

*A Comparison of Two Methods to  
Improve HgbA1c Testing:  
“Pay for Performance” versus a “Chronic  
Care Collaborative”*

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# Chronic Care Model



# Chronic Care Model



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# Chronic Care Collaborative (CCC)

Emphasis is on the “system”  
and the patient

# Pay for Performance (P4P)

Emphasis is on the  
physician/practice

# P4P

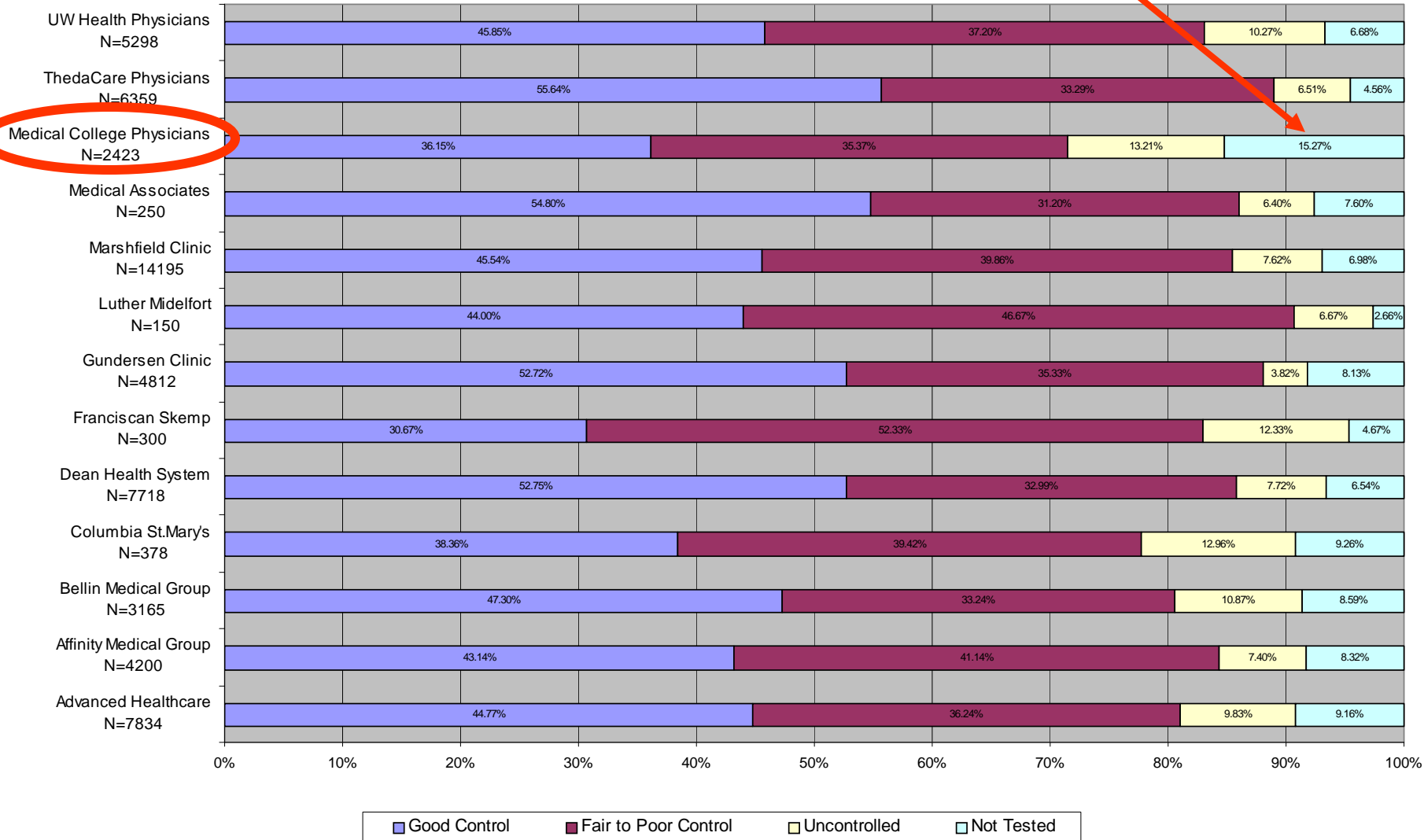
- Incentives provided – usually financial
- Based on performance measures or defined outcomes
- Methods for improvement usually not defined

# Trigger

- 2004 - Wisconsin Collaborative for Healthcare Quality (WCHQ) public reporting of Hemoglobin A1c (HgbA1c) testing in diabetics.
- Poor performance led to
  - intense scrutiny of internal processes
  - active engagement in efforts to improve our performance.



