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Pay for Performance in High-Medicaid Practices

Tenth National Pay for Performance Summit

March 2 2014

San Francisco, CA

Disclosures

Naomi Bardach and co-authors have documented that they have no financial relationships to disclose or Conflicts of Interest (COIs) to resolve.

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Objectives

- **Brief overview of what's known about P4P in Medicaid populations in the outpatient setting**
- **Describe the results of a P4P program in clinics serving a high proportion of Medicaid patients**
  - *Designed to address known limitations*
- **Discuss potential implications for P4P program design and future research**

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Background

- It remains unclear whether pay for performance programs are effective, particularly with small group safety net providers

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Background

- **The programs have the potential to increase health care disparities**
  - *Rewards go to highly-resourced providers who can achieve benchmarks while low-resourced providers cannot achieve them and do not receive rewards*
  - *Focus on the "low hanging fruit" healthier patients*
  - *"Creaming" (decreased access for high-risk patients)*

Lindenauer, et al. NEJM 2007

Werner, et al. JAMA 2005

Background

- **In a New York Medicaid-focused managed care P4P program focused on Diabetes there was no change in incentivized practices on process and outcome measures**
  - *Authors suggest that this may have been due to lack of infrastructure*
- **For outpatient providers caring for commercially insured children in MA, P4P had a small though statistically significant effect on process measures**

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Chien et al. Preventive Medicine 2012, Chien et al. Pediatrics 2014

Objectives

- Brief overview of what's known about P4P in Medicaid populations in the outpatient setting
- **Describe the results of a P4P program in clinics serving a high proportion of Medicaid patients**
  - *Designed to address limitations*
- Discuss potential implications for P4P program design and future research

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Design focused on:

- Different design from benchmarking approach in order to avoid penalizing under-resourced providers and discouraging poor performers from participating
- Pay more for achieving a metric in sicker patients or patients with socio-economic stressors
- Infrastructure is in place to support improvement
- Include outcomes as well as processes

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Larger context of program: PCIP

- **Primary Care Information Project**
  - *Focus on bringing EHRs to providers for NYC underserved*
  - *Same EHR with clinical decision support*
  - *Technical assistance or support for quality improvement, meaningful use, patient centered medical home*
  - *Funding: DOHMH NYC*
- **Pay for Performance program within PCIP**
  - *Health e-Hearts*
  - *Funded by the Robin Hood Foundation, interested in improving health for low income NYC communities*

Talk outline: 4 studies from PCIP

- **P4P year 1**
- **P4P year 2 (new cohort enters)**
- **Survey data from years 1 and 2—potential mechanisms to explain control vs incentive differences in performance**
- **Unintended consequences**

- **Strengths**
  - *Pragmatic implementation with ongoing data stream*
  - *Longitudinal data with varying incentives and different levels of exposure*

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Pay-for-Performance in High-Medicaid Practices: Implications from a Cluster-Randomized Trial in New York City

JAMA, 2013 Sep 11;310(10):1051-9

AHRQ

NYC Health Primary Care Information Project

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Research question

- What is the effect of a piece-rate, graduated pay for performance program in small, EHR-enabled practice performance on cardiovascular outcomes and processes?

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Study Design

- **A cluster-randomized, controlled trial of incentives**
  - *Clustered at the clinic level for randomization*
  - *Incentives also paid at the clinic level*
- **Patients: > 18 years old**
- **Two program years, with the design of the program changing between year 1 and year 2**

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Population Year 1

- **84 small (1-2 providers) practices in New York City**
- **All practices were participants in Primary Care Improvement Project (PCIP)**
  - *Electronic Medical Record (EMR) with clinical decision support reminders for measures*
  - *Ongoing quality improvement site visits*

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Incentive Structure

	Base Payment	Payment for High-Risk Patients			Total Possible Payment per Patient
	Insurance: Commercial **Co-morbidity:** No IVD or DM	**Qualifying Insurance:** Uninsured Medicaid	**Qualifying Co-Morbidities:** IVD or DM	**Combination of qualifying insurance and co-morbidity:** Uninsured/Medicaid and IVD/DM	
Aspirin	-	-	$20	$20	$20
BP Control	$20	$40	$40	$80	$80
Cholesterol Control	$20	$40	$40	$80	$80
Smoking Cessation	$20	$20	$20	$20	$20

Maximums: $200 per patient. $100,000 per practice

IVD: Ischemic Vascular Disease; DM: Diabetes Mellitus

Quality measures

A **Antithrombotic Rx**

$$\frac{\text{Antithrombotic prescribed}}{\text{Patients with Diabetes or IVD*}}$$

B **Blood pressure control("BP")**

$$\frac{\text{BP controlled (<140/90 or <130/80)}}{\text{Patients with hypertension}}$$

S **Smoking Cessation Intervention**

$$\frac{\text{Intervention delivered}}{\text{Patients who smoke}}$$

*IVD: Ischemic Vascular Disease; TC: Total Cholesterol; LDL: Low Density Lipoprotein

Study Timeline

YEAR 1

YEAR 2

April 2009

Intervention starts Cohort 1 (n=84 clinics)

April 2010

End of year 1

October 2010

Start of year 2 with Cohort 2 (n=60 new clinics, Total=140 clinics)

October 2011

Study Timeline

No intervention

April 2009

Intervention starts Cohort 1 (n=84 clinics)

April 2010

End of year 1

October 2010

Start of year 2 with Cohort 2 (Total=140 clinics)

October 2011

Study Timeline

Quarterly performance reports for all clinics

April 2009

Intervention starts Cohort 1 (n=84 clinics)

April 2010

End of year 1

October 2010

Start of year 2 with Cohort 2 (Total=140 clinics)

October 2011

End of year 2

Ongoing quality improvement support site visits

Study Timeline

April 2009

Intervention starts Cohort 1 (n=84 clinics)

April 2010

End of year 1

Lump payment

October 2010

Start of year 2 with 2nd cohort (n=60 new clinics, Total=140 clinics)

Quarterly payments

October 2011

End of year 2

Analysis

- **Difference-in-differences approach to quantify the effect size in each cohort**
  - *Compares the difference in performance change over time between intervention and control clinics*
- **Mixed effects logistic regression to account for clustering of patients**
- **A treatment by time interaction term assessed the statistical significance of the effect**

RESULTS

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YEAR 1

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Baseline Characteristics of Intervention and Control Patients

