes to drug therapy as a result of MTM interventions

Evaluate your MTM program and ask…

- What patient population are your targeting?
- What are the common interventions being done?

MTM Process Measure

- Percent of eligible patients receiving a comprehensive medication review (CMR)

	2008	2009	2010	2011
Eligible patients	28,007	40,494	40,865	39,842
Patients receiving a CMR	12,849*	17,658*	24,616	26,796
Percent of eligibles receiving a CMR	45.9%	43.6%	60.2%	67.3%

*based on pharmacist encounters with patients (No. of beneficiaries who participated)

Outcomes Examples in the CMS MTM Description Template

- Drug-drug interactions
- High-risk meds
- Diabetes med dosing, suboptimal treatment
- Medication adherence
- Costs (drug, medical, healthcare)
- Hospitalization, ER utilization
- Satisfaction (member, provider)

MTM Outcome Measures

- During the early years, we assessed our population and reported on a couple outcome measures (LDL, A1c control)

- In 2009, we worked with the America's Health Insurance Plans (AHIP) and piloted various MTM measures:
  - Program demographics (CMR, coverage gap, etc)
  - Generic utilization
  - Medication adherence (statins, oral hypoglycemics)
  - Safety measures
  - Clinical measures

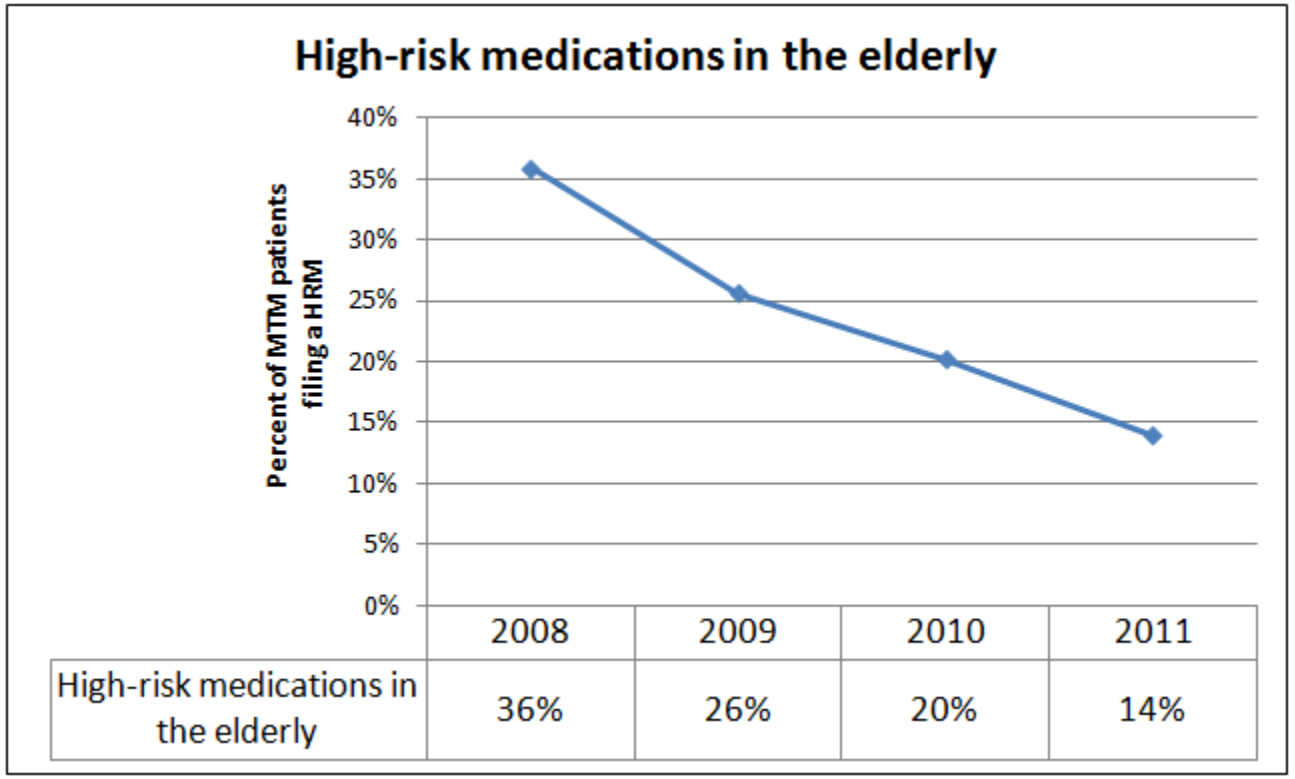
- Piloted Pharmacy Quality Alliance (PQA) MTM measures
  - CMR; high-risk meds; ACE/ARB in DM & HTN; controller use in asthma