## Blood Sugar (A1c) Control - Reporting Period: Q3 2003 - Q2 2004



# Response

- Primary care at MCW is provided in several venues:
  - Hospital-based General Internal Medicine (GIM) teaching clinic
  - 3 off-site clinics.
- These venues pursued different approaches.

# Approaches

- GIM clinic – Pilot test of AAMC chronic care collaborative applying principles of chronic disease management (CCC).
  - Off-site clinics - created a financial incentive program for providers (P4P)
- Opportunity for natural experiment:  
“P4P vs Chronic Care Management”

# Methods

## 3 Groups:

- CCC pilot – panels of 2 physicians in GIM
- P4P – panels from one of offsite clinics
- “Control”– Remaining patients in GIM (8 physicians) - Usual Care

# Chronic Care Collaborative (CCC)

- Diabetics were identified and a registry created.
- Group visits
  - opportunity to discuss issues with the group and contact with a dietician, diabetes educator and a foot specialist
- Diabetes specific visit with the physician.
  - Focused on diabetes related care and identification of a personal self-accountability goal.

# P4P

- P4P physicians received lists of their diabetics and HgbA1c's.
- Bonuses were linked to:
  - proportion of patients tested for HgbA1c
  - Mean HgbA1c for the panel. ( $< 7.3$ )

# Usual Care (Control)

- The remaining providers in GIM maintained their usual care.
- Diabetes educators/dietitians were available by referral.

# Patient Registries

- Diabetic registry for the CCC was identified as of August 1, 2005 and followed prospectively through October 31, 2006.
- Parallel registries were retrospectively constructed for the P4P and usual care groups from patients registered prior to August 1, 2005.



# Analysis

- Baseline proportions computed August 1, 2005
  - % HgbA1c testing completed
  - Median hemoglobin A1c values
- Re-analyzed as of October 31, 2006.
- Difference between the last available HgbA1c and the first HgbA1c was calculated for each patient.
- Median difference ( $\Delta$  HgbA1c), median final HgbA1c and 95% confidence intervals were then calculated for each group.\*

\*Mood's median

# Results

Median reduction in glycohemoglobin:

- CCC participants = 0.4%
- Usual Care and P4P = No change

$P < 0.001$

# Results

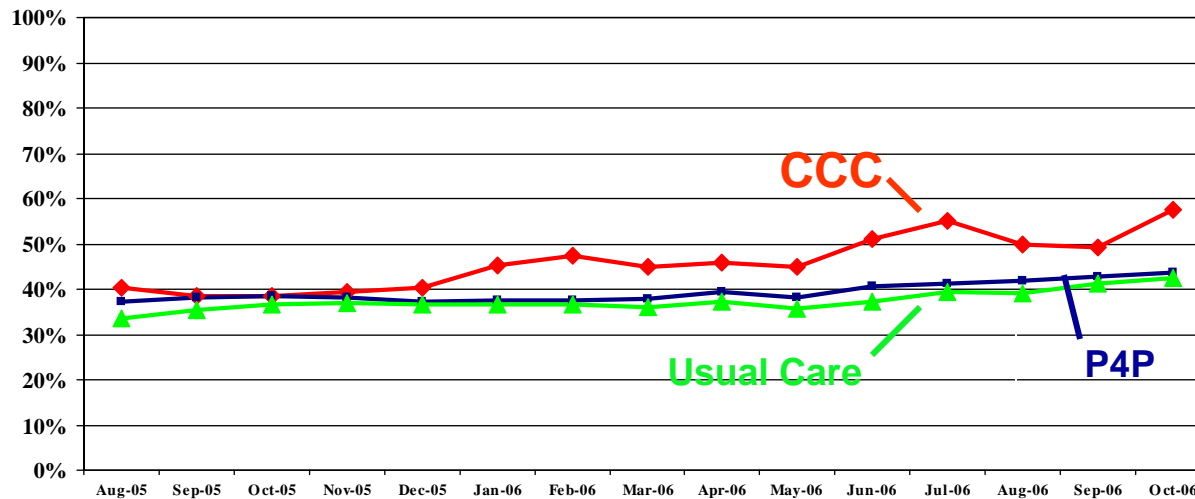
Clinic	Number of patients	HgbA1c before*	HgbA1c after*	$\Delta$ HgbA1c *	% Tested Before	% Tested After
CCC	142	7.4	7.0	- 0.4†	86.6	100
Usual care	529	7.3	7.3	0.0	84.1	99.1
P4P	493	7.0	7.1	0.1	86.6	99.8

