# Guidance for Structuring Team-Based Incentives in Healthcare

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New payment methods designed to incentivize more efficient care delivery are accelerating the movement of healthcare providers into organized provider groups. More efficient healthcare delivery requires explicit structuring of care delivery processes around teams of clinicians working toward common patient care goals. Provider organizations accepting new payment methods will need to design and implement compensation systems that provide incentives for team-based care. While lessons from studies performed both outside and inside healthcare provide some guidance on designing and implementing team-based incentives, organized delivery systems face several significant barriers to accomplishing this.

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**For author information and disclosures, see end of text.**

As healthcare spending continues to grow, provider payment reform remains a priority for policy makers. Both public and private sector policies have focused on the payment system as a central tool for delivery system reform. Federal examples include Value Based Purchasing and the Shared Savings Program for Accountable Care Organizations.[1,2] At the same time, the Center for Medicare & Medicaid Innovation (CMMI), commercial plans, and Medicaid programs are testing new delivery models and payment incentives.[3]

As provider organizations sign these contracts, they must grapple with how best to organize care processes and change the incentives within their own organizations.[4-7] Provider organizations need to examine and modify existing compensation systems to better align provider incentives with the cost-containment goals created by the new payment methods and new care-delivery models they will put in place to achieve them. For example, new compensation systems are needed for distributing global or bundled payments, distributing shared savings, and encouraging team-based care across provider specialties.



It is widely understood that future efforts to improve patient outcomes and system efficiency are likely to rely heavily on increased teamwork.[8] However, little attention has been given to how to best structure financial incentives *within* an entity such as an accountable care organization (ACO) to maximize cooperation in achieving improved quality and lower spending. While teamwork has been shown to improve clinical outcomes and provider satisfaction in a variety of ambulatory and inpatient settings, discussion of how best to incent medical teams has been limited.[9-18] In this article, we focus on the design of reward systems and performance evaluations for teams.

We begin our analysis with a clinical vignette to highlight the relevance and complexity of team-based incentives. Drawing from the literature on organizational behavior, we then define teamwork and present evidence that workers' interdependence—the degree to which each worker impacts the outcomes of his/her colleagues' work—affects how work should be evaluated and rewarded.[19] We discuss the implications of this evidence for teamwork in healthcare generally, and the use of teams to promote shared accountability for clinical outcomes and healthcare spending in particular. Finally, we highlight challenges associated with implementing team-based performance measurement and reward systems.

## Team-Based Care for Diabetes: A Clinical Vignette

Mrs Smith, a 70-year-old non-smoking woman with type 2 diabetes mellitus, hypertension, and obesity, goes to see her primary care physician (PCP) for a new patient visit. She is insured through Medicare, and her new PCP's practice recently joined an ACO that is eligible for shared savings and quality performance bonuses through the Medicare Shared Savings Program. In this program, the ACO is given a yearly spending target for its population of patients. If the ACO meets performance thresholds for certain quality measures, and total medical spending for all included patients is below target, then the ACO shares the savings with Medicare.

### Take-Away Points

- Future efforts to reduce healthcare spending and improve care quality will likely rely heavily on teamwork.
- Research from within and outside of healthcare indicates that team-based performance incentives can improve team effectiveness. Thus, team incentives may help delivery organizations to improve quality and reduce spending.
- Barriers to implementing team incentives include: frequent clinical team turnover; clinician resistance to changing practice patterns and reimbursements; and adoption of reliable and valid team performance measurement systems.
- Strategies for addressing these barriers include: improving clinical team continuity; involving clinicians in incentive design; and using information technology for work team monitoring and assessment.

Mrs Smith was discharged from the hospital 2 weeks ago following a 3-day hospitalization for pneumonia. Prior to discharge, Mrs Smith's inpatient care team scheduled her for a post-discharge follow-up appointment with her PCP. The hospital discharge summary, discharge medication list, and test results from the hospitalization were forwarded to the PCP's office. Laboratory tests sent during this hospitalization were notable for an elevated glycated hemoglobin (A1C) of 10.2, reflecting poor control of her diabetes.