Safety Outcomes

1a. High-risk medications (HRM) in the elderly

- Percent of MTM patients ≥ 65 years receiving one or more prescriptions for any HRM

  (lower the number the better)



	2008	2009	2010	2011
High-risk medications in the elderly	36%	26%	20%	14%

Safety Outcomes (continued)

1b. High-risk medications in the elderly (pre vs. post)

- Percent of MTM patients ≥ 65 years who received a CMR that discontinued or did NOT fill the HRM120 days after the CMR (higher the number the better)

	2010	2011
High-risk meds (pre vs post)	69.4%	72.9%

Safety Outcomes (continued)

2. Patients with DM & HTN not receiving an ACEI or ARB

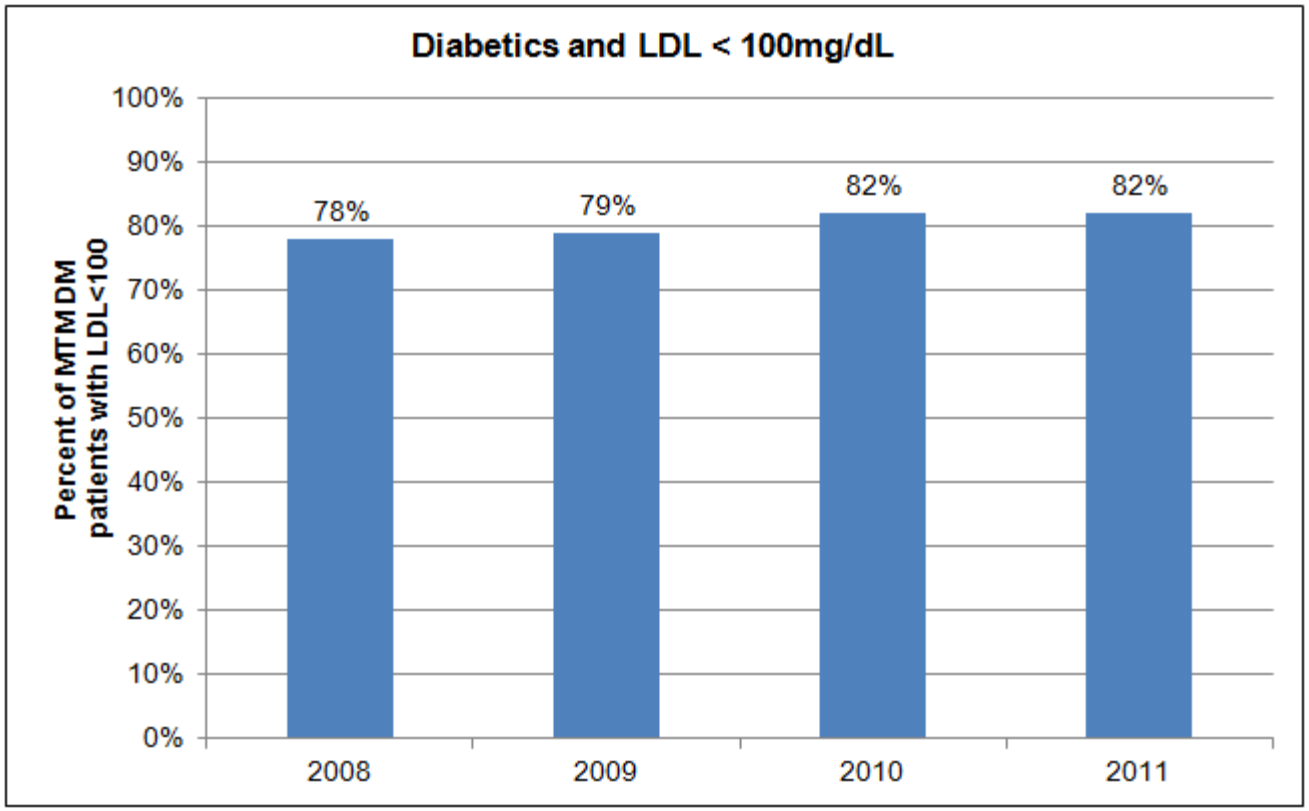
- Percent of MTM patients receiving a medication for both diabetes and hypertension and are NOT receiving a prescription for an ACEI or ARB (lower the number the better)

