

The Impact of ACO Formation on Physician Referrals

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Abstract

Substantial efforts have been underway in recent years to adopt payment models that tie provider reimbursement to the quality or value of care provided (Burwell, 2015). Notably, as part of the Affordable Care Act (ACA), the Center for Medicare and Medicaid Services (CMS) has established accountable care organizations (ACOs), which consist of collections of physicians, hospitals and other health providers that collectively take responsibility for a large patient population and whose payment rates are tied to the quality and cost of the care that they deliver. The main idea behind ACOs is that by promoting integration and providing quality-based incentives that ACOs will increase the efficiency with which healthcare is delivered by improving cooperating and reducing waste. While recent research has indicated that the program has achieved cost savings and improved quality (CMS, 2015b), a potential concern with the ACO program is that collaborative agreements across ACO providers could enable the exercise of market power among participants that could lead to an increase in the price of medical care. This project builds on previous literature which has looked at the impact of hospital ownership on physician referrals by estimating the impact of participation in an ACO on provider referrals. Using public physician referral data recently made available by CMS, combined with information on physician ACO affiliation we will analyze the degree to which ACO affiliation drives physician referral patterns, as well as examine the implications for non-affiliated providers.

Background

Accountable Care Organizations (ACOs) are an essential component of the Medicare Shared Savings Program (MSSP), established by the Affordable Care Act (ACA) of 2010. ACOs represent an attempt to change provider incentives with the goal of ensuring that healthcare provided to Medicare beneficiaries is both high-quality and cost-effective. This is part of a larger shift in the medical payment methodology away from fee-for-service, and towards a method of payment that rewards high-value care. The Secretary of Health and Human Services has set a goal to make 30% of payments through “alternative payment models” by 2016, and envisions the ACO model as playing a large role in this transition (Burwell, 2015). ACO participation has increased substantially in recent years, with some specialties reporting that as many as 30% of providers have joined these organizations (Medscape, 2015).

The goal of the MSSP is to reduce unnecessary spending and waste by allowing a group of providers that form an ACO to jointly take responsibility for a set of Medicare beneficiaries. If an ACO is able to provide care to these patients at a lower cost than expected, assuming the maintenance of a high standard of care (as measured by 30 quality metrics), the Centers for Medicare and Medicaid Services (CMS) will pay the ACO a portion of the cost savings. Preliminary results have been mostly positive, as ACOs have been successful at controlling costs (Nyweide 2015).

ACO formation poses a unique challenge for antitrust enforcement, particularly given the competing forces inherent with the creation of these organizations. The Department of Justice (DOJ) and the Federal Trade Commission (FTC) have recognized the potential that providers which join into a Medicare ACO could engage in anticompetitive practices, and have outlined requirements for ACOs to avoid of antitrust scrutiny (FTC and DOJ, 2011). While preliminary

analysis has shown that few providers meet these criteria on their own, little research has analyzed provider behavior following the decision to participate in an ACO (Kleiner et al., 2016). This is particularly important, given that regulators have expressed concerns that ACO providers would limit competition through their referral networks. For instance, for an ACO with a large market share, this ACO could control referrals and potentially prevent payers from steering patients to specific providers. Large ACOs could also tie sales of their services to a private payer's purchase of other services from providers that do not participate in the ACO. For example, through a "tying contract," a large ACO could insist that a purchaser contract with all physician groups under common ownership, even if only a single physician specialty group under the same ownership participates in the ACO. Large ACOs could also require exclusivity, to discourage providers from contracting with payers outside the ACO, and could even restrict the dissemination of information on the cost and performance of the ACO (Feinstein, 2014, Kleiner et al., 2016).

Prior Literature

A substantial literature has examined the extent to which physician behavior responds to financial incentives. For example, Ho and Pakes (2014) show that physicians with capitated compensation arrangements are more likely to refer patients to lower-priced hospitals,¹ while Baker et al. (2014) demonstrate that physician practices acquired by hospitals are more likely to refer patients to the hospital that owns their practice. Physician responses to such incentives have been also documented for practices whose income is tied to prescription drug profitability (Iizuka, 2012), and physicians who own imaging equipment (Baker, 2010).

¹ A capitated arrangement is one in which a medical provider is given a set fee per patient, regardless of the treatment required.