Today, the practice's nurse practitioner (NP) evaluates Mrs Smith's vital signs and finds that her blood pressure is elevated above the goal for diabetic patients. The NP reconciles Mrs Smith's current and pre-hospitalization medication lists and the PCP performs a full physical examination. While testing for sensation in her feet, the PCP diagnoses diabetic neuropathy—or decreased feeling—in both feet and a grade I diabetic ulcer in the right foot. At the end of their visit, Mrs Smith and her PCP discuss a plan to better control her diabetes and blood pressure. The PCP increases the dose of Mrs Smith's blood pressure and diabetes medications, starts a low-dose aspirin, and refers her to a dietician for medical nutrition therapy, an ophthalmologist for a dilated eye exam, and a podiatrist for additional management of her ulcer and peripheral neuropathy. Mrs Smith is also assigned a care manager, who will help organize the patient's appointments with each provider and facilitate communication of important information between them. All providers are part of the same ACO.

The practice's NP administers influenza and pneumonia vaccines, and sees Mrs Smith 2 weeks later to check her blood pressure and then every 3 months for A1C measurements and counseling. The clinic's administrative assistant forwards Mrs Smith's clinic notes and recent laboratory work to the dietician, ophthalmologist, and podiatrist and uploads them into the ACO's electronic medical record (EMR). The NP then contacts each provider to clarify Mrs Smith's management goals, and introduces them to the other providers who will be caring for her. The NP makes it clear that all of Mrs Smith's providers will be working together to care for her, and will be collectively responsible for achieving the ACO's quality standards, some of which will include those developed by the Centers for Medicare & Medicaid Services (CMS).[1]

After a patient visit, each provider posts a note in the shared EHR and forwards this note to other members of the care team. The case manager creates a groupwide e-mail list so that the providers can discuss management decisions and share patient updates. When Mrs Smith returns to see her PCP 1 year later, her A1C and blood pressure are improved, and she has lost 15 pounds. She has not been hospitalized in the past year. The ACO receives a CMS performance bonus for exceeding several ACO quality performance standards, including: performing post-discharge medication reconciliation, influenza and pneumococcal vaccine administration, A1C and blood pressure targets in diabetic patients, and rates of screening for microalbuminuria, retinopathy, and foot ulcers for diabetic patients. Moreover, the ACO's total spending was less than its Medicare target, so it is eligible to receive shared savings.

This vignette raises at least 2 questions about teamwork and performance incentives: In what sense do the providers caring for Mrs Smith constitute a team? And how should the ACO structure these providers' performance incentives to promote the achievement of ACO performance goals?

## Teamwork: Definitions and Theory

Before considering how to optimally compensate this patient's providers, we must first decide if they are a team. Teams are commonly defined by the work process they are engaged in and have been characterized as having 4 distinct types: work teams, parallel teams, project teams, and management teams.[20] Because the individuals delivering our patient's care are the ones actually doing the work, her

**Table 1.** Types of Work Interdependence[19]

| Type of Interdependence | Description in Clinical Setting |
|---|---|
| **Task Interdependence** | Features of work requiring that the work be performed by multiple individuals. Task interdependence increases with positive answers to the following questions:<br><br>1) Are workers given collective responsibility for completing work?<br>2) Are workers given explicit rules regarding whether they should complete the work as a group, or individually?<br>3) Does work require, or lend itself well to, having multiple individuals working simultaneously to complete it?<br>4) Does group have to share physical resources and/or information to complete the work? |
| **Outcomes Interdependence** | The degree to which shared significant consequences of work are contingent on collective work performance. Outcomes interdependence increases with positive answers to the following questions:<br><br>1) Are members of a group held collectively accountable for work outcomes? Is work performance evaluated at the team or individual level?<br>2) Do they receive work-related compensation or rewards from the same source (eg, the same institution)?<br>3) Are all group members financially accountable for work outcomes? Are all group members eligible for a share of the team's performance reward? |
| **Behavioral Interdependence** | The degree to which a group of individuals actually exhibit teamwork in practice. Behavioral interdependence increase with increasing number of positive answers to the following questions:<br><br>1) Do individuals complete work entirely as a group (high behavioral interdependence), alone (low behavioral interdependence), or largely alone, but with periodic interactions between team members to coordinate work (moderate behavioral interdependence)? |

providers are a work team.[21] Work teams have some defining features, including: 1) a clearly defined goal requiring multiple individuals working interdependently; 2) boundaries that differentiate between team members and nonteam members; 3) authority and autonomy to manage work processes; 4) stable membership over a reasonable time period; and 5) they possess the essential resources necessary to achieve their goals.[22-24] Mrs Smith's providers meet these criteria for a work team.

