Case Studies

Multi-Level Networks
High Tech Diagnostic Imaging Management

National Institute for Health Care Management

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Blue Cross and Blue Shield of Minnesota

An independent licensee of the Blue Cross and Blue Shield Association

Blue Cross Blue Shield of Minnesota: Overview

- 2.9 million Members
  - 1,900,00 reside inside of Minnesota
- Minnesota providers are mostly in large care systems
- Headquarters for 20 Fortune 500 companies – each advised by national benefits consulting firms

Hospital Cost Measurement

> Milliman's "RBRVS for hospitals"
  - Inpatient services are grouped to APR-DRGs (per day)
  - Outpatient RVUs are assigned at the HCPC level rather than APC

Hospital Quality Measurement: NQF/CMS Measures – Required Threshold

> Acute Myocardial Infarction (AMI)
> Heart Failure (HF)
> Pneumonia (PN)
> Surgical Infection Prevention (SIP)
> Patient Safety Indicators (PSI)

Our Approach to Clinic Profiling

- Providers=Clinics or care systems, not individual practitioners
- Meetings with Minnesota Medical Association (MMA)*, Minnesota Academy of Family Physicians (MAFP), and large provider groups
- Rank providers based on both cost and quality

  → weighted equally
- We tiered 17 primary care and traditional medical specialties

* Provided an independent critique and published all details (methods and metrics) on MMA website

Specialties Tiered Based on Both* Cost and Quality: State-wide

> Primary Care
  - Family practice
  - Internal medicine
  - General practice
  - Pediatrics
  - Obstetrics/gynecology

> Medical / Surgical
  - Dermatology
  - Cardiology
  - General surgery
  - Orthopedics

> Medical / Surgical
  - Geriatrics
  - Oncology / hematology
  - Otolaryngology
  - Pulmonology
  - Rheumatology
  - Allergy & immunology
  - Preventive medicine
  - Ophthalmology

* A smaller subset of specialties have no standardized quality metrics and are tiered on risk-adjusted cost alone. A few specialties are exempted from tiering, e.g., anesthesiology, where patient choice is not usually exercised.

Clinic Profiling Methodology

Currently using Blue data only, not all-payer

- Quality
  - Evidence-based measures based on NQF, AQA, and HEDIS specifications
  - 32 quality measures
- Cost
  - Episode Treatment Groups (ETGs) as a measure of cost
  - Multivariate regression modeling was run on each ETG to derive expected cost.
- Definitions and results are transparent
- Specifications explained for minimum sample sizes, attribution, outliers, reconsiderations, data refresh intervals

Statistical Adjustments: Expected Costs

> Adjust ETGs for differences in demographic, clinical, and benefit variables:
- Age
- Physician specialty (generalist, specialist, multi-specialty group)
- Median household income, based on census block group of residence
- Gender
- Complication
- Surgical procedure
- Hospitalization
- Medication burden - # of unique medication types each patient receives
- Anatomic location of injury (esp. useful for orthopedic ETGs)
- Pharmacy benefit
- Comorbidity score (Charlson)