	2010	2011
Suboptimal treatment in DM & HTN	18.9%	16.3%

Clinical Outcomes

1. Diabetics and LDL < 100mg/dL

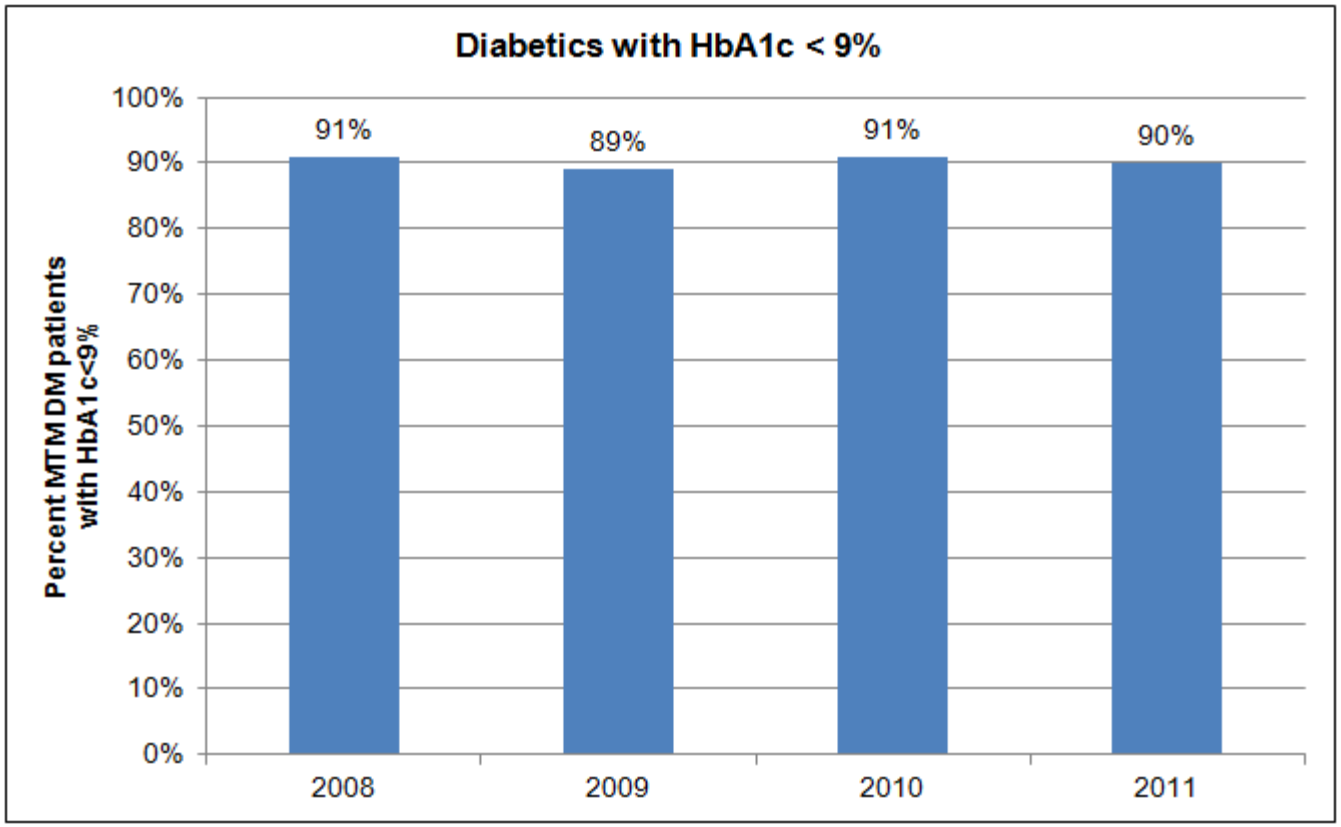
- Percent of diabetic patients in the MTM program with an LDL < 100 mg/dL during the program year