\*Mood's median

† p < 0.001

# % A1c < 7.0

## % A1C Less than 7



Data Source: EPIC, IDX

# Demographics

Clinic	Median Age	Gender (% Female)	Median income
CCC	60.1	62 %	\$17177
Usual Care	60.8	63.6 %	\$17177
P4P	62.3	51.1 %	\$18086

- Population NOT randomized
- P4P group:
  - Older,
  - Wealthier,
  - More evenly divided between male and female

# Impact of demographics

- Small impact on HgbA1c.
- “Trend” to lower HgbA1c with higher per capita income
  - accounts for only 1.3% of the total variation.
- Increasing age associated with lower HgbA1c (p= 0.039)
  - accounts for 7-8% of the variation seen.
- Dominant influence was the individual provider, accounting for the majority of the variation.

# Limitations

- Not randomized
  - But, age and income trends should have favored the P4P group.
- One incentive for the P4P was increasing % tested.
- → ? noncompliant patients encouraged to come in for testing increasing the median HgbA1c for the group.
- CCC group belonged to only 2 providers

# Conclusion

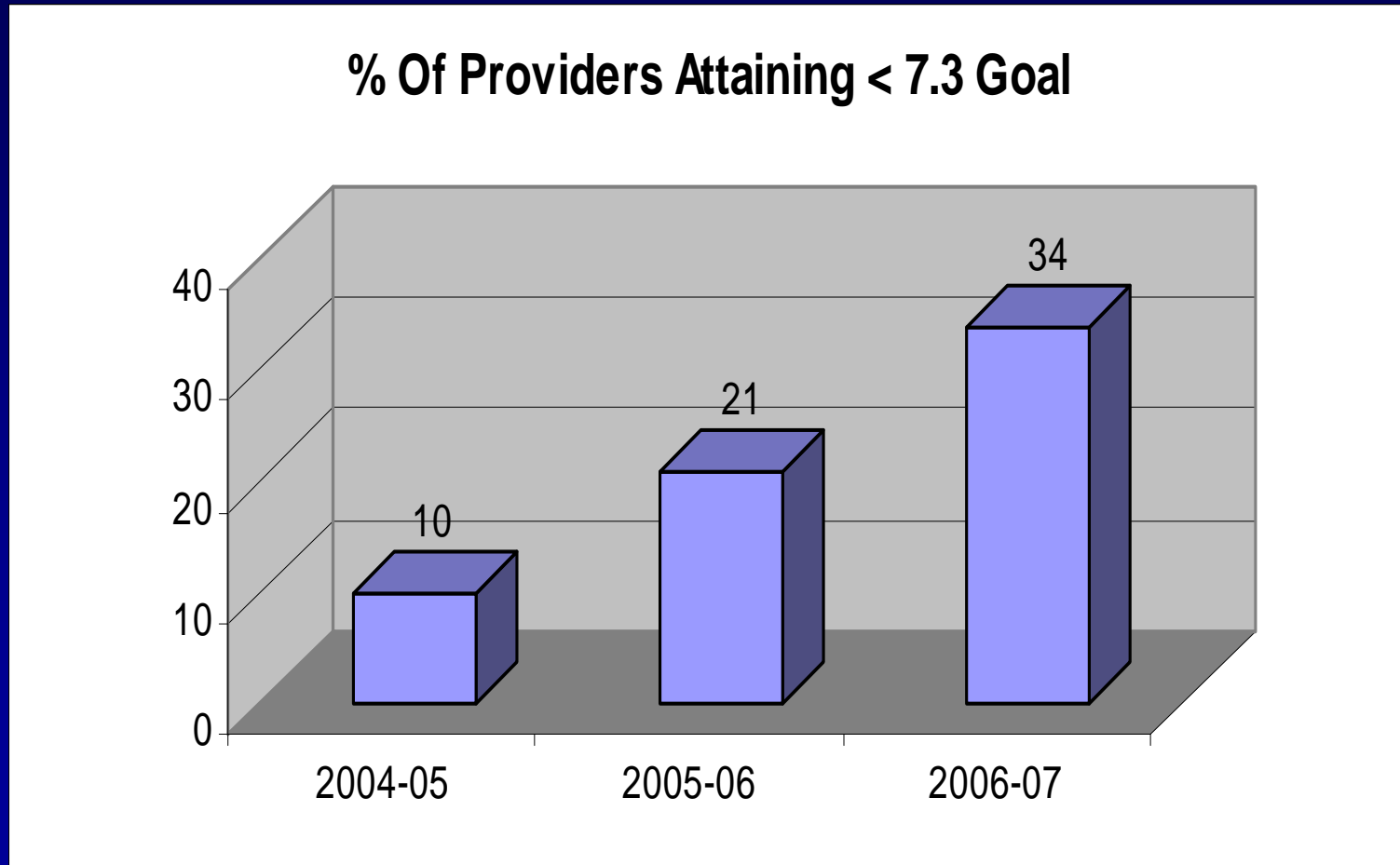
Implementation of a multidisciplinary chronic care collaborative model led to a substantially greater impact on reducing HgbA1c over a 14 month period than usual care or P4P using targeted incentives.



