

Care for Complex Patients with Diabetes: Where is their Medical Home?

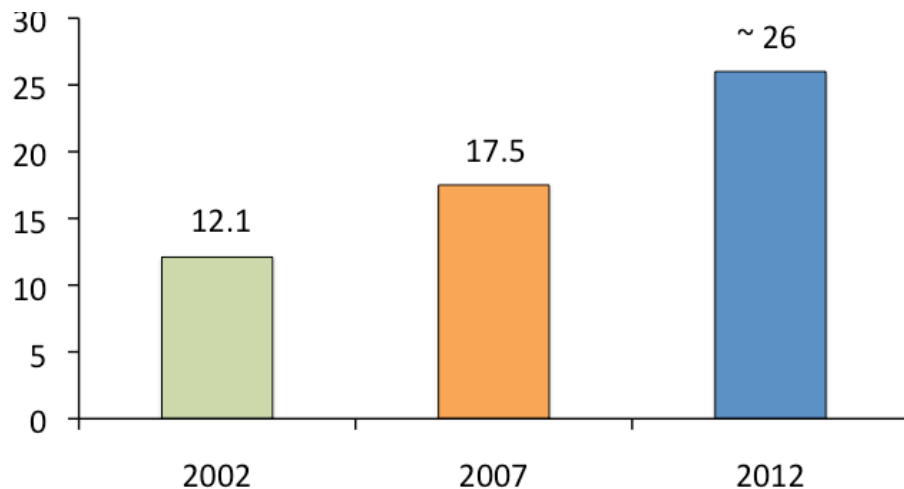
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Financial Disclosures

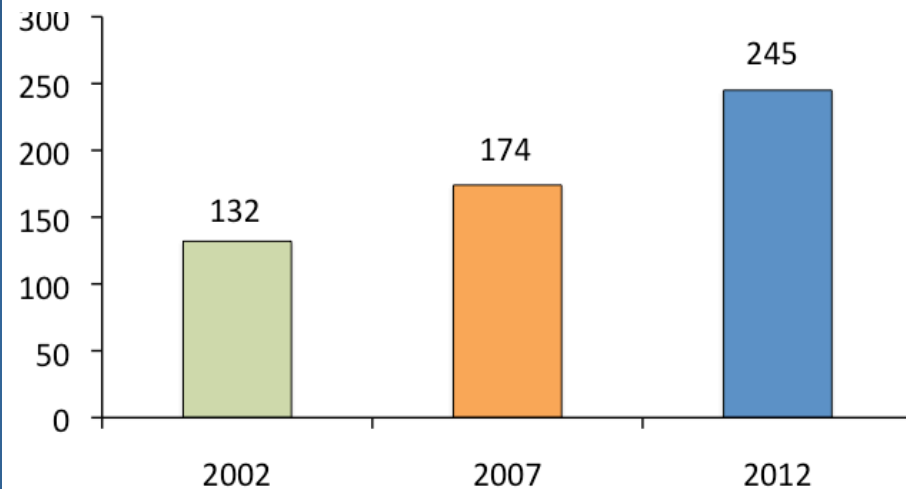
➤ None

Estimated Prevalence and Costs of Diabetes in the U.S., 2002-2012

Number of People with Diagnosed Diabetes, Millions



Estimated Cost of Diabetes Care, Billions, US Dollars



- Total costs of Diagnosed diabetes have risen by 41% between 2007 and 2012
- Medical expenditure for people with DM are 2.3 times higher than those without DM
- The primary driver of increased cost is the increasing prevalence of DM
- Despite the introduction of new classes of medications for DM treatment, anti-diabetic agents and supplies only account for 12% of medical expenditure

NCQA Practice Certification

1. Patient access and communication
2. Patient-tracking and registries
3. Care management
4. Patient self-management and support
5. Electronic prescribing
6. Test tracking
7. Referral tracking
8. Performance reporting and improvement
9. Advanced electronic communication

NCQA Update

- 6800 sites and 35,000 providers recognized
- New Standards launch March 24, 2014
 - Greater emphasis on team-based care – must designate roles and responsibilities
 - Integration with behavioral health
 - Sustained Transformation – performance improvement
 - Care management for complex cases

Basic Components of the PCMH

- Coordination and integration of care
- Quality and safety (Decision supports)
- Whole person orientation
- Personal physician
- Physician-directed medical practice
- Enhanced access
- Payment reform – quality based reimbursement

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
 - 1200 practices and 3000 practitioners
 - exceeded NCQA quality thresholds
 - estimated annual savings of \$161 million for diabetes care