Teams are best suited to complete highly interdependent and complex work—tasks for which an individual's work product and performance depend upon the performance and expertise of others.[22] Three forms of work interdependence impact teamwork outcomes: task interdependence, outcomes interdependence, and behavioral interdependence.[19] Task interdependence refers to characteristics of work that necessitate that it be performed by multiple individuals (Table 1[19]). Outcomes interdependence refers to whether work performance is evaluated and/or compensated at the level of the team or the individual. For example, Mrs Smith's providers would have high outcomes interdependence if they were evaluated as a team for meeting certain ACO quality and spending benchmarks. Behavioral interdependence is a function of how well a group of individuals actually work as a team.[19] Well-functioning teams are more likely to demonstrate higher levels of achievement[21,23,25] and group functioning is influenced by a range of factors (Table 2[9-11,13-16,19-21,23,26-32]).

Organizational research has identified several key lessons about how the structure of a team's work, its compensation, and its performance evaluation systems influence teamwork quality and work outcomes. First, team effectiveness appears to be highest when task interdependence and outcomes interdependence are congruent. In other words, when multiple individuals need to work together to complete a task, team rewards and performance evaluations can motivate team members to work together more effectively. Conversely, individual performance assessments and compensation for work requiring a team can undermine team effectiveness and impede team performance.[19,33,34] Second, the motivational effects of team-based rewards will be blunted, if not lost entirely, if they are not supported by team training and performance feedback systems. Team-based performance incentives improve team performance if team members understand how to build effective teams and how to be good team members, and can see their progress toward a goal.[12,15,21,23,25,35,36] Third, overly complex rewards and performance evaluation systems lack motivational power because employees lose sight of the links between work and

**Table 2.** Characteristics Associated With Work Team Effectiveness

| Characteristic | Example From Vignette |
|---|---|
| **Task Features** | |
| a) Autonomy<br>b) Task interdependence | a) Care team has authority to manage Mrs Smith's care without constant oversight from ACO management.<br>b) Team members aware of their collective accountability for Mrs Smith's care. |
| **Team Composition** | |
| a) Team size (optimal size is task-dependent)<br>b) Diversity of training and expertise<br>c) Multiple team affiliations (may reduce commitment to any 1 team) | a) PCP ensures that all members contribute meaningfully to achieving Mrs Smith's care goals.<br>b) Team includes mixture of generalists and specialists.<br>c) Specialist's affiliation with multiple clinical teams limits commitment to any 1 team. |
| **Team Leadership** | |
| Team leadership quality positively associated with team effectiveness. | Team leader (PCP) clarifies objectives, expectations, and individual roles to Mrs Smith's care team members and facilitates improvement through consistent feedback and education. |
| **Team Processes** | |
| a) Development of core norms of conduct<br>b) Frequent and standardized communication<br>c) High levels of participation in team's work<br>d) Collaborative decision making and shared mental models | a) Team formulates core norms of conduct to help guide formulation of Mrs Smith's care plan.<br>b) Weekly team meetings to discuss Mrs Smith's care; interim updates communicated via e-mail.<br>c) All team members have important, clearly specified team roles.<br>d) E-mail updates from team members facilitate group decision making. |
| **Organizational Context** | |
| a) Timely and consistent performance feedback<br>b) Equitable rewards systems<br>c) Access to team training/coaching<br>d) Culture (organizational emphasis on teamwork and innovation)<br>e) Information technology/management systems | a) Team given monthly performance reports; reports used to identify improvement needs.<br>b) Yearly performance bonus for meeting performance benchmarks.<br>c) Team coach works with team on weekly basis.<br>d) Senior level support for multidisciplinary teamwork.<br>e) All practitioners have access to EHR and secure, HIPAA-compliant e-mail. |