	Incentive	Control	P value
Patient Characteristics			
Age, y	45.8 (6.7)	46.6 (4.8)	0.62
Male, %	42.0 (8.6)	39.8 (10.5)	0.48

Baseline Characteristics of Intervention and Control Clinics

Clinic Characteristics	Incentive	Control	P value
Clinicians, median (IQR)	1 (1-2)	1 (1-2)	0.77
Patients, median (IQR)	2500 (1200-4607)	2000 (1100-3500)	0.45
Time since EHR implementation, mo	9.93 (4.47)	9.57 (4.44)	0.81
QI specialist visits	5.17 (3.43)	4.24 (2.73)	0.25
Insurance, %			
Commercial	33.8 (23.9)	32.1 (21.6)	0.89
Medicare	25.6 (22.0)	26.8 (17.6)	0.32
Medicaid	35.3 (28.3)	35.7 (24.8)	0.88
Uninsured	4.3 (4.8)	4.7 (4.9)	0.60

Results: Baseline Performance

Measure	Control (%)	Incentive (%)	P value
Aspirin therapy, CAD or DM	54.4	52.6	
BP control, no comorbidities	31.8	52.1	<0.05
BP control, DM	10.4	16.8	<0.05
Smoking cessation intervention	19.1	17.1	

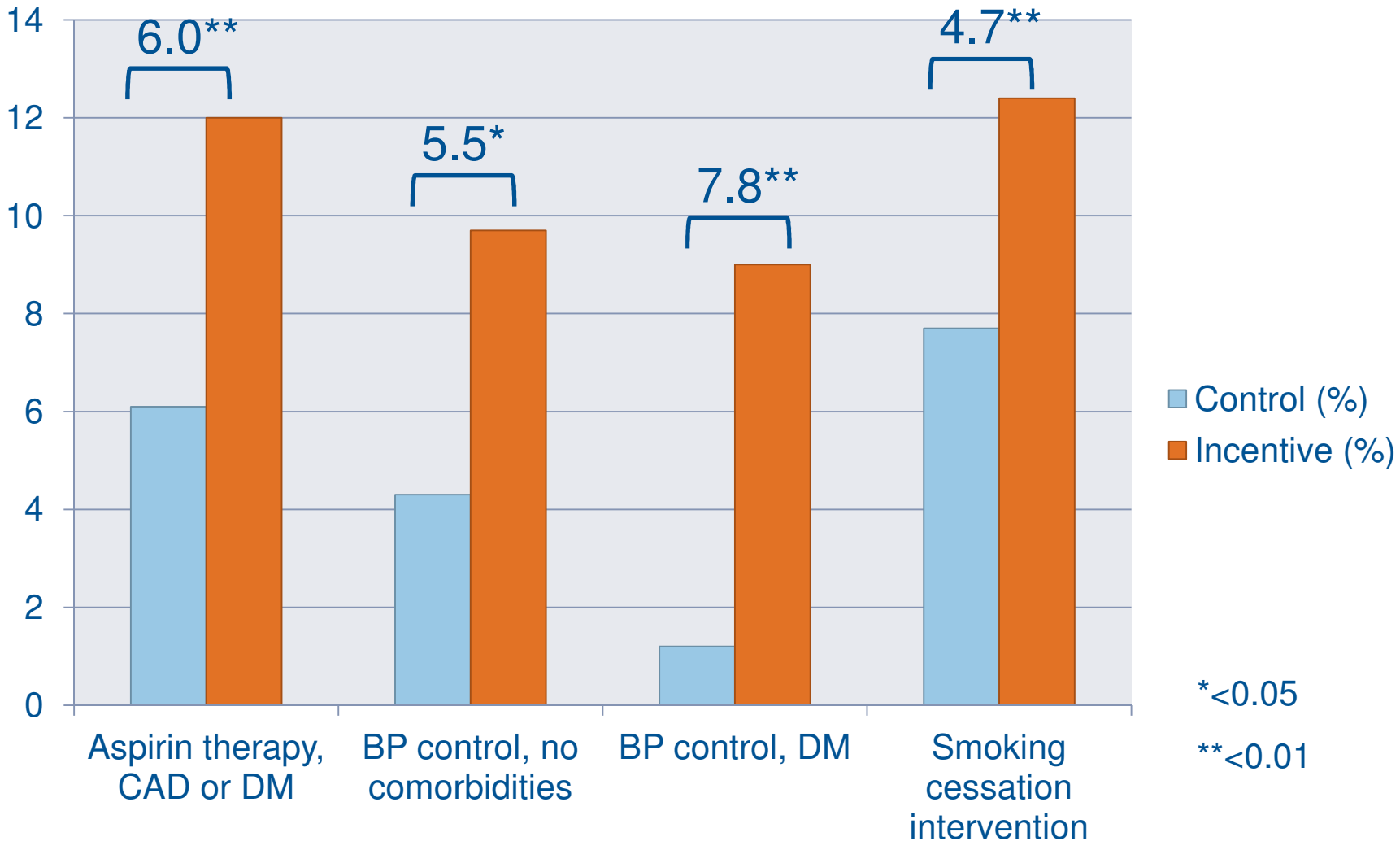
Year 1

Results: Baseline Performance

Measure	Control (%)	Incentive (%)	P value
Aspirin therapy, CAD or DM	54.4	52.6	
BP control, no comorbidities	31.8	52.1	<0.05
BP control, DM	10.4	16.8	<0.05
Smoking cessation intervention	19.1	17.1	

Year 1

Improvements in Performance



Year 1 summary

- All groups improved
- Incentive group had greater improvements on processes and intermediate outcomes for patients with and without comorbidities
- Patients with hypertension and diabetes did not fare worse, with that population benefitting substantially given low baseline rates of BP control

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YEAR 2
(UNPUBLISHED)

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Objectives

- **To assess the effects of the incentive in the second year of the program**
- **Program was modified:**
  - *Higher amounts*
  - *Quarterly payments rather than one lump sum at the end*
- **We compare the incentive effect between the clinics participating in their second year of the program (exposed) and a sample of clinics newly enrolled and randomized in the second year (naïve)**

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Incentive Structure

	Base Payment	Payment for High-Risk Patients			Total Possible Payment per Patient
	Insurance: Commercial **Co-morbidity:** No IVD or DM	**Qualifying Insurance:** Uninsured Medicaid	**Qualifying Co-Morbidities:** IVD or DM	**Combination of qualifying insurance and co-morbidity:** Uninsured/Medicaid and IVD/DM	
Aspirin	-	-	$50	$50	$50
BP Control	$50	$100	$100	$150	$150
Smoking Cessation	$50	$50	$50	$50	$50

