Issue Brief: A New Method to Enhance Provider-to-Practice Attribution Using Healthcare Claims Data

As the healthcare system continues to shift toward rewarding value-based care instead of volume-based care, reporting on the cost and quality of care is increasingly important for measuring progress.

This reporting often includes assessing the quality of care offered by specific providers. Such assessments can help determine payment incentives for providers, increase transparency, and highlight areas for improvement.

Key to this reporting is "attributing" patients to providers – that is, identifying the connections between a patient and the providers that they have seen in order to identify the specific provider most responsible for their care. This patient-to-provider attribution is a key step for many analyses, but can fall short when a higher tier – practice-level measurement – is required. For that, additional attribution is necessary.

PUTTING THE FOCUS ON PRIMARY CARE

Attribution for value-based care and related analyses often focuses specifically on a patient's primary care provider. These primary care providers are increasingly important in value-based care since they often develop long-term relationships with their patients, helping them to identify issues early and more effectively manage chronic conditions, improving their patients' outcomes and reducing costs.

Statewide all-payer claims databases (APCDs) are a rich source of data that help analysts connect patients to their providers – primary care and otherwise. APCDs collect and integrate health plans' enrollment and claims data – medical, pharmacy, and dental – for commercial, Medicaid, and Medicare insurers. The available information includes a list of rendered services, the dates on which those services were provided, and the billed amounts for each service. They also include information about the individual provider – whether a physician or other type of healthcare professional – who administered the care.

In some cases, enrollment files submitted to APCDs include flags that identify patients participating in specific programs and initiatives (e.g., accountable care organizations (ACOs)) or who receive their primary care from specific provider organizations. For managed care plans – which aim to limit costs while maintaining a high standard of care, typically through limited provider networks focused on preventive care – patients often are required to select a primary care provider, which may be reported in the APCD's enrollment files. In other cases, lists of patient enrollment for specific programs may be collected separately and linked to the APCD data.

When the data includes flags that clearly identify a patient's primary care provider, attribution is straightforward. When those flags are not available, Onpoint's analysts use a proven series of algorithms to perform the patient-to-provider attribution. Onpoint's attribution methods enable analysts to consistently identify relationships between a patient and an individual provider (e.g., a doctor or a mid-level provider like a nurse practitioner). This attribution is a key step for many analyses and affords measurement and reporting at a provider level.

THE MISSING LINK IN PROVIDER-TO-PRACTICE ATTRIBUTION: PROVIDER ROSTERS

Reporting at a group or practice level, however, traditionally has been more challenging. This is largely due to the widespread absence of available provider rosters – authoritative lists that identify the organizations for which they render services – and the logistical and technical challenges of collecting, aggregating, and maintaining those rosters that are available across different organizations and systems. The process of developing, verifying, and maintaining a roster of providers and where they practice is highly resource intensive and often not within budget.

The development of these robust practice and organizational rosters for primary care providers and specialists, however, is key to advancing healthcare cost and quality reporting. To overcome this challenge, Onpoint has developed a new method to create provider rosters by combining information readily available in healthcare claims data and publicly available self-reported provider data.

Claims data reported to an APCD includes key information about the providers and organizations responsible for delivering patient care. On professional claims – that is, claims for services rendered outside of a hospital setting – two types of providers typically are included:

1. **Rendering.** The rendering provider is the individual who performed the specific services listed on the claim.
2. **Billing.** The billing provider is the individual or organization who has requested – and receives – payment for the rendered services.

Typically, rendering providers work as part of a practice or within a larger healthcare organization. In these cases, the billing provider represents that practice, organization, or facility. Accordingly, the billing provider often can be used as a proxy for the practice at which the rendering provider delivered the service. While this isn't always the case – for example, the billing provider may be an organization that owns and is located at a different physical address than the practice itself or may be a solo practitioner, in which case the billing provider and the rendering provider are the same – but a majority of provider-to-practice relationships can be captured in this way. By leveraging these billing practices and incorporating other publicly available provider information, Onpoint has developed a logic to assign – or attribute – a primary care provider to a single location for a designated reporting period.

A PARTNERSHIP TO STRENGTHEN PRIMARY CARE IN CALIFORNIA

Onpoint recently partnered with the Integrated Healthcare Association (IHA) in California, the Purchaser Business Group on Health (PBGH), and the California Quality Collaborative (CQC) to support the development of provider-to-practice rosters for the California Advanced Primary Care Initiative (CAPCI) pilot study. As part of this work, Onpoint and IHA developed the attribution method described in this issue brief, presenting our work at the National Association of Health Data Organizations (NAHDO) meeting in November 2023.

CAPCI is a partnership of payers and providers who are working to improve primary care in California by adopting a value-based payment model for primary care providers, setting increased primary-care investment goals, and providing technical assistance to practices.

HOW SUCCESSFUL WAS OUR METHOD?

When we compared our attribution results to existing provider-to-practice rosters maintained separately by individual participating practices, we found that our new method aligned well with their proprietary rosters, mapping 76% of the providers to the correct practice rosters. As part of this work, we identified two reasons that providers from the practice-provided rosters were missing from the claims-based rosters:

1. Some providers – especially mid-level providers (e.g., nurse practitioners, physician assistants) – were not reported as

a rendering provider in the claims data, which excluded them from the attribution process entirely.

2. While many of the missing providers did appear in the claims data and, in many cases, had payment requests submitted on their behalf by practices that provided a roster, they were attributed to a different practice that submitted payment requests on their behalf more frequently.

We recognize that the relationships between providers and practices are complex, especially when providers practice at multiple locations. This is why our team also incorporates supplementary sources of provider data to allow providers to be affiliated to more than one practice when necessary for analysis. We also have enhanced the grouping of organizations to consolidate reporting for organizations that use more than one billing National Provider Identifier (NPI) – a federally assigned 10-digit number that identifies a unique healthcare provider or health plan – across their different departments and locations.

WHAT'S NEXT?

This new methodology is a promising approach to developing and refining practice rosters using APCD data. Reported claims data, however, is only one possible data source for linking providers to practices. By using claims data in concert with other sources, including the Provider Enrollment, Chain, & Ownership System (PECOS) maintained by the U.S. Centers for Medicare & Medicaid Services (CMS), it is possible to develop even more robust practice rosters for a range of practice specialties beyond primary care in support of performance reporting and improvements in healthcare cost and quality.

To help meet this need, Onpoint has developed a Provider Directory tool that includes affiliations to practices and facilities as well as to facility subparts. The Provider Directory features an affiliation crosswalk that links to a client's quarterly data sets for use in practice and organizational analytics. It also allows credentialed users to update the relationships between providers and organizations to increase the accuracy of performance reporting and to ensure that not only are patients appropriately assigned to providers but also that providers are appropriately assigned to practices.

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ABOUT ONPOINT HEALTH DATA

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