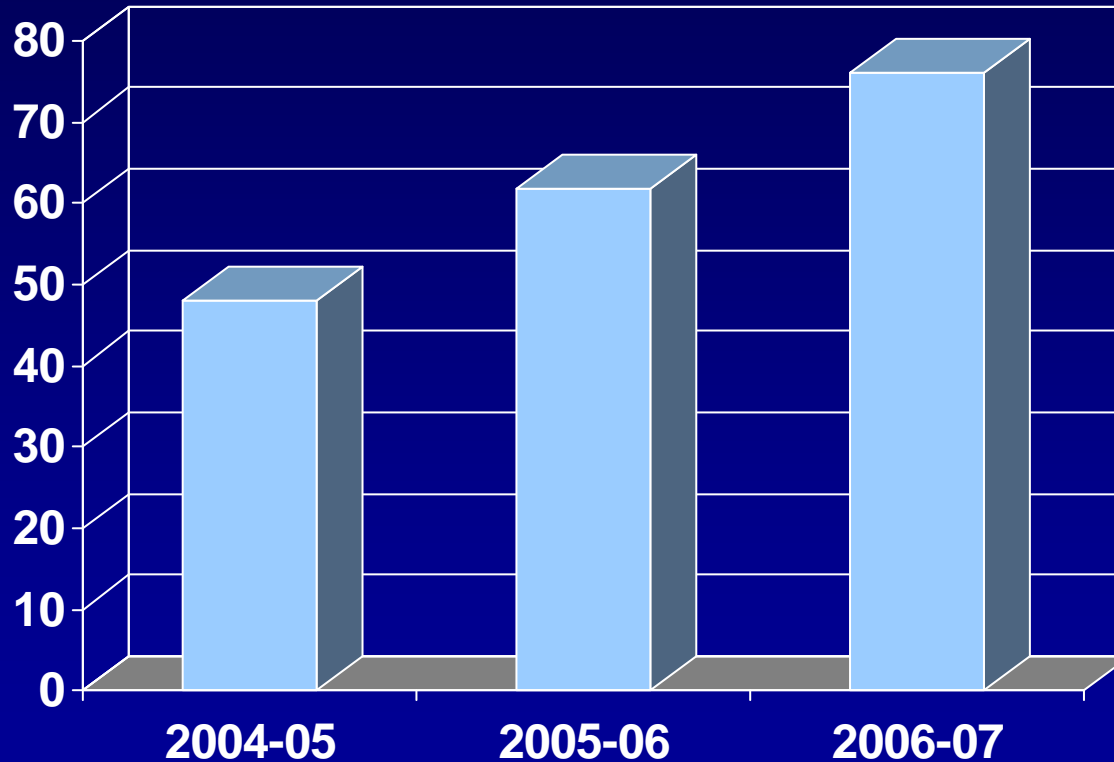
# But ...

That does not mean that pay for performance was not successful.