Maximums: $400 per patient. $100,000 per practice

IVD: Ischemic Vascular Disease; DM: Diabetes Mellitus

Population Year 2

- **Small (1-2 providers) practices in New York City**
- **Exposed cohort, n=80 clinics (Year 1 participants)**
- **Naïve cohort, n=60 clinics**
- **All practices were participants in Primary Care Improvement Project (PCIP)**
  - *Electronic Medical Record (EMR) with clinical decision support reminders for measures*
  - *Ongoing quality improvement site visits*

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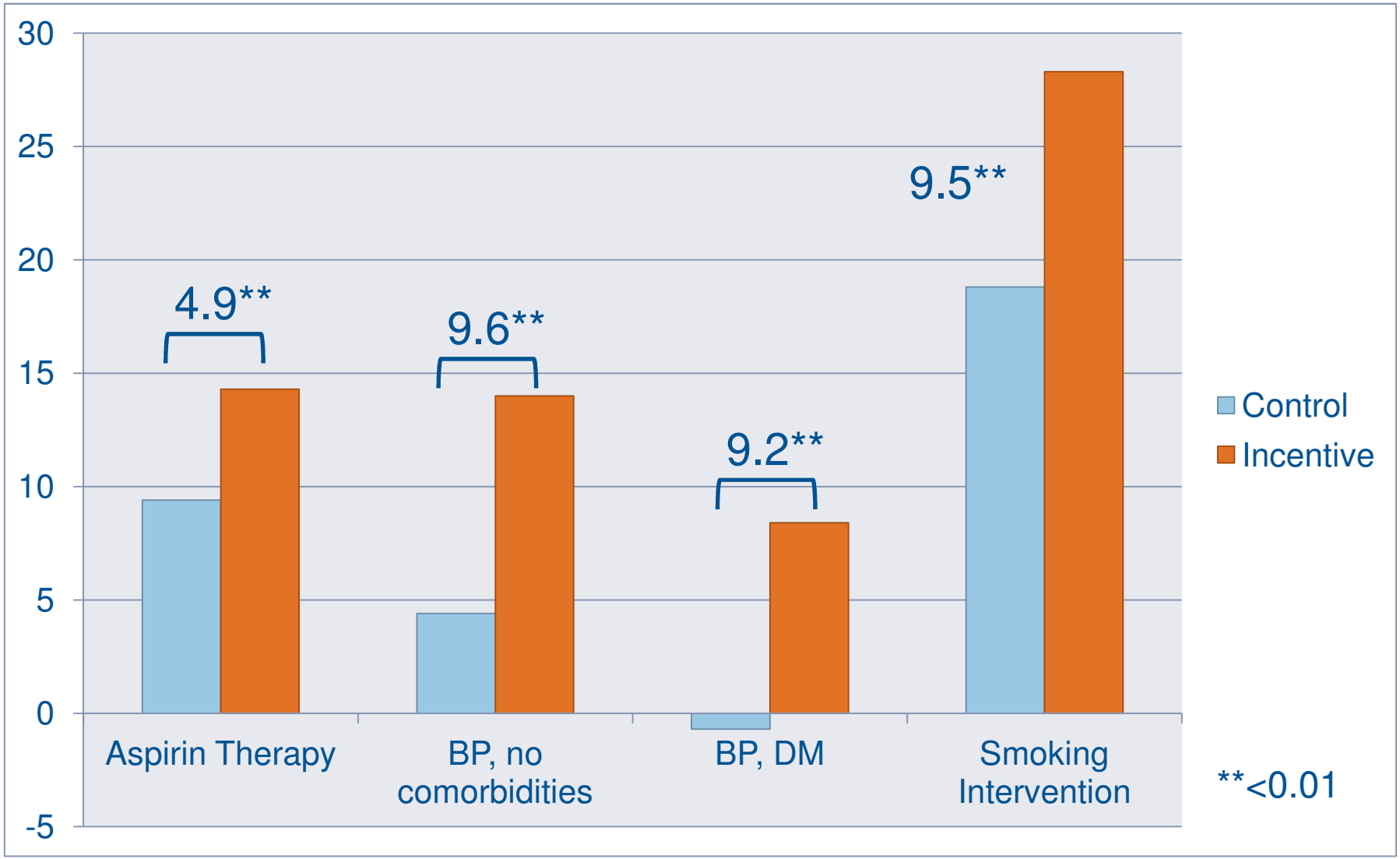
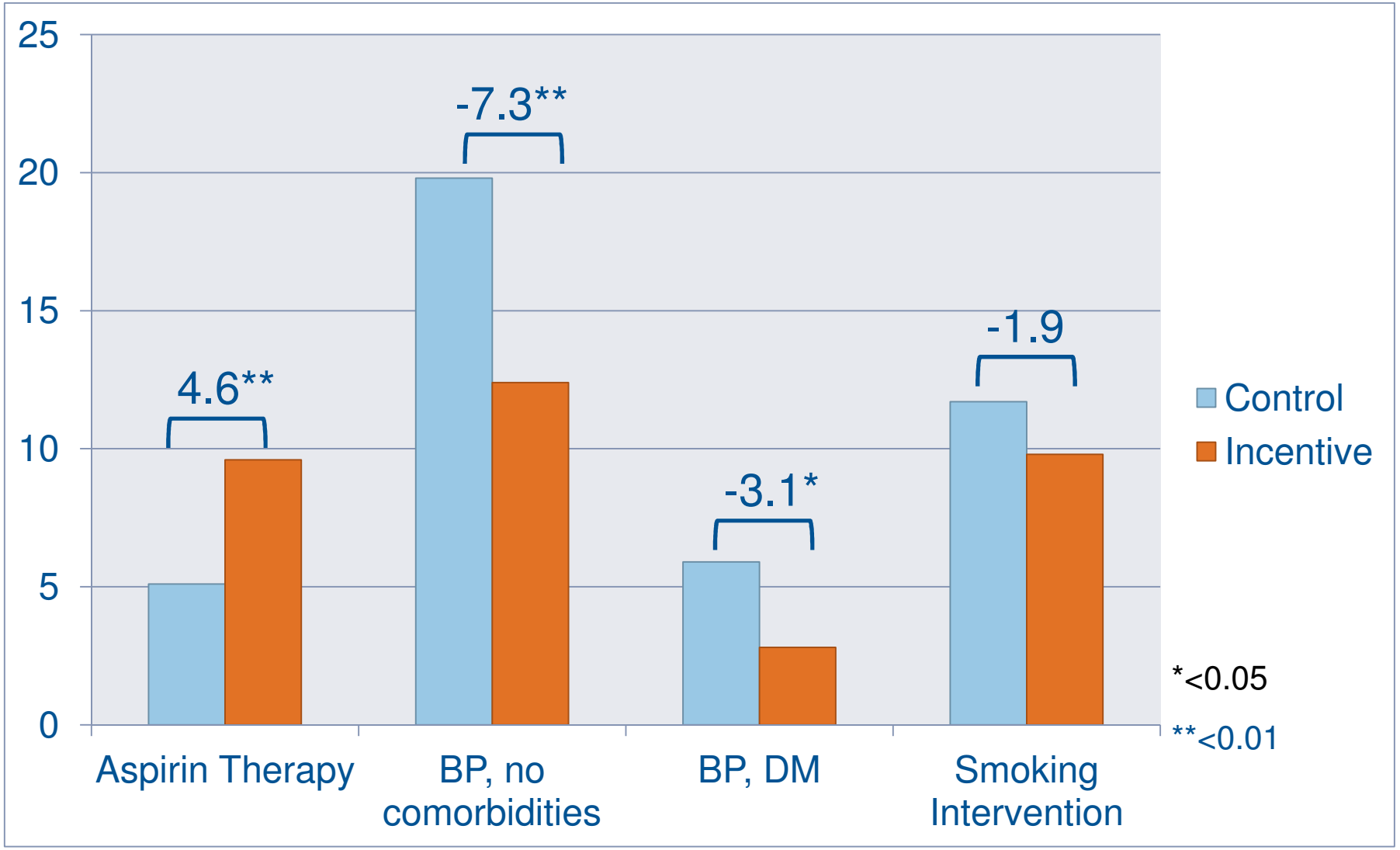
Baseline year performance

