Pay-for-Performance: Approaches of Professional Societies

CCCF 2011
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I currently hold a New Investigator Award from the Canadian Institutes for Health Research
Pay-for-performance in pulmonary, critical care and sleep medicine: an official ATS policy statement


*on behalf of the American Thoracic Society pay-for-performance working group

Pay for performance in critical care: An executive summary of the position paper by the Society of Critical Care Medicine*

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Submitted By: The Pay for Performance Task Force of the Advocacy Committee. (Crit Care Med 2009; 37:
1. *ad-hoc* subcommittee of the Health Policy Committee

2. experts in pulmonary, critical care and sleep medicine, hospital and outpatient practice administration, health care quality measurement, health economics, and health services research
Objectives

1. Discuss definitions of and evidence for pay for performance schemes

2. Consider the potential for unintended consequences from these schemes

3. Discuss challenges to pay for performance in Critical Care Medicine

4. Recommendations
1. Definitions and Evidence
P4P schemes seek to address the “Quality Chasm”

McGlynn et al

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of Indicators</th>
<th>No. of Participants Eligible</th>
<th>Total No. of Times Indicator Eligibility Was Met</th>
<th>Percentage of Recommended Care Received (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall care</td>
<td>439</td>
<td>6712</td>
<td>98,649</td>
<td>54.9 (54.3–55.5)</td>
</tr>
<tr>
<td>Type of care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive</td>
<td>38</td>
<td>6711</td>
<td>55,268</td>
<td>54.9 (54.2–55.6)</td>
</tr>
<tr>
<td>Acute</td>
<td>153</td>
<td>2318</td>
<td>19,815</td>
<td>53.5 (52.0–55.0)</td>
</tr>
<tr>
<td>Chronic</td>
<td>248</td>
<td>3387</td>
<td>23,566</td>
<td>56.1 (55.0–57.3)</td>
</tr>
</tbody>
</table>
P4P links compensation for healthcare to achieving Pre-specified targets

- Reward based (extra compensation)
- Penalty based (withholding compensation)
- Absolute performance (payments for meeting pre-defined goals)
- Relative performance (quality compared between similar providers and payments made to the highest performers)
P4P links compensation for healthcare to achieving Pre-specified targets

- Behaviour change:
  - clinicians, clinician groups, hospitals

- Quality domains:
  - structure, process, outcome
Evidence for P4P


Technical Review
Number 10

Prepared for:
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services

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Harold S. Luft, Ph.D.

Annals of Internal Medicine
Improving Patient Care

Does Pay-for-Performance Improve the Quality of Health Care?
Laura A. Petersen, MD, MPH; LeChauncy D. Woodard, MD, MPH; Tracy Urech, BA; Christina Daw, MPH; and Supicha Sookanan, MPH

2006
Evidence for P4P

- Summary of both systematic reviews
- 9 randomized controlled trials (6/9 included in both)
  - Modest overall improvement
  - Heterogeneous incentive programs
  - Heterogeneous targeted providers
  - Heterogeneous quality indicators
Evidence for P4P

- Summary of both systematic reviews
- Most involved primary care
- Most targeted few quality indicators
- None targeted hospital inpatients
- None targeted critical care physicians
- None targeted critical care quality indicators
Evidence for P4P

207 hospitals participating in P4P demonstration project
Centers for Medicare & Medicaid
406 public reporting only
Measures of care for heart failure, MI, pneumonia
Up to 2% of total reimbursements
Absolute improvements in composite measures (adjusted for baseline & hospital characteristics)
2.6% to 4.1% over 2 years
Evidence Supporting P4P

Pneumonia

Percentage of patients who were assessed for oxygenation

Percentage of patients who were given initial antibiotics within 4 hours after arrival

Percentage of patients who were assessed and given pneumococcal vaccination
Evidence for P4P

Graph showing the performance rate of pneumonia over quarters from 2003 to 2005. The graph compares Pay for performance and Public reporting, with a clear increase in performance rate over time for both categories.
Evidence for P4P