Clinical Outcomes (continued)

2. Diabetics with HbA1c < 9%

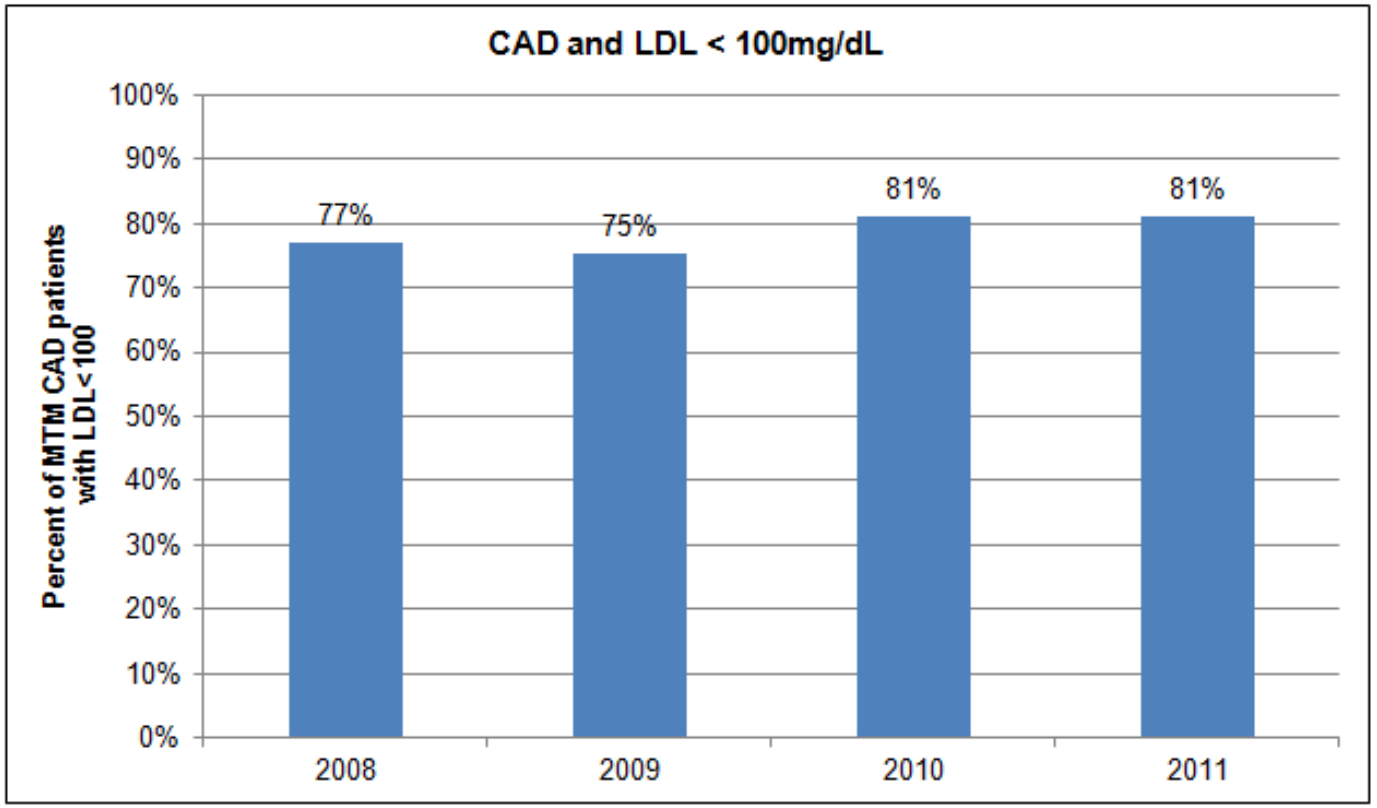
- Percent of diabetic patients in the MTM program with HbA1c < 9% during the program year