	Naïve		Exposed	
Measure	**Control (%)**	**Incentive (%)**	**Control (%)**	**Incentive (%)**
Antithrombotic therapy, IVD or DM	64.2	57.7	64.7	70.5
Blood pressure control, no comorbidities	57.1	49.8	42.8	51.1
Blood pressure control, in DM	32.0	30.2	26.1	27.8
Smoking Cessation intervention	16.6	18.8	24.4	32.6

Performance Changes Year 2, Naive



Performance Changes Year 2, Exposed



Conclusion

- P4P with a higher incentive and quarterly payments was effective in the naïve cohort, with apparently larger effect sizes than in the first year of the program
- However, among exposed clinics, control clinics improved more than intervention clinics on blood pressure measures, though all clinics improved

Implications

- **Unclear why control clinics improved more rapidly than intervention clinics in the exposed cohort on BP control**
  - *Secular trends*
  - *"Low hanging fruit"*
  - *P4P program signals policy attention to measures, with incentivized clinics responding more rapidly*
- **Piece-rate, graduated incentives are effective in the first year of the program**
- **Larger incentives may lead to larger effect sizes in the first year of the program**

Unintended consequences

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The intended and unintended consequences of quality improvement interventions for small practices in a community-based electronic health record implementation project.

Authors:
Ryan AM
McCullough CM
Shih SC
Wang JJ
Ryan MS
Casalino LP

Med Care. 2014 Sep;52(9):826-32

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Research Question

- **What is the effect of incentives on non-incentivized measures in the Health e-Hearts program?**

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Methods

- **All P4P practices**
- **Unincentivized and not reported on measures:**
  - *Documentation*
    - BMI measurement
  - *Processes*
    - Appropriate asthma rx
    - Pneumoccocal vaccine
  - *Intermediate Outcomes*
    - HbA1C control

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Decreased performance over time on unincentivized measures

- **Relative to predicted performance in the same set of practices**
- **Underpowered to look at specific measures or by cohort, due to limitations in data transfer from EHR**

Incentivized measures			Unincentivized measures		
Intensity of exposure			Intensity of exposure		
6 months	12 months	18 months	6 months	12 months	18 months
6.7**	10.1*	10.1*	-4.9**	-7.6**	-8.3*

*P<0.05; ** P<0.01

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Results from Preliminary Analysis of Individual Measures by Cohort (unpublished)