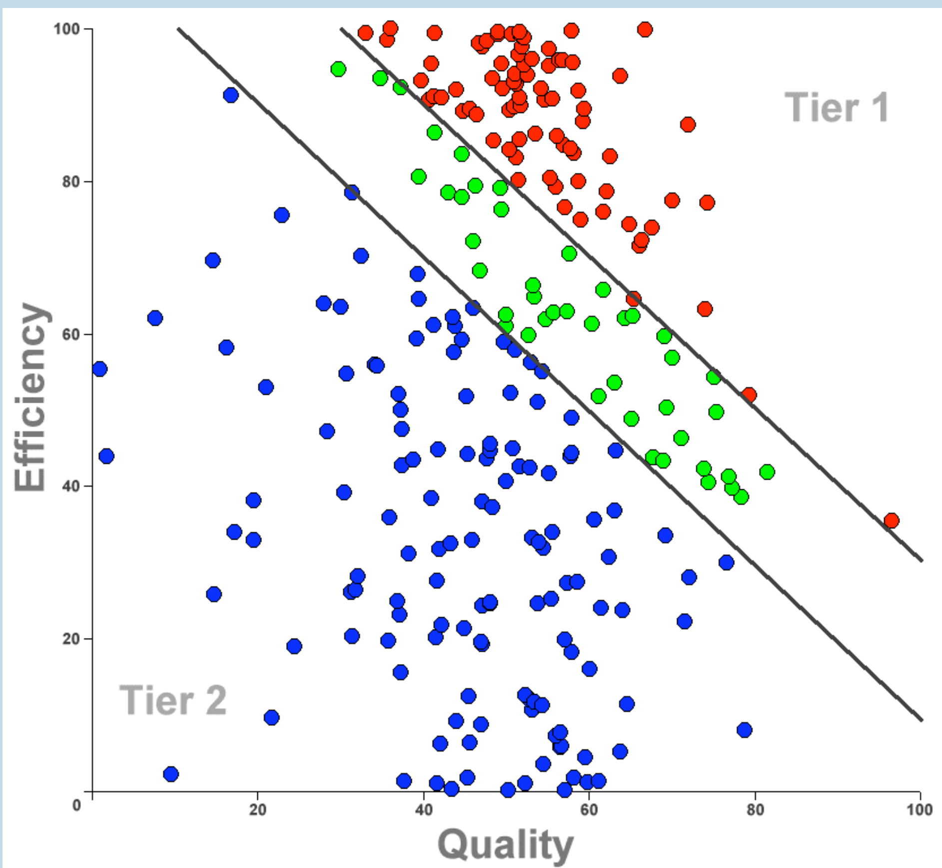
Utilization Information for Providers

Inflammation of the Intestines and Abdomen

Utilization Category	Provider A	Multispecialty providers
Inpatient Facility (R&B)	2.03	1.59
Advanced imaging - CAT/CT/CTA (e.g. diagnostic colonographies)	3.97	3.29
Major Procedure - other	3.76	2.58
Lab tests - other	3.91	2.74
Office visits - established	3.33	2.75
Consultations	1.84	1.48
Minor procedures - other 1	6.30	5.04

Y-axis: Average Number of Services (0.00–7.00)