Clinical Outcomes (continued)

3. Coronary artery disease (CAD) patients and LDL<100mg/dL

- Percent of MTM patients with CAD and LDL < 100 mg/dL during the program year



Hospitalization & ER Utilization

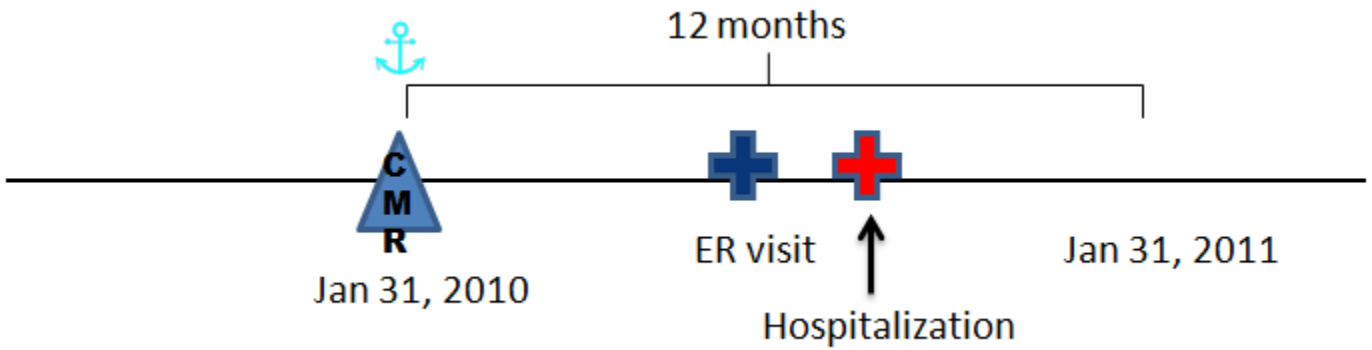
- Hypothesis: MTM patients that received a CMR have a lower utilization of hospitalization and ER visits compared to a comparative population

- Program period: Jan 1, 2010 to June 30, 2010

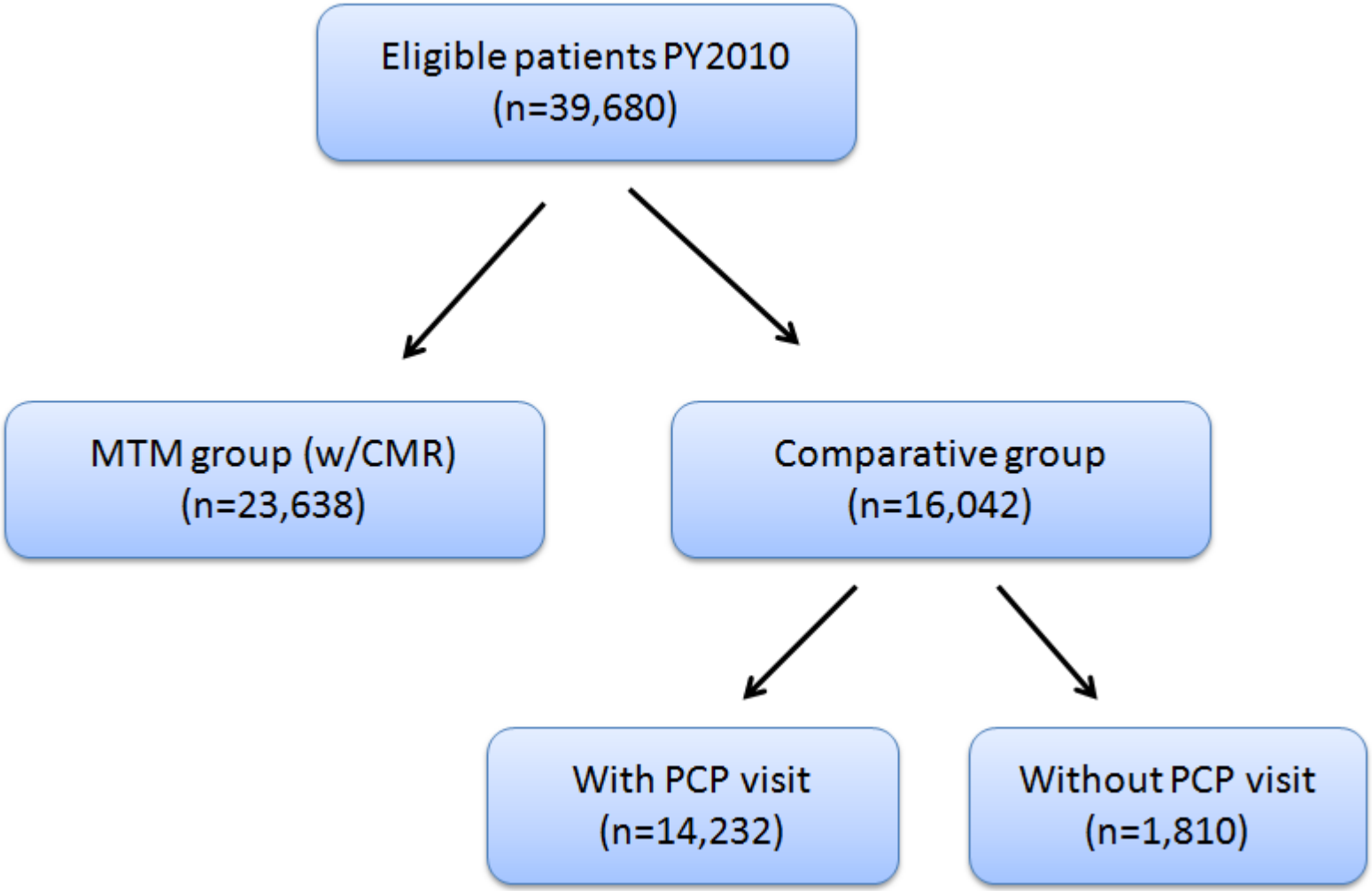
- Inclusion:
  - MTM group: Enrollment in the 2010 program year (Jan 1 to Jun 30, 2010)
  - Comparative group: Eligible for the 2010 MTM program (e.g. disenrolled, inactive); with or without a PCP visit during Jan 1 to Jun 30, 2010