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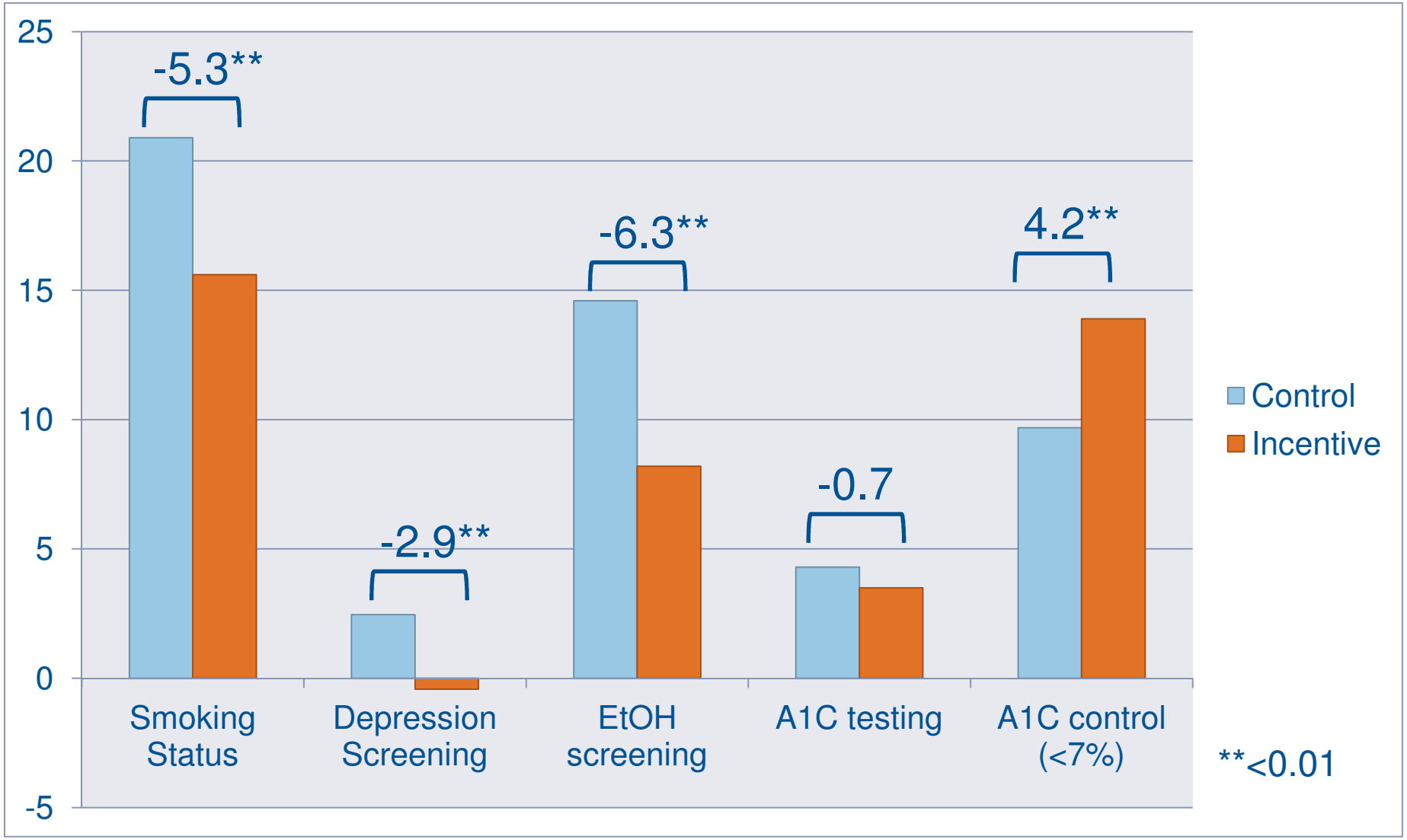
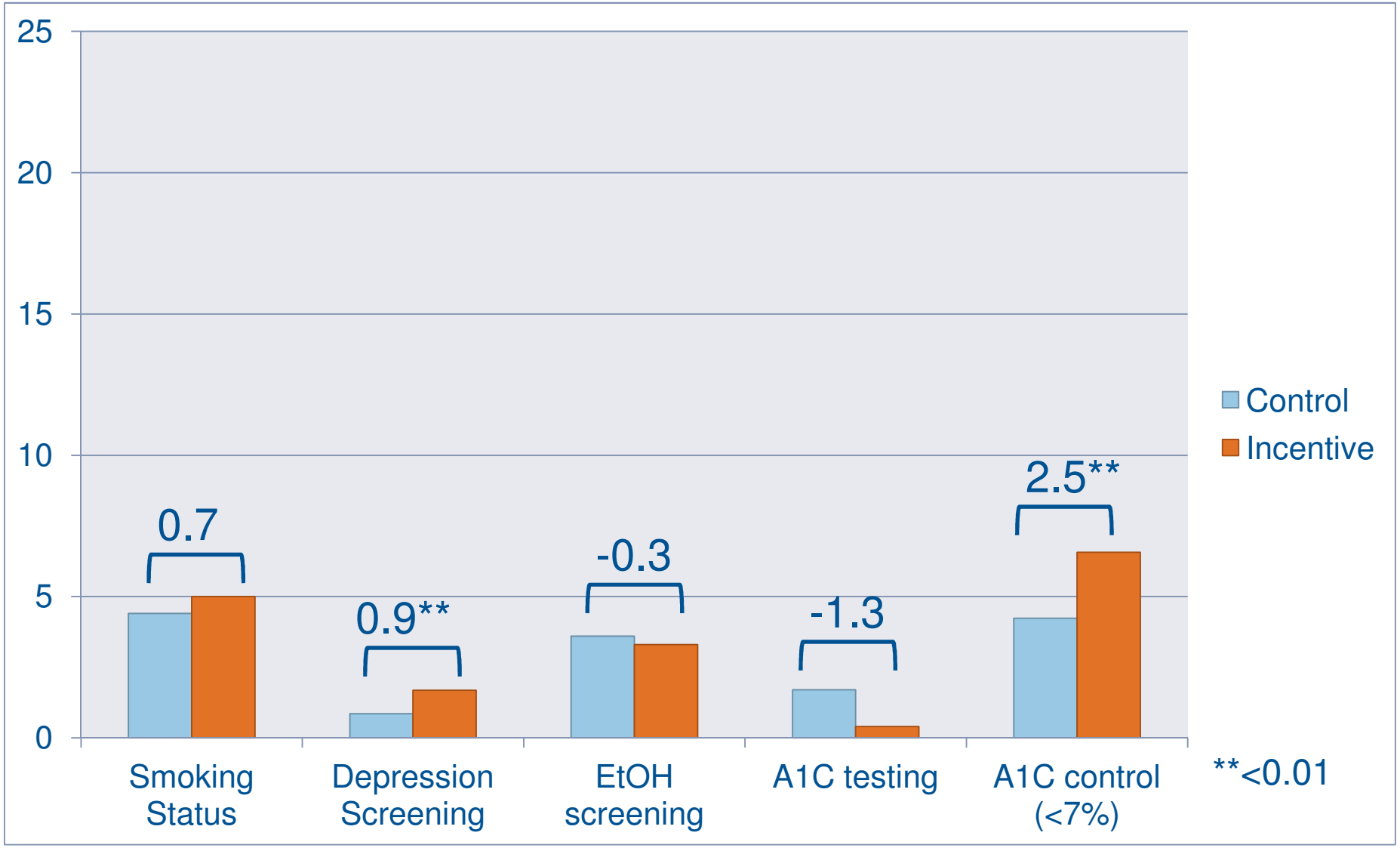
Baseline Year 2 Performance: Unincentivized Measures

	Naïve		Exposed	
Measure	**Control (%)**	**Incentive (%)**	**Control (%)**	**Incentive (%)**
Documentation				
Smoking Status	57.0	68.7	76.6	69.0
Depression Screening	5.6	6.1	4.8	3.8
EtOH screening	34.6	41.5	31.7	26.5
Processes				
A1C testing	23.3	35.3	34.3	36.8
Intermediate outcome				
A1C control (<7%)	0.3	2.7	14.5	8.6

Performance Changes Year 2, Naive



Performance Changes Year 2, Exposed



Summary

- **On individual non-incentivized measures, P4P program had differential effects**
- **For documentation measures, both groups improved, with the incentive group improving at a slower rate than the control group in the first year**
  - *The incentive group caught up by the end of the second year*
- **For DM process measure, incentive and control groups behaved similarly in both years**
- **For DM intermediate outcome measure, incentive groups improved at a faster rate than control groups, in both years**

