Does Form Follow Function?: Provider Group Structure As a Driver of HEDIS Quality Of Care Measures Within a Large Urban Medicaid Health Plan

Accreditation of Medi-Cal, Healthy Kids and Healthy Families Program.

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Presenter Disclosures

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The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

I am employed as a Senior Biostatistician at L.A. Care Health Plan – the Local Initiative Health Authority of Los Angeles County, California.

L.A. Care is a public entity competing with commercial insurers in the Medicaid and S-CHIP markets in L.A. County.

Notes:
CAHPS® is a registered trade name of the Agency for Healthcare Research and Quality (AHRQ).
HEDIS® is a registered trade name of the National Committee for Quality Assurance (NCQA).

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I. Learning Objectives

1. Describe the functions that provider groups serve in connecting patients to doctors, and how those functions impact services to patients.

2. Describe which provider group structures deliver the best or worst performance on measures of clinical quality.

3. Analyze whether provider group structure is an underlying factor in disparities in clinical quality between demographic groups in the Medicaid population.

4. Identify which structural features of high-performing provider groups are associated with better performance on HEDIS measures.

5. Explain how findings on provider group structure can be made actionable to improve quality of care.

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II. Background – Health Plan and HEDIS 2012 Survey

L.A. Care Health Plan -- large, diverse membership:

– Mostly Medicaid, urban, 2/3rd pediatric, often Spanish-speaking.

– Roughly 21% of Medicaid managed care population in California.

– Roughly 2.1% of Medicaid managed care population in the U.S.

– Los Angeles County, California: Roughly 1-in-14 residents is an L.A. Care member.

– Mostly Medicaid, some S-CHIP, SNP, and special programs.

– Serves 10 distinct language concentrations ("threshold languages"):
  Spanish, English, Armenian, Korean, Cambodian, Chinese, Russian, Vietnamese, Farsi, Tagalog.

– Mostly urban and suburban; 1 semi-rural region in the high desert.

HEDIS 2012 Survey (Measurement Year 2011):

– For specific types of clinical care, HEDIS measures the quality of care received by health plan members. NCQA specifies the protocol, and sample sizes and units of analysis depend on the population and differ from measure to measure.

– L.A. Care measures and reports a designated subset of HEDIS measures, as required by state regulators and as used for NCQA Accreditation.

– Hybrid survey mode: Data regarding clinical quality preferably come from administrative data (encounters and claims submitted by clinics regarding the care rendered to the health plan's patients). On measures where data are not deemed complete, health plans can augment administrative data by taking a sample of members eligible for that measure, and pursue medical records directly from the patients' doctors and clinics.

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III. Introduction and Analytic Approach

It is often observed that some of the top performing provider organizations in different markets, are staff model organizations. The maintained hypothesis in this pilot study was that quality of care would be highest among provider groups with more of the following features of fully-integrated staff model organizations:

- Training in a uniform style of practice.
- Electronic medical records for medical history and coordination of care.
- Consolidated facilities, so that patients can get more than one test or service in a single visit.

This briefing examines whether provider group structure impacts quality of care, as a factor for health plan administrators to consider in provider groups contracted to serve patients.

Provider group structures range between loosely-integrated Independent Practice Associations (IPAs) and fully-integrated Staff Model organizations, where the doctors are employees of the provider group.

- In IPAs, the provider group exists largely to provide support services: contracting, billing, consolidation and submission of data on encounters and claims describing visits of patients to doctors, etc.

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Operationalization

In this study, the foregoing hypothesis was tested using the following 5 levels to represent the degree to which a provider group had elements of a fully-integrated staff model, in descending order of sophistication:

- Staff Model (medical groups – sometimes owned by a health plan – with self-contained services: clinics, labs, pharmacies, and sometimes hospitals);
- Medical Group (clinical staff are largely employees of the medical group);
- Mixed (MG+IPA – often geographical, by acquisition);
- IPA (independent practices, under an association, which provides contracting, billing, and record-keeping services);
- Small clinics with assigned members.

Structure requires considerable information to characterize. This pilot study sought a simple way of characterizing provider groups, based on the provider group names and website descriptions of the groups' basic structures.

- Medical groups traditionally were staff model organizations. This paper explores, in part, whether "medical group" or "IPA" in a provider group's name, provides a rough way to classify provider groups and capture the degree of integration present.

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IV. Relationship of Provider Group Structure to Quality of Care

- A few results were significant, and most matched the expected pattern.

Avoidable ER -- non-SPD:	**p(F)=0.0015 -- order mostly as predicted** [b]
Avoidable ER – SPD:	In predicted order [ab] (strong outlier)
30-day Readmission rate – non-SPD:	Not in predicted order [b]
30-day Readmission rate – SPD:	In predicted order [b]
Adults: Cholesterol Management:	**p(F)=0.0360 -- order mostly as predicted.**
Adults: Diabetes – Eye Exam:	Order mostly as predicted [b]
Adults: Diabetes – HbA1c Test:	Not in predicted order [b]
Adults: Diabetes – Poor Control:	Somewhat in predicted order [ab]
Adults: Diabetes – LDL Screening:	Not in predicted order [ab]
Adults: Diabetes – LDL In Control:	In predicted order [ab]
Adults: Diabetes – Nephropathy:	In predicted order [ab]

SPD: Seniors and People Living With Disabilities.
ANOVA with post hoc comparisons. **Bold** denotes that F is significant at p<=0.05.
Green indicates results support hypothesis. Red indicates opposite.
Italics indicate that groups performed in hypothesized order: Staff > MG > Mixed > IPA > Clinic.
Underlined: 2 or more groups have non-overlapping means in ANOVA (usually Staff and Clinic).