Clinic Quality and Efficiency Ranking

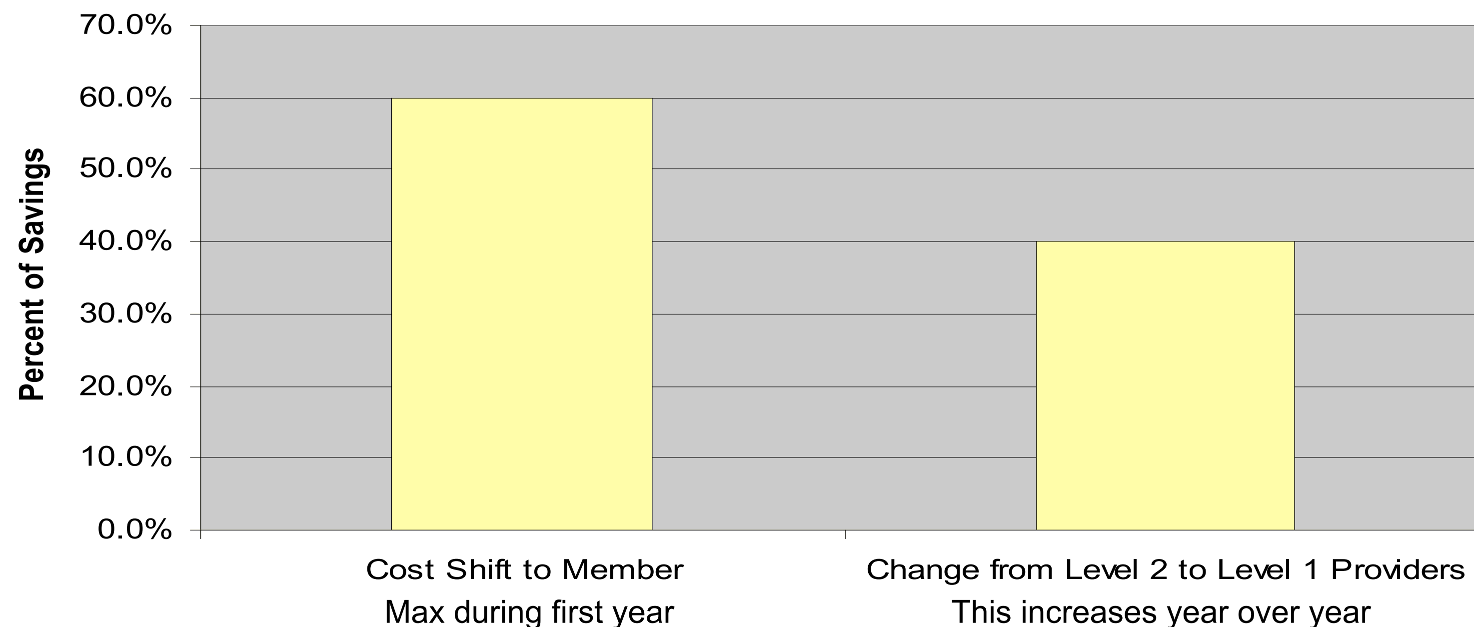


The clinic tier line was adjusted to create two networks that will address two degrees of purchaser acceptance of disruption

Achieve

Perform

2007 Savings for Large National Employer



High Tech Diagnostic Imaging

The Strategy

A new approach to support the ordering of appropriate high-technology diagnostic imaging (HTDI) procedures

> The approach consists of a common set of HTDI appropriateness criteria that would be:

- Available in the physician's office to provide clinical decision support *at the time care is being discussed with the patient and prior to ordering HTDI tests*
- Embedded into an electronic medical record (EMR), or made available via web site
- Continually updated and expanded as evidence and guidelines evolve (excludes tests or procedures Blue Cross Medical Policy considers investigational)

Background

ICSI

A 15 year-old collaborative in Minnesota

Multiple payers and providers

List of the Key Events/Dates re: HTDI

Month	Year	Event
Fall	2005	ICSI convened an informal group of health plans and medical groups to explore issue of HTDI
Winter	2005	ICSI informal group of health plans and medical groups disbanded
September	2005	Health plans are mandated by the legislature to implement PA or "otherwise use evidence-based practices to address these services" for public programs
July	2006	Medica started PN/PA pilot with a few medical groups
Fall	2006	Medical groups approached ICSI to re-examine issue
Fall	2006	HTDI Steering Committee formed at ICSI
January	2007	Medica and HealthPartners implemented PN
February	2007	HealthPartners Medical Group implemented an alternative solution
March	2007	Fairview Health Services implemented an alternative solution
March	2007	Medica began denying claims for failure to prior notify
April	2007	Allina Medical Clinic implemented an alternative solution
June	2007	SMDC and Park Nicollet implemented an alternative solution
July	2007	BCBS implemented PN
September	2008	ICSI's HTDI Steering Committee receives Board approval for alternative solution
October	2008	Health plans notified their PN/PA vendors of contract termination
January	2009	Planned go live for alternative solution

PN = Prior Notification   PA = Prior Authorization

Background

- The HTDI approach was developed at the request of ICSI member provider groups and health plan sponsors to provide another option to prior notification or authorization of elective out-patient HTDI procedures
- This option was developed by ICSI's HTDI Steering Committee, which is comprised of representatives from provider groups, health plans, and the Minnesota Department of Human Services.
- Based on an ICSI pilot project by five Minnesota medical groups
  - Provider groups and health plan sponsors determined that the pilot demonstrated that this was an efficient, patient-centric model that was preferred over vendor-provided prior notification or authorization processes