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
 - 25 practices and 110 practitioners
 - 20,000 Medicare patients with diabetes
 - 2.5 – fold improvement in meeting 9 quality indicators

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
- Pennsylvania Chronic Care Initiative – 2008
 - 102 practices and 518 practitioners
 - over 56,000 patients with diabetes
 - Self management goals increased from 20 to 70%

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
- Pennsylvania Chronic Care Initiative – 2008
- Rhode Island Chronic Care Initiative – 2008
- Group Health Cooperative – 2007
 - 1 clinic with 9200 patients vs 19 matched control clinics
 - 29% reduction in ED visits
 - 11% reduction in hospitalizations
 - By 21 months, ROI of \$1.50 for each \$1 spent

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
- Pennsylvania Chronic Care Initiative – 2008
- Rhode Island Chronic Care Initiative – 2008
- Group Health Cooperative – 2007
- Health Partners – 2002
 - 50 clinics and 600 practitioners
 - 24% reduction in hospitalizations
 - 8% lower out-patient costs

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
- Pennsylvania Chronic Care Initiative – 2008
- Rhode Island Chronic Care Initiative – 2008
- Group Health Cooperative – 2007
- Health Partners – 2002
- Colorado PCMH Pilot – 2009
 - 17 practices

PCMH Demonstration Projects in DM

- Community Care of NC – 1998
- Geisinger – 2006
- Pennsylvania Chronic Care Initiative – 2008
- Rhode Island Chronic Care Initiative – 2008
- Group Health Cooperative – 2007
- Health Partners – 2002
- Colorado PCMH Pilot – 2009
- PCMH National Demo Pilot – 2006
 - 36 practices

PCMH Demonstration Projects in DM

- Southeastern Pennsylvania Chronic Care Initiative – 2007 through 2011
 - 32 practices with > 64,000 patients compared to 29 control practices with almost 56,000 patients
 - 7% and 6% prevalence of diabetes, respectively
 - 5% more A1c testing – but more abnormal results
 - 11% greater monitoring for diabetic nephropathy

Health Care Delivery Associations With Quality Care

	Multivariate Model	
	Odds Ratio (95% CI)	P Value
Change in quality (2010 vs 2008), by study group		
PCMH vs paper health records	1.07 (1.03-1.11)	<0.001
PCMH vs EHR	1.06 (1.01-1.11)	0.009
EHR vs paper health records	1.01 (0.97-1.05)	0.68

Delivery System Impact on Performance Measures in Diabetes

	PCMH n (%)	Paper n (%)	EHR n (%)	PCMH vs Paper	PCMH vs EHR
A1c Testing					
2008	3048(80)	5079(73)	2377(76)	P<0.001	P<0.001
2009	3111(83)	5075(74)	2430(78)	<0.001	<0.001
2010	2840(82)	3903(69)	1863(72)	<0.001	<0.001
LDL Testing					
2008	3026(79)	5108(74)	2336(74)	P< 0.001	P<0.001
2009	2948(79)	5057(74)	2361(76)	<0.001	0.002
2010	2635(76)	3882(68)	1824(71)	<0.001	<0.001