Definitions

- Anchor date:
  - MTM group: CMR date; look 12 months AFTER the CMR date for hospitalization or ER visits
  - Comparative group: PCP visit; look 12 months AFTER the PCP visit (earliest date in data set) for hospitalization or ER visits



Number of Patients



Results

	n	Mean age, yr (range; SD)	Mean no. of active meds (range; SD)	Mean no. of Hospitalization (range; SD)	Mean no. of ER visits (range; SD)
MTM group (w/CMR)	23,638	74.98 (21-103; 8.67)	14.46 (0-50; 5.16)	1.97 (1-19; 1.59)	2.67 (1-82; 2.85)
Group w/PCP visit	14,232	74.67 (0-104; 9.47)	14.79 (0-52; 5.34)	2.16 (1-22; 1.84)	2.97 (1-96; 3.33)
Group w/o PCP visit	1,810	78.34 (30-107; 10.78)	13.97 (0-41; 5.74)	2.28 (1-28; 2.17)	2.69 (1-87; 3.60)

Results of Our 2010 MTM Eligible Patients

Incidence of Hospitalization

	HospDC flag (%)	p value
MTM group (w/CMR)	7286 (30.82%)	<0.001
Group w/PCP visit	5115 (35.94%)	
Group w/o PCP visit	767 (42.38%)	