ACO indicates accountable care organization; EHR, electronic health record; HIPAA, Health Insurance Portability and Accountability Act; PCP, primary care physician.
Adapted from Lemieux-Charles and McGuire (2006) and Cohen and Bailey (1997). All listed characteristics have been associated with work team effectiveness in published research.[9-11,13-16,19-21,23,26-32] Table does not include an exhaustive list of variables that may influence team effectiveness.

rewards.[33] Fourth, members of work teams appear to derive greater satisfaction from team-based performance incentives than individual incentives.[23,24,37,38]

These 4 lessons clearly apply to healthcare settings. Indeed, many large integrated health systems—including Kaiser Permanente, Virginia Mason, Geisinger Health System, and The Massachusetts General Hospital—have used team-based incentives and team-based feedback systems to help drive significant improvements in process outcomes, including rates of screening mammography, adherence to protocols for managing diabetes, and hand-washing.[26,27,39,40]

Given this guidance, what are our options for structuring incentives for individuals and groups that will optimize patient health? Answering this question requires an understanding of the types of measured performance indicators available for incenting group and individual performance. Useful performance measures possess some common features, which are outlined in the National Quality Forum measure selection criteria, and include importance, validity, reliability, and feasibility.[41] These indicators should be easy to understand and applied in a fair and objective manner. Furthermore, employees need to understand why part of their compensation is tied to the indicator. Additionally, employees must feel that they have control over their measured performance and can improve it if necessary.[23,28,42] Good performance indicators for teams reflect the work of all, or at least a majority of, the team's members, and should not be linked to the actions of only a few team members. Comprehensive sets of team performance indicators should include measures of teamwork quality, and customer or patient satisfaction.[1,23,28]

Applying these lessons to the vignette helps illustrate how measures can be used with incentives. Appropriate

targets for incenting Mrs Smith's care team include average A1C levels, blood pressure, and LDL levels for all diabetic patients. These commonly used measures are impacted by the work of the PCP, nutritionist, NP, and specialists who reinforce medication compliance, and nutrition, exercise, and weight loss goals. In contrast, hospital admission rates for all patients or certain subsets, another common quality measure, are more difficult for individual team members to see as being under their control, and might therefore be a less desirable target for team incentives. Other measures—including rates of pneumonia vaccination, yearly dilated eye exams, and screening for microalbuminuria—could be built into a composite measure which all team members contribute to achieving. Team-based performance incentives might also motivate Mrs Smith's providers to address specialty-specific and overall goals of care, including medication compliance, adherence to dietary recommendations, and regular exercise.[26,27] Provider organizations could also tailor incentives toward less-traditional quality measures, including appropriate utilization of CT scans and trans-thoracic echocardiograms, and rates of discharge summary completion within 24 hours of discharge.

Individual-level and organization-level performance incentives also have a role in healthcare systems with team-based healthcare delivery models. Individual level incentives are particularly effective for encouraging individual skill building, and organization-level incentives promote attention to organizationwide priorities. However, neither of these kinds of incentives directly encourages teamwork. Holding some, but not all, members of a team financially responsible for the group's outcomes is problematic because the excluded individuals may be less motivated to improve team outcomes, and may resent their colleagues' eligibility for additional compensation. For example, the NP in our vignette could feel frustrated if the PCP received incentive payments for meeting performance targets that the NP contributed to achieving. Conversely, team members who are eligible for performance rewards will feel frustrated if they are held accountable for team outcomes that they cannot control, a common problem with organization-level performance incentives.[23,33]

## Implications for Health Systems Design and Management

Implementing team-based incentives alone without systematic efforts to redesign the work of care delivery to be highly interdependent is unlikely to result in transformational performance improvement. Indeed, in organizations dominated by individual provider care delivery models, instituting team-based rewards alone is unlikely to create highly functioning teams. Instead, team-based incentives are likely to lead to "free riding," and other problems noted above, undermining the goals of using teams to deliver care.[23] Providers will need to see that cooperation will improve work performance.