Delivery System Impact on Performance Measures in Diabetes

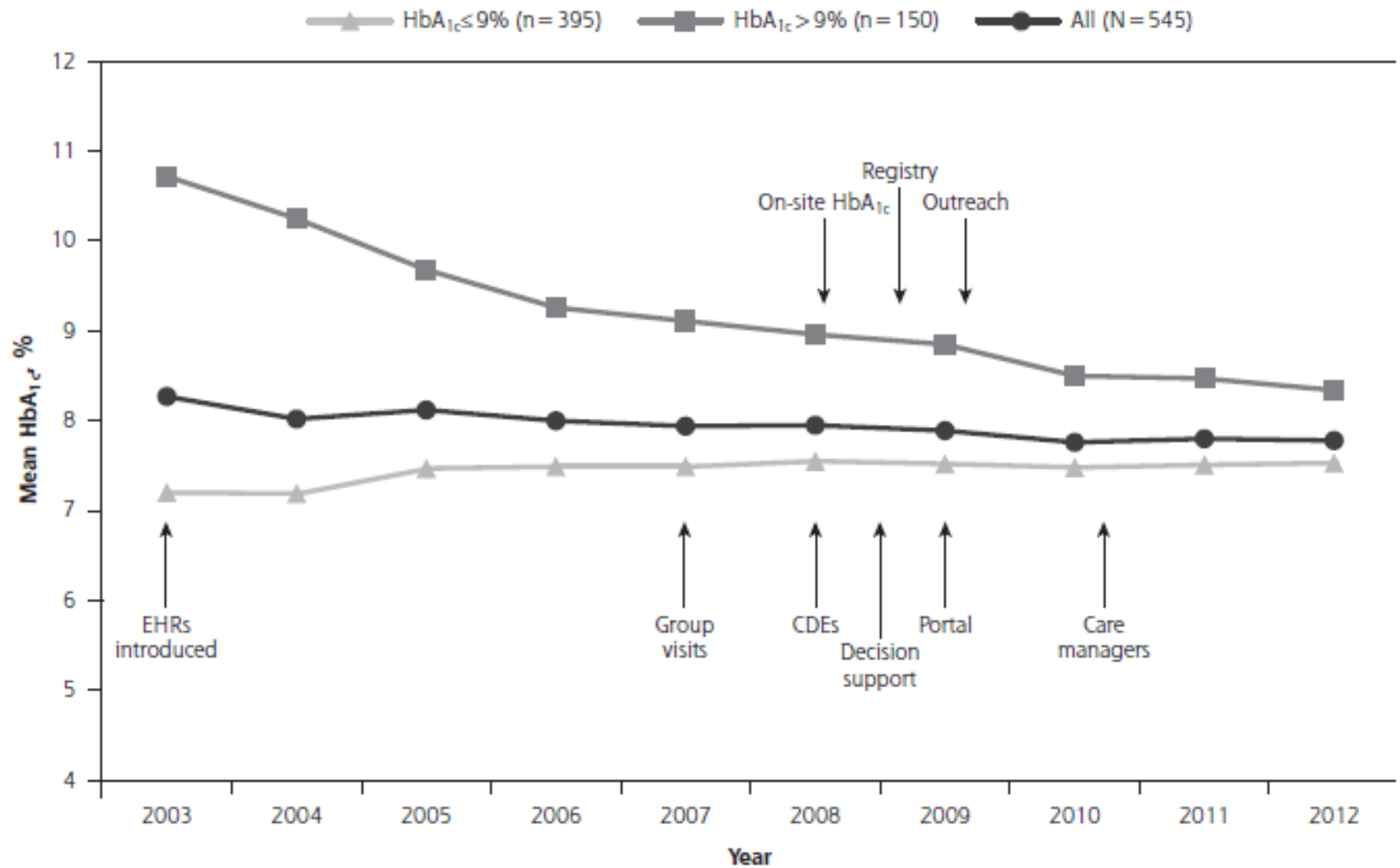
	PCMH n (%)	Paper n (%)	EHR n (%)	PCMH vs Paper	PCMH vs EHR
Eye Exams					
2008	1605(42)	2870(41)	1257(40)	P=0.59	P=0.115
2009	1575(42)	2697(39)	1183(38)	0.005	<0.001
2010	1552(45)	2247(39)	986(38)	<0.001	<0.001
Nephropathy Screening					
2008	2588(68)	3980(57)	1896(60)	P< 0.001	P<0.001
2009	2495(67)	3854(56)	1829(50)	<0.001	<0.001
2010	2255(65)	2845(50)	1383(54)	<0.001	<0.001