For ACOs that participate in the Medicare Shared Savings Program, because Medicare prices are not negotiated, but rather are set administratively, there is no explicit price-based incentive for Medicare ACOs to engage in anticompetitive conduct. Thus, the major motivation for joining an ACO centers on any shared savings that could be generated from participation. However, for a dominant ACO with large market share, this ACO could control referrals and potentially prevent non-Medicare payers from steering patients to specific providers. Such an entity could also tie sales of their services to a private payer's purchase of other services from providers that do not participate in the ACO. This could allow participating practices to grow their market share by guaranteeing referrals while maintaining independence.

However, it is unclear as to whether such responses would be expected for ACO arrangements. Rebitzer and Votruba (2011) note that because ACOs do not require participants to limit themselves to a single ACO, providers may be less likely to elicit a large behavioral response when joining an ACO. Similarly, Frandsen and Rebitzer (2013a) note that the performance incentives in ACOs will necessarily be "under-powered" and thus too weak to elicit meaningful changes in provider behavior. Furthermore, Rebitzer and Votruba (2011) suggest that ACOs are likely to be most effective in settings where care is already integrated, suggesting that ACOs may do little to change care referral patterns across providers.

This project will build on our prior research on the antitrust implications of ACOs in the physician market. In that work, we analyzed the share of the physicians that could potentially fall under antitrust scrutiny if they were to form an ACO (Kleiner et al. 2016). This will extend this work in order to determine whether ACO formation changes provider referral patterns, and whether these referral patterns are potentially indicative of conduct that could limit provider competition in markets with a significant ACO presence.

Data and Empirical Strategy

We plan to model of physician referrals using primarily three data sources available through CMS: provider relationship data, ACO provider-level data, and Medicare Data on Physician Practice and Specialty (MDPPAS).

The CMS provider relationship data was only recently made public. It includes yearly information on the number of Medicare patients shared across providers in 30, 60, 90 and 180 day intervals from 2009 through 2015.

The Medicare Data on Physician Practice and Specialty (MDPPAS) connects individual physicians to practices. This data set allows the grouping of providers from the Medicare relational data into practices using their Taxpayer Identification Number (TIN). This will allow us to observe behavior at the practice level. With data from 2009 to 2014 we will be able to observe relationships and behavior before and after ACO formation.

Finally, the ACO Provider Level File includes a list of every Shared Savings Program Accountable Care Organization, the date the ACO began operating, the county primarily served, and all associated participating practices and providers including their TIN and National Provider Identifier (NPI), a unique identifier assigned to each physician that treats Medicare patients.

We will model behavior at the level of a practice. In our model, a practice sees a patient and then determines whether the patient requires further treatment. If so, the practice decides from which practice, including its own practice, the patient should receive treatment. While in reality the patient plays a role in this decision, the physician's role as an agent for the patient has been well documented.

Formally, we plan to model the share (S) of patients from practice i that are referred to practice j in year t as follows:

$$S_{ijt} = \gamma_i + \delta_j + M_{it} + \psi X_{ij} + \tau T_{ij} + \alpha_1 A_{ijt} + \epsilon_{ijt}$$

where γ_i and δ_j are practice fixed effects, M_{it} is a market/year indicator variable that controls for market-specific shocks, X_{ij} includes interactions between the specialty of practice i and the specialty of practice j (e.g. primary care and oncology), T_{ij} is the distance between practice i and practice j , and A_{ijt} is an indicator variable for whether practice i and practice j were in an ACO together in year t . The coefficient of interest is α_1 .

An important limitation of this specification is that, the decision to form an ACO is likely driven by previously close relationships between practices. Additionally, a known limitation of our approach is that we are limited to specifying our model at the yearly level and will thus not have information on individual patients. However, the specification of our model adequately captures the desired relationship of interest and will allow us to address our research question regarding the impact of ACO participation on physician referrals.

Further Research

The extent to which ACO participation affects physician referral patterns is of significant economic and policy interest and given the unique arrangement under which ACOs operate, it is unclear as to how provider behavior may change in response to participation in an ACO. This work will contribute to the literature on physician responses to financial incentives, as well as inform policy makers as to the impact of increased integration among health care providers.

We are hopeful that this project will lead to future work analyzing physician relationships, market power and incentives. Future projects could include exploring the practice-level characteristics that predict ACO formation, as well as the relationship between market specific factors and group practice size.

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