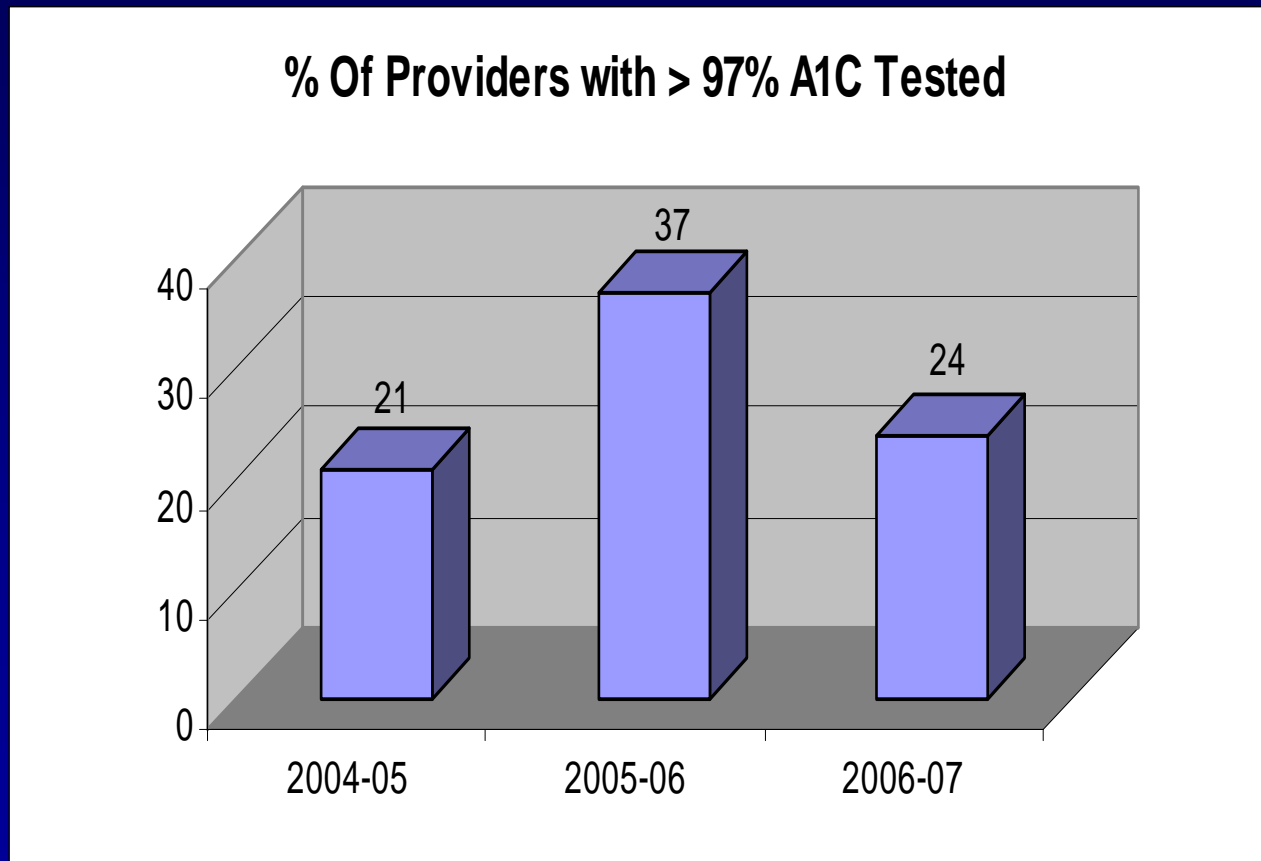
# Providers achieving Mean HgbA1c goal (P4P)



# % of Providers Meeting Press-Ganey Metric



# Providers achieving testing goal P4P



# Observations

- Only a handful of providers received full incentive.
  - Motivated by extra bonus
  - Motivated by external evaluation: the “report card”
- Increase in number of patients discharged from the practice for “noncompliance”.

# Case example

2 physicians who “made incentive goals”

- Empowered MA to contact patients
- Those without HgbA1c encouraged to come in
- Patients tested routinely on presentation

# Implications

- P4P did lead to improved outcomes but over longer time frame
- Some providers responded – others did not
- Those that achieved goal did it by improving the system in their “micro-environment”
- The CCC model may have worked more quickly because system put in place immediately
- P4P required practices to develop their own solutions over time

# Conclusions

- If a process for improvement well defined, e.g. chronic care model, invest in this approach.
- If solution not clear or established approach not suitable, “Pay for Performance” is a reasonable alternative but process will take longer and there will be less consistency.