Conversely, team-based care delivery models should not rely solely upon team-based rewards. Rewards systems in team-based organizations combine significant team-based payments with rewards for individual and organizational performance.[23] Ideally, team-based organizations will also have incentives and performance measurement systems that can account for the outcomes of multi-team collaborations.[24]

## Barriers to Implementing Team-Based Incentives

Healthcare delivery organizations face 3 types of barriers to implementing team-based performance and rewards systems: structural, cultural, and technical. The most important barrier to effective team-based reward systems in healthcare is the complexity of healthcare itself. The vast majority of healthcare is not delivered in focused factories where processes are linear and team members are relatively easily tracked.[43] The inherent complexity of human biology and illness results in the frequent requirement to care for individual patients along non-linear care paths, dramatically increasing the degree of difficulty for building effective team-based incentives. Thus, certain team-based aspects of a clinician's work will likely always remain outside of a specific incentive system. In addition, team-based performance incentives will be easiest to implement, and most effective, when team composition is stable over time.[23] However, some care teams have relatively rapid turnover, particularly in settings where healthcare professionals are being trained. Moreover, physicians and non-physicians often have different limitations on how financial incentives are managed in their compensation plans (eg, unionized nurses). Furthermore, equitably measuring and incenting inter-team collaborations—which are common in clinical settings—can be challenging.

With regard to cultural barriers, clinicians often resist changes in practice patterns and reimbursement systems. Objections typically include concerns about decreasing compensation, loss of control over work processes, and requirements for additional training. Clinicians' lack of familiarity and training with teamwork may also contribute to their resistance.[29,44] Generating broad support for team-based performance incentives may be particularly difficult in organizations that have traditionally valued individual work performance.[23]

Finally, effective incentive systems require reliable and valid performance measurement tools. Hospitals and clinics will need performance evaluation systems that equitably assess team performance without adding onerous administrative processes. While performance measurement and consistent performance feedback are essential for performance-based compensation and improvement, instituting these systems

appears to be more challenging in healthcare than in other industries due to the high number of different outcomes that must be tracked in order to thoroughly monitor healthcare service quality.[23,27,30]

### Overcoming Barriers to Implementing Team-Based Incentives

Provider organizations can take a number of steps to address the structural, cultural, and technical barriers to implementing team-based incentives outlined above. Structural barriers can be mitigated by reducing team member turnover and ensuring that clinical work spaces are appropriately designed for teams. For example, hospitalists could be assigned to work on specific hospital floors and training programs could assign residents to a team that rotates together from service to service. Increased geographic admitting—in which 1 clinician or team admits all patients to 1 care unit—would improve team consistency by ensuring that physicians and non-physician staff work together over time. Importantly, a strong teamwork culture has been associated with higher nurse retention rates.[45,46] As for clinical work space, teamwork is facilitated by having space that allows the team to convene, and this may require some redesign and investment.

To address cultural barriers to team-based incentives, leaders of provider organizations should engage physicians and non-physician clinicians, in efforts to design team performance incentives and incorporate them into existing payment plans. Engaging clinicians in system redesign has been associated with increased provider support for redesign efforts.[47-49] In addition, clinicians are more likely to support initiatives that clearly benefit their patients. Thus, leadership should review the evidence that teamwork is associated with higher quality care when engaging with clinicians. Ongoing education for clinicians about all aspects of the incentive program—including team training and performance assessment and feedback—is important for generating and maintaining clinician buy-in. As with any performance incentive program, the organization needs to maintain a process by which employees' concerns can be addressed.

To mitigate technical barriers, provider organizations will likely need access to robust information technology (IT) infrastructures. Modern EHRs, order entry programs, and complementary data extraction and analysis systems will help monitor and assess clinical work processes, including the work of clinical teams. EHR and administrative data can be used to construct performance measures, identify incentive targets, study the success of existing incentives, and monitor for inconsistencies in how outcomes are measured and rewarded. IT can also be used for delivering team training and performance assessment and feedback to clinical teams.

## CONCLUSIONS

While much remains to be learned about incentivizing performance in healthcare, the organizational behavior literature suggests that incentives systems should be used both to promote desirable work outcomes and to support and encourage particular work designs—including effective teamwork. Such an approach may yield valuable insights into how to better leverage teamwork to create true shared accountability for healthcare quality and spending.

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