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Discussion

- **The summative P4P incentive effect on a combination of unincentivized measures found worse performance over time**
- **It may be that the summative approach obscured differences in the incentive effect by type of measures (documentation vs. processes vs. outcomes) and differences in effects over two different cohorts**
  - *Less focus in the incentive group on documentation in the first year*
  - *The same way the intended effects of the P4P incentive diminished over time, with the control group catching up, the incentive group caught up on the unincentivized measures*

Discussion

- **Population of focus for unincentivized measures may change the story**
  - *Design of incentive programs needs to consider effects on other populations (asthma, depression screening)*
  - *There may be a quality spillover effect on other measures of care within the same population (diabetics)*

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Objectives

- Brief overview of what's known about P4P in Medicaid populations in the outpatient setting
- Describe the results of a P4P program in clinics serving a high proportion of Medicaid patients
  - *Designed to address known limitations*
- **Discuss potential implications for P4P program design and future research**

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Design implications

- Graduated incentive design
- Piece-rate design
- Advice to clinics and policy-makers: invest in using QI tools—decision support, registries

Design implications (cont.)

- **Program successes may occur through multiple mechanisms—control clinics are potentially affected as well**
  - *Consider rotating clinic incentive eligibility*
    - Enables clinics to build capacity
    - Renews focus in incentive years, potentially prolonging sustainability
- **Assess for performance on unincentivized measures within the same population and different populations**
  - *Consider population when suites of incentivized measures and unincentivized measures*

Acknowledgements

- **New York DOHMH, PCIP**
  - *Jason Wang, PhD*
  - *Samantha F. DeLeon, PhD*
  - *Sarah C. Shih, MPH*
- **Phil R. Lee Institute for Health Policy Studies, UCSF**
  - *L. Elizabeth Goldman, MD*
  - *John Boscardin, PhD*
  - *R. Adams Dudley, MD MBA*

Thomas Frieden, MD MPH—Director, Centers for Disease Control and Prevention
Farzad Mostashari, MD ScM—Former National Coordinator for Health Information Technology, at Brookings Institution

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Questions?

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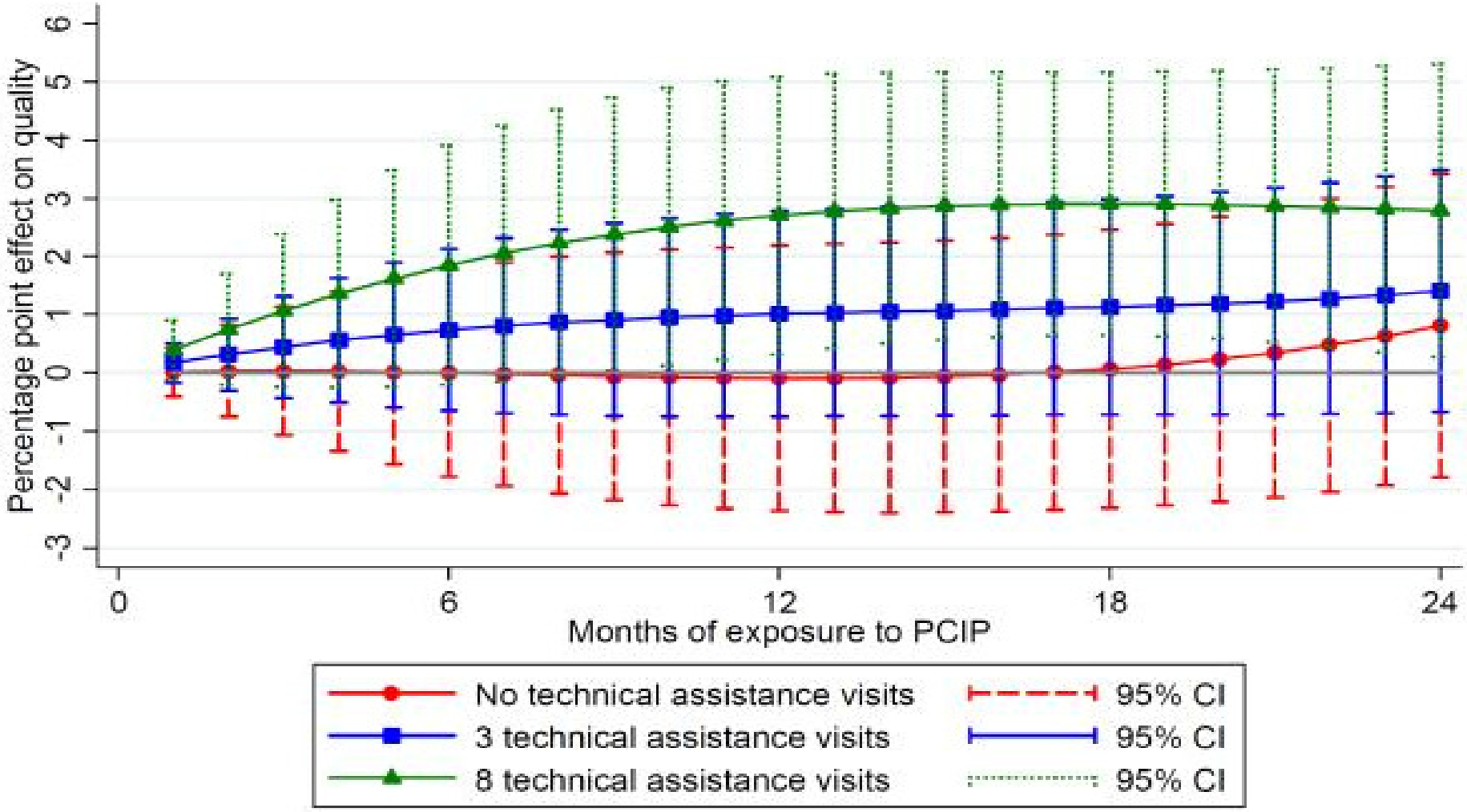
Need for prolonged technical assistance to achieve improvements



Small Practices' Experience With EHR, Quality Measurement, and Incentives

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Am J Manag Care. 2013 Nov;19
(10 Spec No):eSP12-8

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NYC Health Primary Care Information Project