FQHC Transition to PCMH

Table 1. Annual Use of PCMH Services by Patients With Diabetes

Group and Year	Patients, No.	Outreach Services ^a		Diabetes Education Services ^b		Psychosocial Care Services ^c		Primary Care Services ^d	
		Received, %	Mean (SD), No. ^e	Received, %	Mean (SD), No. ^e	Received, %	Mean (SD), No. ^e	Received, %	Mean (SD), No. ^e
HbA _{1c} ≤9% ^f									
2003	398	59.0	2.1 (3.2)	0.0	0.0 (0.0)	9.0	0.2 (1.1)	99.7	5.4 (3.2)
2004	696	74.4	3.2 (4.4)	0.0	0.0 (0.0)	20.7	0.9 (3.0)	99.7	5.8 (3.8)
2005	914	78.2	3.2 (3.9)	0.0	0.0 (0.0)	26.6	1.0 (4.0)	99.8	5.8 (3.6)
2006	1,031	81.5	3.2 (3.9)	0.0	0.0 (0.0)	25.5	0.9 (2.6)	99.3	5.9 (3.7)
2007	1,085	70.8	3.0 (3.3)	0.0	0.0 (0.0)	17.5	0.7 (2.6)	98.8	5.1 (3.4)
2008	1,251	86.4	3.4 (3.3)	4.1	0.1 (0.4)	18.9	0.7 (2.4)	98.4	5.5 (3.8)
2009	1,512	82.6	3.4 (3.6)	21.1	0.5 (1.4)	19.4	0.7 (2.9)	98.1	4.8 (3.6)
2010	1,731	90.1	4.2 (4.1)	19.4	0.5 (1.2)	19.2	0.9 (3.3)	98.3	4.5 (3.3)
2011	2,057	95.3	5.9 (5.6)	53.3	1.3 (2.2)	27.4	1.0 (3.4)	99.4	4.7 (3.2)
HbA _{1c} >9% ^f									
2003	161	60.2	1.8 (2.7)	0.0	0.0 (0.0)	11.2	0.4 (2.4)	99.4	5.9 (4.1)
2004	234	73.9	2.4 (3.2)	0.0	0.0 (0.0)	18.4	0.7 (3.0)	100.0	5.7 (3.9)
2005	307	78.2	2.6 (3.0)	0.0	0.0 (0.0)	25.1	0.9 (4.0)	99.7	5.5 (4.1)
2006	321	72.3	2.5 (2.8)	0.0	0.0 (0.0)	25.2	0.5 (1.8)	99.1	5.3 (3.4)
2007	295	87.8	3.2 (3.3)	0.0	0.0 (0.0)	17.6	0.6 (2.4)	97.6	4.8 (3.6)
2008	369	93.8	4.0 (3.4)	6.2	0.1 (0.4)	22.5	0.7 (2.6)	96.7	5.0 (3.8)
2009	425	96.0	6.3 (5.2)	40.2	0.9 (1.8)	24.9	0.8 (2.8)	97.2	4.6 (3.8)
2010	447	95.3	6.1 (4.6)	39.6	1.0 (1.7)	22.6	1.0 (3.6)	98.2	4.1 (3.2)
2011	551	98.5	8.7 (7.3)	77.8	2.6 (3.3)	35.3	1.2 (3.9)	99.5	4.3 (3.2)

Figure 1. Mean HbA_{1c} values for patients seen throughout the 9-year practice transformation to a PCMH.



CDE = certified diabetes educator; EHR = electronic health record; HbA_{1c} = glycated hemoglobin.

Table 4. Key Factors Supporting Higher-Performing Practices

Key Factor	Description
Health information technology	Early adoption of EHRs (4 of 5 higher-performing practices had EHRs in place ≥ 2 years before PCMH implementation)
Administrative leadership	Highly engaged practice administrators who championed the PCMH transformation
Clinician leadership	Regular clinician meetings to discuss performance, agree on clinical guidelines, and establish standards of care
Shared vision and buy-in	Careful articulation and reinforcement of how the medical home will help patients and the practice and the need for changes
Staff development	Team orientation and early development of medical assistant role
Focus on improvement	Meetings revolve around PCMH and clinical quality improvement
Shared decision making	Feedback from practice consistently sought on changes before, during, and after implementation
Accountability	Clear roles and responsibilities and accountability to these roles and responsibilities
Finances	Stable billing and administrative systems
Financial autonomy	Direct receipt of and ability to invest PCMH financial incentives
Benchmarking	Monthly clinician-specific benchmarking to identify best practices and breakdowns in PCMH processes
Reporting and documentation	Careful attention to data reporting and documentation of PCMH changes
Inclusivity	Collective problem solving and open communication
Staff stability	Minimal staff turnover