[a] Fails normality assumption (Shapiro-Wilk p>=0.05).
[b] Fails homogeneity of variance assumption (Levene p<=0.05). ANOVA is robust to this in larger samples.

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Relationship of Provider Group Structure to Quality of Care (Cont.)

- The results are mixed. A few results were significant,
- Staff Model was usually near the top, with most of the uncertainty coming from Mixed and Clinic.

Asthma: Appropriate use of meds:	Not in predicted order [b]
Adult women: Breast cancer screening:	p(F)=0.0032 – partly in predicted order [b]
Adult women: Cervical cancer screening:	In predicted order [b]
Young women: Chlamydia screening:	Not in predicted order [b]
Postpartum care:	p(F)=0.0005 -- order mostly as predicted [b]
Prenatal care:	p(F)=0.0185 -- partly in predicted order [b]
Adolescent immunizations:	Not in predicted order [b]
Adolescent well-care:	Not in predicted order [b]
Well-child visits (ages 3-6):	Not in predicted order [b]
Children with pharyngitis:	In predicted order [ab]

ANOVA with post hoc comparisons. **Bold** denotes that F is significant at p<=0.05.
Green indicates results support hypothesis. Red indicates opposite.
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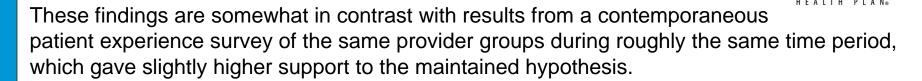# V. Interaction of Provider Group Structure With Age and Gender

- The study dataset was derived for other purposes, and contained no demographic breakouts at the provider group level.

- However, HEDIS measures target specific types of care for particular conditions, and these permit some exploration about how provider group structures serve different age and gender groups.

- The maintained hypothesis had only mixed support among the demographic groups. It fared best with adults and tests received by adult women.

- The worst performance was in the adolescent measures. In those measures, most of the deviation from pattern came from the "Clinic" category, which performed better than predicted for adolescent patients. One possibility is that these are organized in some manner to serve the school-age population; or are better set up to capture records about adolescent immunizations and checkups.

VI. Discussion and Implications

The analysis provided only mixed support for the hypothesis that provider group performance on HEDIS would be best among those which implement some of the features found in fully-integrated staff model practices.

These findings are somewhat in contrast with results from a contemporaneous patient experience survey of the same provider groups during roughly the same time period, which gave slightly higher support to the maintained hypothesis.

A simpler statement of the hypothesis – using two categories (Staff Model vs. Other) – fares better in the present study's data. That was not pursued in this paper, since the point of the study is to explore whether some features of Staff Model operation can be successfully deployed by other organizations without adopting the full model.

Some other ways to improve the analysis in any next round:

- Most of the noise in this present study came through the "Mixed" and "Clinic" categories. These merit further exploration to see if the definitions can be refined.

- Use of a multi-level modeling approach would allow better capture of information from the patient-level data at the heart of HEDIS measures.

- Any replication of this pilot study should carry forward basic demographics for analysis.

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VII. Recap of Learning Objectives

1. Describe the functions that provider groups serve in connecting patients to doctors, and how those functions impact services.

    Depending on structure, provider groups offer various services to doctors and clinics: centralized contracting; centralized billing; collecting claims and encounter data for submission to payers; reviewing and authorizing services; sharing risks; attracting doctors with specialized skills; contracting for specialist access, etc.

2. Describe which provider group structures deliver the best or worst performance on measures of clinical quality.

    Evidence was mixed. "Staff Model" was the most consistently high performer; but "Clinic" excelled in the two adolescent measures.

3. Analyze whether provider group structure is an underlying factor in disparities in clinical quality between demographic groups in the Medicaid population.

    Although demographic variables were not available in the data source, the HEDIS measures, themselves, differentiate on age and gender. Staff model providers were most associated with higher HEDIS performance on adult measures; measures on screenings for women; and measures regarding prenatal and postpartum care.

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VII. Recap of Learning Objectives

4. Identify which structural features of high-performing provider groups are associated with better performance on HEDIS measures.

    Fully-integrated staff model provider groups tend to have centralized data through electronic medical records (EMR). Such systems provide more complete and timely capture of encounter data. Such systems can also be used to generate reminders to doctors and patients regarding appointments, screenings, immunizations, etc.

5. Explain how findings on provider group structure can be made actionable to improve quality of care.

    Certain features of staff model practices can be implemented in other provider group structures: electronic medical records as noted above; centralized labs and clinics to reduce travel and delay for patients; and promotion of uniform practices related to quality.

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VIII. Making the Findings Actionable for Better Quality of Care

Unlike CAHPS, where ratings rely on patient ratings of services, HEDIS is more reliant on data gathering about quality of care. Thus, HEDIS is more directly amenable to improvement using data technologies found in the Health Information Technology (HIT) and Electronic Medical Record (EMR) arena.

Because HEDIS is tie-able to discrete encounters, HEDIS is also more approachable through Pay-For-Performance (P4P) incentives and other elements in the Accountable Care Organization (ACO) model. This aligns the economic interests of providers with patients' needs. Health plans can quickly detect and directly reward quality of care during the year, and coach providers on missed opportunities.

Aside from incentives and data technology, the findings also can also be made actionable by focusing contracting toward organizations that use some of the other features that distinguish staff model operations. P4P incentive money can also be targeted toward addressing the weaknesses of a particular provider group.

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Related briefing:

"Group Dynamics: The Relationship Between Provider Group Structure and Patients' Ratings on Services Central to the Patient-Centered Medical Home (PCMH) Model."

APHA Medical Care Session 2070.0 Primary Care Delivery Among Disparate Populations -- paper 292749 on Quality Improvement, November 3, 2013.

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