11.2% improvement

7.1% improvement

4.1%
(2.3-5.9%)
### Evidence for P4P

<table>
<thead>
<tr>
<th>Pneumonia</th>
<th>Inpatient Mortality</th>
<th>Percentile</th>
<th>ARR</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygenation assessment</td>
<td></td>
<td>25th</td>
<td>0.042</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75th</td>
<td>0.041</td>
<td></td>
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<tr>
<td>Pneumococcal vaccination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARR</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Value</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Timing of initial antibiotic therapy</td>
<td></td>
<td>25th</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>75th</td>
<td>0.035</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARR</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Value</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Composite score</td>
<td></td>
<td>25th</td>
<td>0.042</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>75th</td>
<td>0.038</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ARR</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Value</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

Rachel M. Werner, MD, PhD
Eric T. Bradlow, PhD

*JAMA*, December 13, 2006—Vol 296, No. 22
Do quality targets lead to better outcomes?

1. 1075 hospitals – Leapfrog Safe Practices Survey (13 safe practices)

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest)</td>
<td>1.97 (1.78,2.18)</td>
</tr>
<tr>
<td>2</td>
<td>2.04 (1.84,2.25)</td>
</tr>
<tr>
<td>3</td>
<td>1.96 (1.77,2.16)</td>
</tr>
<tr>
<td>4 (highest)</td>
<td>2.00 (1.80,2.22)</td>
</tr>
</tbody>
</table>

Association Between Hospital-Reported Leapfrog Safe Practices Scores and Inpatient Mortality

*JAMA. 2009;301(13):1341-1348*

Leslie P. Kernisan; Sei J. Lee; W. John Boscardin; et al.
Pay for Performance, Quality of Care, and Outcomes in Acute Myocardial Infarction

54 hospitals participating in P4P targeting MI care
446 control hospitals
Funded by Centers for Medicare & Medicaid
105,383 patients over 3 years
Only 2 of 6 therapies improved with P4P

ASA prescription 97.1% vs 95.9%
Smoking cessation counseling 95.8% vs 88.8%
P4P for Acute MI

CMS Measures

Mean Score

<table>
<thead>
<tr>
<th>Time</th>
<th>Pay-for-Performance Hospitals</th>
<th>Control Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-Dec 2003</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>Jan-Jun 2004</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Jul-Dec 2005</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Jan-Jun 2006</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

JAMA. 2007;297:2373-2380
P4P in the United Kingdom

**SPECIAL ARTICLE**

Pay-for-Performance Programs in Family Practices in the United Kingdom

Tim Doran, M.P.H., Catherine Fullwood, Ph.D., Hugh Gravelle, Ph.D., David Reeves, Ph.D., Evangelos Kontopantelis, Ph.D., Urara Hiroeh, Ph.D., and Martin Roland, D.M.


**SPECIAL ARTICLE**

Effects of Pay for Performance on the Quality of Primary Care in England

Stephen M. Campbell, Ph.D., David Reeves, Ph.D., Evangelos Kontopantelis, Ph.D., Bonnie Sibbald, Ph.D., and Martin Roland, D.M.

P4P in the United Kingdom

1. £1.8 billion ($3.2 billion USD)
2. 146 care measures, near universal participation by GPs
   – ~25% of GP payments (avg $40k/year)

4. Median 83% achievement
5. Exception reporting not extensive, but strongest predictor of high achievement
Some… but not all… practices improved
Some... but not all... practices improved

- Rate improved
- Rate not improved

P4P rollout

Score vs. Year (1998-2007)

- Coronary heart disease
- Diabetes
- Asthma

1. Limited evidence from RCTs
2. Most large scale implementations have been associated with modest improvements
   – Generalizability and relevance to CCM unclear
3. Relationship of targeted process measures to patient outcomes uncertain
2. Unintended Consequences
1. Improved documentation of care processes without changing quality of care

2. Overuse (providing inappropriate procedures to ineligible patients to obtain incentives)
   Larson DM et al. *JAMA* 2007; 298:2754
3. Improvements may come at the expense of other quality indicators.
Unintended Consequences

P4P rollout

4. Discount patient preferences
   – Quality measures may be insensitive to patient needs or treatment preferences

5. May fail to consider important contraindications
   – Interactions between targeted therapies (example: drug-drug interactions)
   – Importance of having opt-out / acceptable exclusion criteria
Unintended Consequences