Racial Comparisons in a PCMH

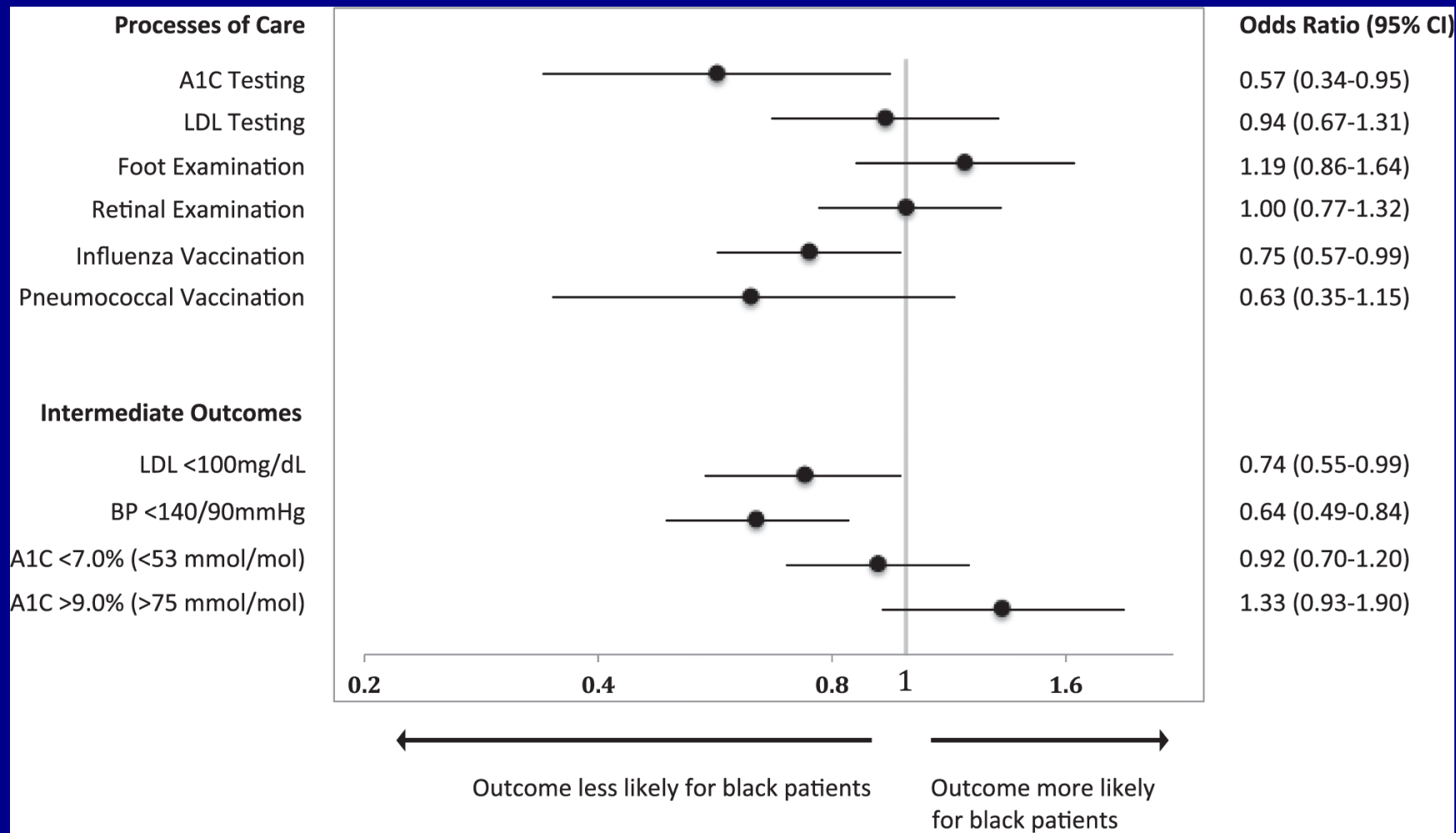


Figure 1—Adjusted ORs for diabetes processes and intermediate outcomes of care. Adjusted ORs for black patients represent the likelihood of receiving a process of care or achieving an intermediate outcome of diabetes care compared with non-Hispanic white patients. Black patients were less likely to receive A1C testing and influenza vaccination and were less likely to have an LDL <100 mg/dL and BP <140/90 mmHg. Model covariates include age, sex, marital status, education, insurance type, social support, mental and physical health composite scores, BMI, total number of diabetes complications, modified Charlson comorbidity index, and treatment intensity and clinical care continuity.

Pioneer ACOs

- 32 ACOs with > 669,000 Medicare beneficiaries
 - 25/32 had reduced risk-adjusted readmission rates compared to benchmark plans
 - 68% of people with diabetes reached BP targets compared to 55% in benchmark plans
 - 57% with diabetes reached LDL-c targets compared to 48% in benchmark plans

Pioneer ACOs

Financial Outcomes

- Only 2 programs lost money (total \$4 million)
- 2012 Medicare spend increased 0.3% compared to 0.8% in benchmark plans
- Pioneer Plans had gross savings of \$76 million
- 13/32 plans saved \$87.6 million (\$33 million to the Medicare Trust Fund)

Medicare Shared Savings Program

- 114 programs plus 123 joining as of 1/2014
- 360 Medicare ACOs in 47 states and DC
- 54/114 spent less than budget benchmarks
- 29/114 qualified for shared savings
 - \$126 million to plans
 - \$128 million to Medicare Trust Fund

Engineering a Better Health Care System

A report from the President's Council of Advisors on Science and Technology

- Accelerate alignment of payment systems with the desired outcomes
- Increase access to relevant health data and analytics
- Provide technical assistance in systems engineering approaches
- Involve communities in improving health care delivery
- Share lessons learned

Summary

- Health care delivery systems must insure the infrastructure to provide this level of care to patients with diabetes
- Preliminary data suggests that PCMH/ACOs can provide high quality care for people with diabetes at decreased cost