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Study Objectives

- To assess clinician attitudes towards P4P measures and intervention
- To assess clinician use of the EHR
- To explore potential explanatory variables for differences in performance on P4P metrics between control and intervention clinics

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Setting and Design

- Lead clinicians from each participating practice in the Health eHearts program (years 1 and 2)
- Survey administered at the end of the second year (October 2011)

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RESULTS

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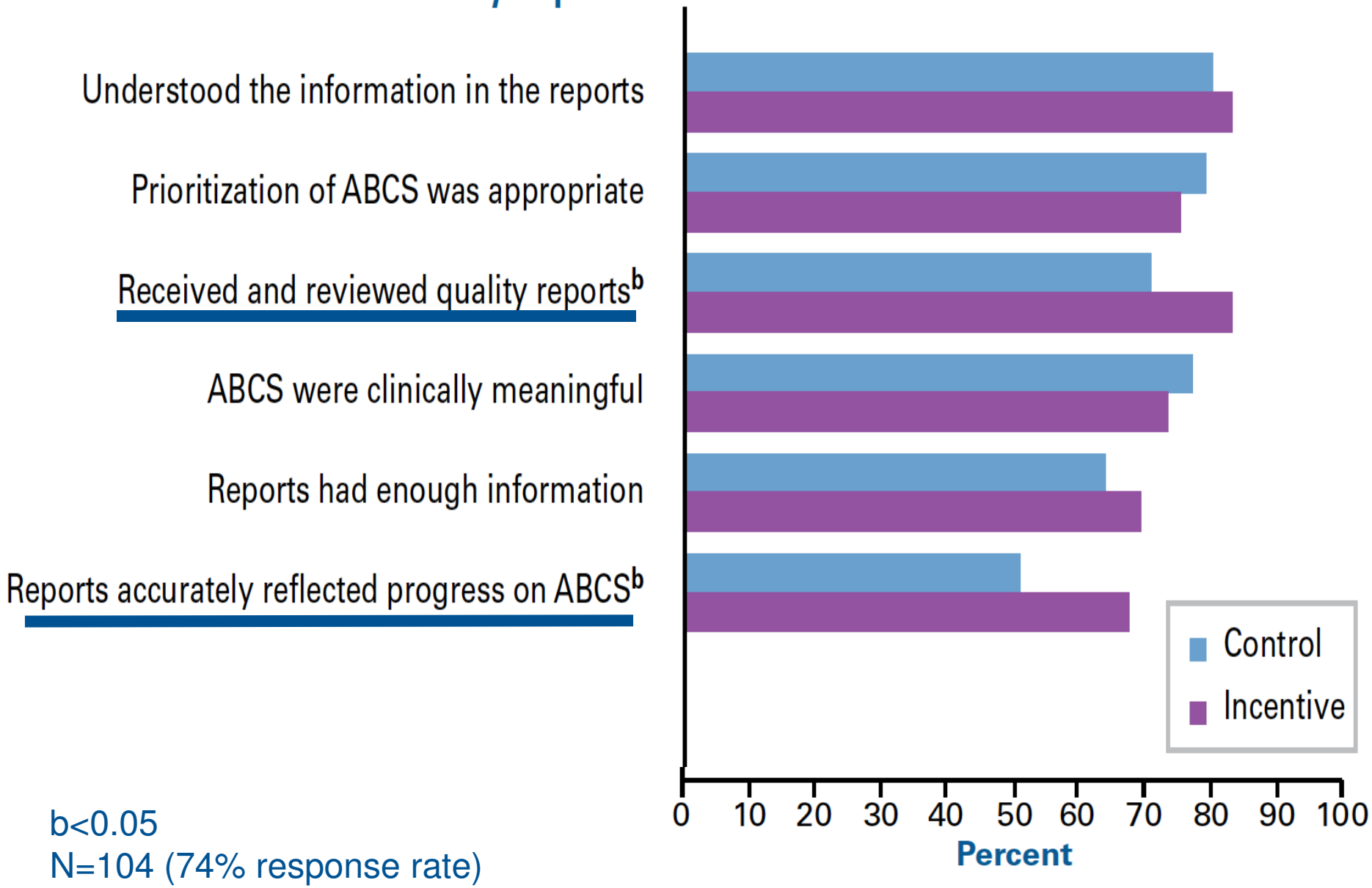
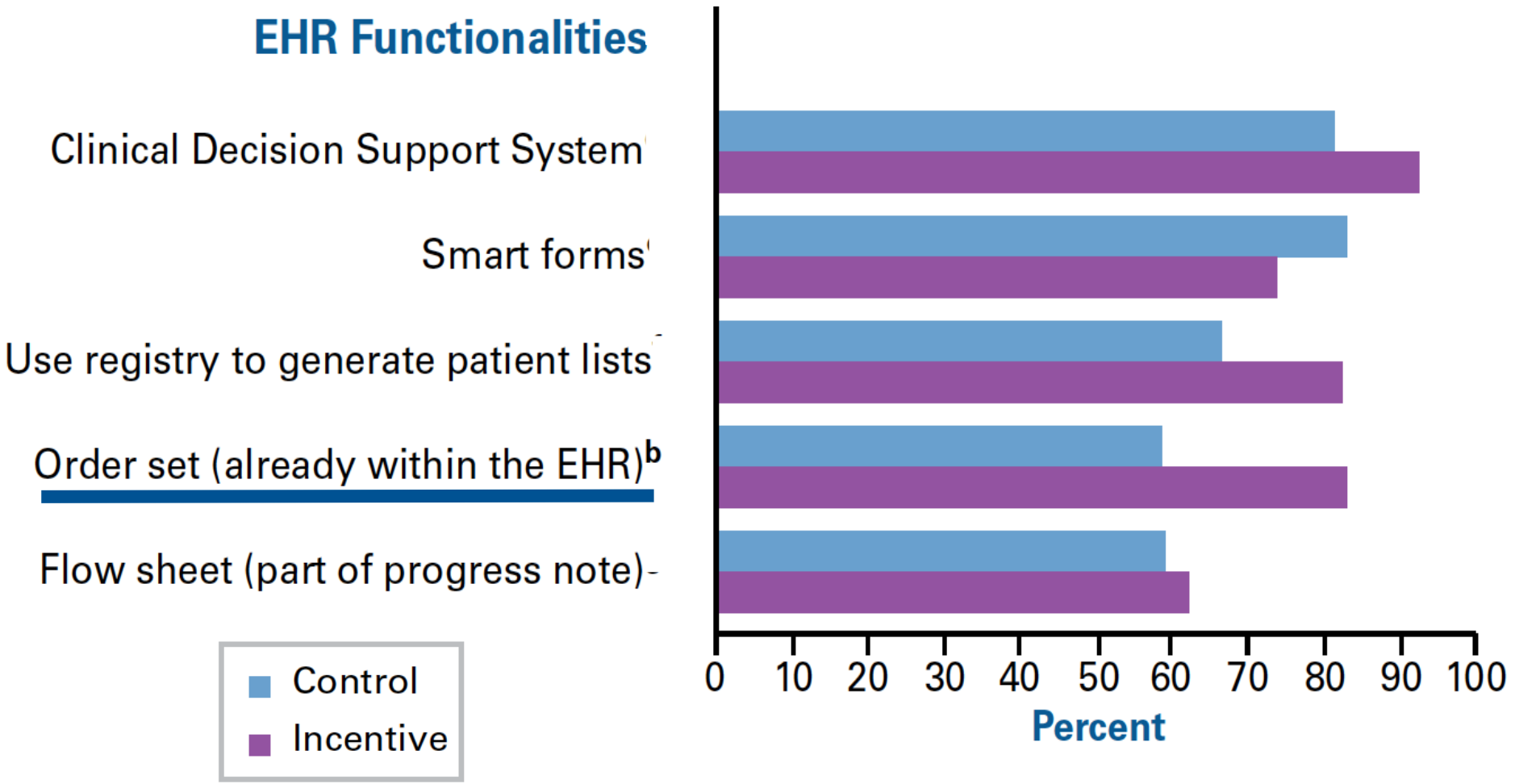
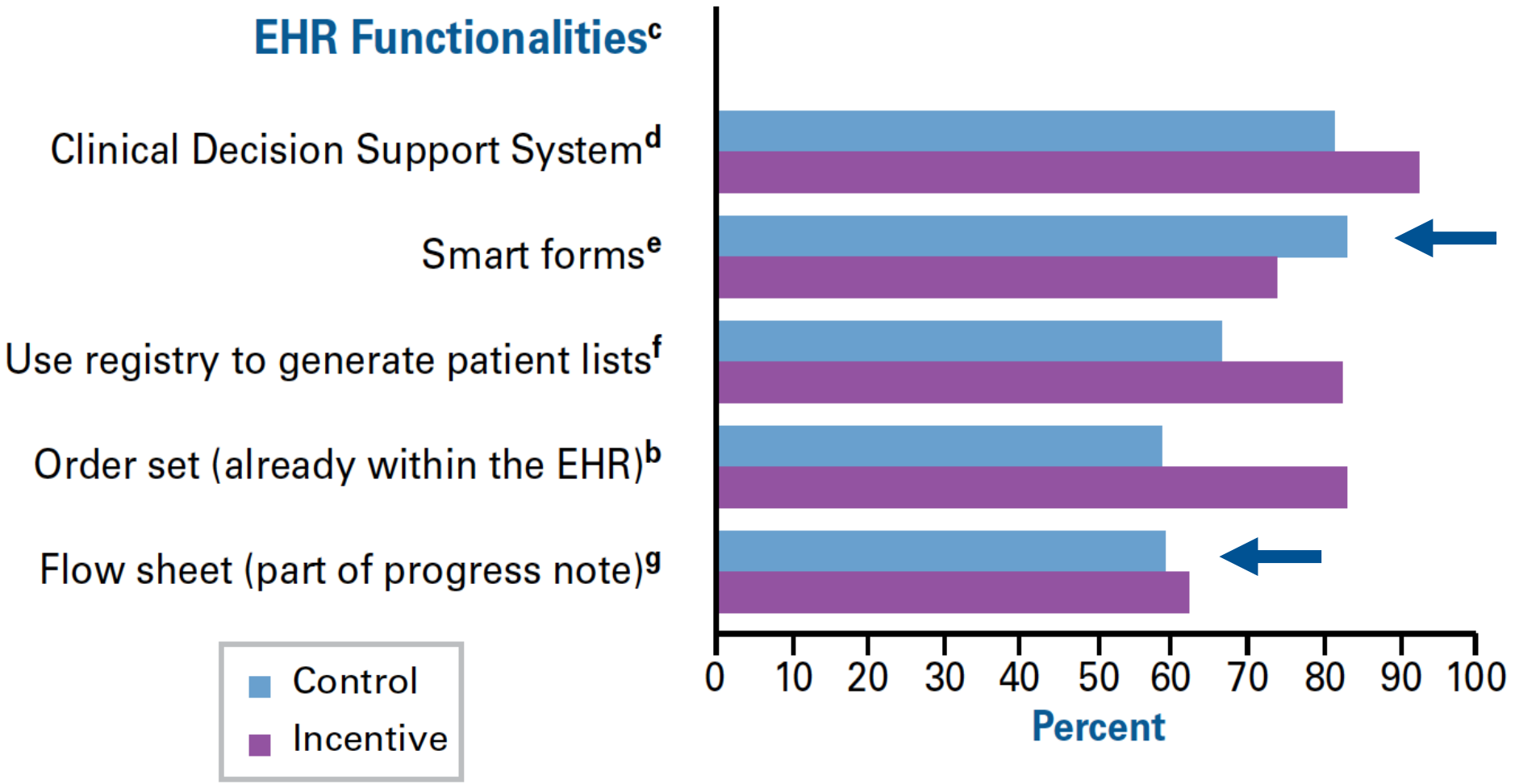
Quality Reports[a]



b<0.05
N=104 (74% response rate)


EHR Functionalities
Clinical Decision Support System
Smart forms
Use registry to generate patient lists
Order set (already within the EHR)b
Flow sheet (part of progress note)
Control
Incentive
0
10
20
30
40
50
60
70
80
90
100
Percent

b<0.05


EHR Functionalities[c]
Clinical Decision Support System[d]
Smart forms[e]
Use registry to generate patient lists[f]
Order set (already within the EHR)[b]
Flow sheet (part of progress note)[g]
Control
Incentive
0
10
20
30
40
50
60
70
80
90
100
Percent

Summary

- Providers in incentive groups report getting "signal" more than control groups
- Providers in incentive groups report more buy-in than control groups re: report accuracy
- Providers in incentive groups report more comfort with functionality that supported success on the incentivized measures
- Data suggest more focus on documentation in the control providers
- These mechanisms may contribute to differences in performance

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