6. Selection Biases
   - Enrolment of fewer sick patients (avoid worse outcomes)
   - Incentives may predominantly reward those with higher baseline performance
1. PacifiCare P4P physicians (California) vs non-P4P (Pacific Northwest)

   – “For all 3 measures, physician groups with baseline performance at or above the performance threshold for receipt of a bonus improved the least but garnered the largest share of the bonus payments.”
Comparing providers: The sample size problem

2000 Nationwide Inpatient Sample

Justin B. Dimick; H. Gilbert Welch; John D. Birkmeyer

*JAMA.* 2004;292(7):847-851
3.
Challenges specific to CCM
P4P poses unique challenges for CCM

1. Choosing appropriate quality measures considering the evolving (limited) evidence base
2. Complex care processes
3. Choosing appropriate targets
1. Few therapies definitively proven to improve mortality and/or health-related quality of life

2. Tension between desire to provide incentives for quality and paucity of interventions definitively shown to improve important outcomes

It’s difficult to identify appropriate quality measures considering our evolving evidence base
Identifying eligible patients can prove challenging

1. Little published data about the validity of performance measures

2. Unknown sensitivity and specificity of identifying appropriate patients for quality of care indicators

   • Syndromes rather than specific diseases
Providing high quality critical care involves complex care processes

1. Outcomes often depend on simultaneous implementation of multiple processes

2. Outcomes may be determined by care processes occurring outside the ICU

3. Bundling of some processes may lead to contradictory effects
1. DVT prophylaxis
2. Low tidal volume in ARDS
3. Barrier precautions for CVC insertion in pediatric patients
4. Prevention of CRBSI with preferential use of subclavian vein
5. Stress ulcer prophylaxis
Which member(s) of the ICU team should be targeted?

- P4P programs typically reward care through established payment systems to hospitals and physicians.
- Potentially neglects the role of other care providers.
- Difficult to attribute health care to a specific provider when multiple clinicians are involved.
- Innovative strategies are required for rewarding all essential members of the health care team.
4. Recommendations
Despite these challenges, P4P programs are likely to become more common

1. Payors and policy makers are not waiting for better quality measures or more validated programs

2. An important strategy may be to study these programs before and during their implementation

3. Critical care physicians should become actively involved in developing these research agendas to ensure that any proposed P4P programs will be relevant to critical care

ATS Pay-for-Performance Working Group – Health Policy Recommendations
Health Policy Recommendations: 
*P4P in Critical Care Medicine*

1. Primary goals of P4P should be improving health outcomes, expanding access to quality healthcare
   - Cost reduction appropriate secondary goal, but this must not adversely impact quality of care

2. P4P should only use quality measures that are valid, reliable, relevant, and evidence-based

3. Costs of developing and measuring performance measures should not be borne solely by clinicians

ATS Pay-for-Performance Working Group – Health Policy Recommendations
Health Policy Recommendations:

P4P in Critical Care Medicine

1. P4P programs which restrict reimbursement for complications must recognize that zero occurrences may not be obtainable
2. P4P must not widen health disparities
3. P4P must not adversely impact quality of care
   – Should reward multiple quality domains (structure, process, outcome)

ATS Pay-for-Performance Working Group – Health Policy Recommendations
Clinical Policy Recommendations:  

*P4P in Critical Care Medicine*

1. P4P represents an opportunity to partner with payers to improve quality
2. Whenever possible, hospitals and physicians should establish mechanisms to reward other (non-physician) health professionals involved in multidisciplinary care
1. Research is needed evaluating the efficacy of P4P in Critical Care Medicine

2. Funding agencies should support research investigating P4P as a mechanism for translating new evidence into practice

3. Research is needed evaluating the cost-effectiveness of P4P

ATS Pay-for-Performance Working Group – Research Policy Recommendations
Conclusions

1. P4P schemes seek to improve quality by linking reimbursement to performance
   - Despite limited evidence of effectiveness (or knowledge of unintended consequences), these are becoming more common

2. The greatest threat to critical care physicians’ professional autonomy would be to leave the planning of future P4P programs to others
   - Our involvement in planning and implementation of such programs is essential
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