ICSI Board-approved Actions

ICSI will assemble and facilitate the following groups to assure the smooth operation of this program and continual refinement of appropriateness criteria:

> ICSI HTDI Steering Committee will oversee the work of these groups, monitor the program's overall operation, and evaluate its effectiveness

> Appropriateness Criteria Work Group consisting of clinical experts participating in the HTDI initiative will review criteria, literature and utilization on specified codes. Feedback on how the appropriateness criteria can be improved will be provided to the HTDI appropriateness criteria vendor

> Learning/Networking Collaboratives will support the implementation and ongoing maintenance of the HTDI option through educational sessions, collaborative meetings, networking calls and/or Webinars

> Outcomes Data Collaborative will analyze/review radiology utilization and outcomes data to determine how it correlates with patient outcomes

Master License Structure (including payments)

Health Plan

Health Plan

Health Plan

Health Plan

HTDI Criteria vendor

ICSI

Master License Agreement

Radiology Provider

Radiology Provider

Radiology Provider

MD MD MD MD MD MD

Clinics are responsible for their costs to integrate with vendor

Each Participating Health Plan is responsible for paying vendor its allocated share (much smaller than two prior years fee to outsourced vendor). ICSI will also play the role of the representative of the Health Plans vis-à-vis vendor.

Health Plan Contracts

Each Participating Health Plan would be responsible for providing incentive to its providers to support use of the Collaborative Option

Data Flow

Utilization / Appropriateness / Clinical Outcome

ICSI HTDI Collaborative Work Groups

Aggregate Data

Health Plan

Health Plan

Health Plan

Health Plan

Membership & provider lists

Rendering Provider

Rendering Provider

Rendering Provider

Rendering Provider

Radiology Reports

HTDI Criteria Vendor

ICSI

ICSI

Aggregate Data

Radiology orders & pt demographics

MD

MD

MD

MD

MD

MD

Each Participating Health Plan, User and Radiology Rendering Provider would be responsible for developing HL7 connection to ICSI to send and receive their own data. ICSI will provide aggregate data to the Steering Committee, work groups and collaborative members.

Aggregate HTDI Utilization Rate per 1,000 Members, 1Q03-2Q08
Aggregate Data Include: BCBS, HealthPartners, Medica, UCare and DHS Claims and Membership Data (Hospital Inpatient and ER Claims Excluded)

*Membership profile differs across health plans.
**Only members affected by the health plan's HTDI initiative are included in this

HTDI Utilization Rate per 1,000 Members

55
50
45
40
35
30
25

1Q03 2Q03 3Q03 4Q03 1Q04 2Q04 3Q04 4Q04 1Q05 2Q05 3Q05 4Q05 1Q06 2Q06 3Q06 4Q06 1Q07 2Q07 3Q07 4Q07 1Q08 2Q08

32.03
33.02
33.39
33.71
35.27
36.12
35.92
36.83
37.83
39.19
38.07
38.09
40.63
40.84
40.84
40.84
41.62
41.09
39.77
42.41
41.34
40.87
43.22
41.59
39.25
44.05
41.85
41.08
44.89
42.10
39.75
45.75
42.36
41.15
46.63
42.62
41.21
47.52
42.88
42.70

Actual utilization (blue line)

Projected Utilization (red line) at 1Q03-2Q06 Average % Change

Projected Utilization (yellow line) at 2Q06-2Q08 Average %

Allina, SMDC and Park implement DS

*State Legislative Mandate
*ICSI informal group of medical groups and health plans conve_d.
*Gr_p

*Medica piloted PN.
*Medical Group approached ICSI to re-examine the issue
*HTDI SC

*Medica and HP implement PN.
*HPMG and FHS implement DS.

BCBS implements

Questions

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