Δ 5.12%

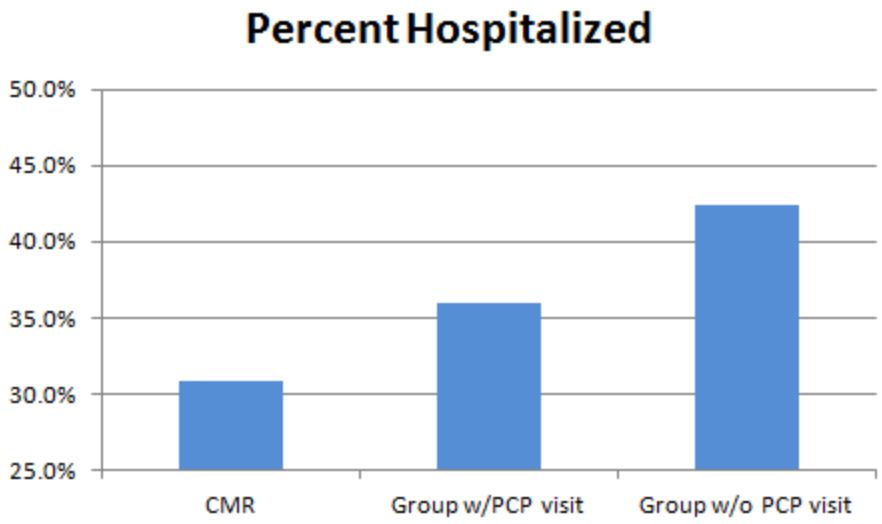
Δ 11.56%

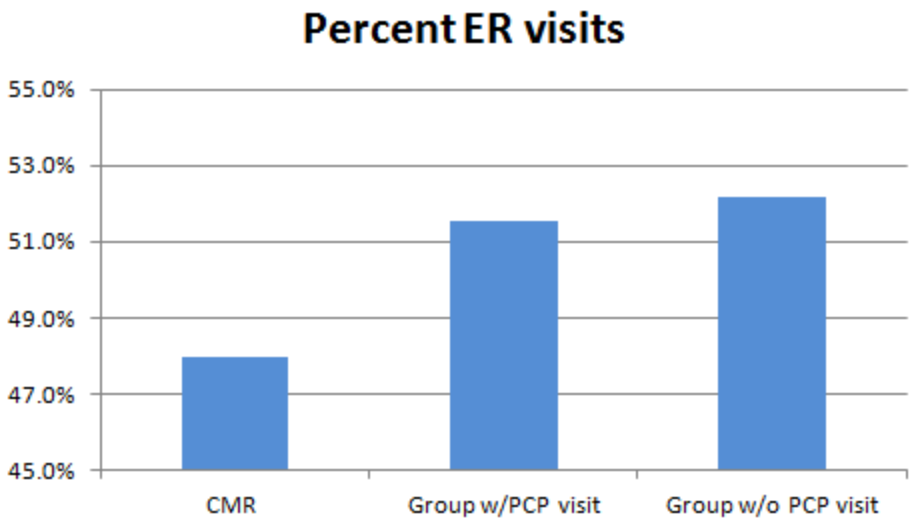
Incidence of ER visits

	ER visit (%)	p value
MTM group (w/CMR)	11,334 (47.95%)	<0.001
Group w/PCP visit	7333 (51.52%)	
Group w/o PCP visit	944 (52.15%)	

Δ 3.57%

Δ 4.2%





Results – Logistic Regression (Odds Ratio Estimates)

	Hospitalization	ER visit
Age	1.015	1.019
Gender (F vs M)	0.896	1.193
Group (CMR vs Comparative group)	0.767	0.813

23% less hospitalization

19% less ER visits

Hospitalization & ER Utilization Conclusions

- MTM group was associated with a lower incidence of hospitalization and ER visits compared to the comparative group

- Patients who received a CMR in the MTM group was 23% less likely to be hospitalized and 19% less likely to have an ER visit compared to the comparative group

Take Away's

- Assess your population and determine where to focus
  - Economic
    - Cost: generic utilization, drug cost PMPM
    - Resource utilization: overall hospitalization, ER visits
  - Clinical
    - Quality: LDL, HbA1c, BP
    - Adherence (statins, oral hypoglycemics, BP meds)
  - Humanistic
    - Satisfaction (provider, patient)
  - Safety
    - High-risk meds, ACEI/ARB use in DM & HTN
- Measure and set your program goals

Assessments

Assessment Question 1

What outcome measures can be used to assess a Medicare MTM program?

Medication adherence rates

Clinical measures affecting management of chronic conditions

Safety measures to prevent harm from medication use or non-use

All of the above

Assessment Question 2

Which of the following clinical outcomes can be used to assess the quality of a Medicare MTM program?

LDL control in patients with coronary artery disease

A1c control in type II diabetes

Blood pressure control in patients with hypertension

All of the above

Questions?

Contact Information

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