Resource Paper

Using Data Strategically in Medicaid Managed Care

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In Brief

This report makes the following major points:

- States can economize on the Medicaid managed care data they require managed care organizations (MCOs) to collect and report, and use their own limited analytic resources more effectively, by focusing on using data to support key managed care strategic goals, including:
  - Improving MCO performance.
  - Demonstrating value to funders (governors, legislators, taxpayers, federal government).
  - Building provider support.
  - Building consumer support and understanding.

- Detailed managed care encounter data on individual health care services is a major potential analytic resource for states and MCOs, but most states have found the data difficult to collect and use. States that have begun to use encounter data to set MCO capitated rates have found that data completeness and accuracy improves substantially when the data are used for that purpose. States should carefully assess the strengths and weaknesses of their encounter data in order to use what they have most effectively and to guide future data collection efforts.

- Widely used standard measures of MCO performance, such as Health Plan Employer Data and Information Set (HEDIS) measures and Consumer Assessment of Health Plans Survey (CAHPS) beneficiary surveys, are valuable purchasing and strategic reporting tools for states, even though individual Medicaid beneficiaries do not appear to make direct use of these measures in choosing among MCOs.

- Other kinds of managed care data, such as reports on complaints and grievances, enrollment and disenrollment, provider participation, External Quality Review Organization (EQRO) findings, and MCO financial performance, generally are easier for states to obtain and use than encounter data, HEDIS, and CAHPS. These data reports can make important contributions to timely identification and resolution of operational and policy problems. MCO financial reports can fill gaps in encounter data and help to set MCO capitated rates.
Executive Summary

As of June 2000, 42 state Medicaid agencies had implemented capitation contracting with at least one managed care organization (MCO). States are collecting large quantities of data in their Medicaid managed care programs, including encounter data from MCOs, Health Plan Employer Data and Information Set (HEDIS) and other utilization and quality measures, the Consumer Assessment of Health Plans Survey (CAHPS) and other enrollee surveys, External Quality Review Organization (EQRO) reports and focused clinical studies, reports on MCO enrollment and disenrollment, complaints and grievances records, reports on MCO financial performance, and state budget expenditure tracking reports.¹

The data are being collected to address concerns about potential problems with access and quality of care in Medicaid managed care, to track costs and support ongoing rate-setting efforts, and to meet federal and state regulatory and reporting requirements. Data are costly for MCOs to collect and report, however, and most states have limited resources to analyze the data and put it to effective use. This puts a premium on using data strategically.

Using Data to Support State Managed Care Strategies

Most state Medicaid managed care strategies focus on some combination of four goals:

- Improving MCO performance.
- Demonstrating value to program funders (governors, legislatures, taxpayers, federal government).
- Building provider support.
- Building consumer support and understanding.

Linking Goals, Audiences, and Data

The audiences and the types of data that are most useful to them vary for each of these goals:

- **Improving MCO performance.** States and MCOs generally agree that standardized performance measures (HEDIS and CAHPS), complaint and grievance reports, EQRO reports, and MCO financial reports are valuable starting points for improving MCO performance. Views among states and MCOs

¹Encounter data are records of health service utilization and costs based on provider “encounters” with MCO enrollees. HEDIS is a series of measures of utilization of and access to managed care services. HEDIS is a registered trademark of the National Committee for Quality Assurance. CAHPS is a registered trademark of the Agency for Healthcare Research and Quality.
differ on the value of encounter data, which have great promise but have proved
difficult to collect and analyze.

- **Demonstrating value to program funders.** Governors, legislators, and state
taxpayers are most interested in overall program cost-effectiveness and in how
individual beneficiary and provider problems are handled. HEDIS and CAHPS
measures can be used to demonstrate overall performance and accountability,
budget expenditure reports can keep track of cost trends, complaint and
grievance reports can provide early warning of potential problems, and encounter
data can be used to put individual cases in context and demonstrate program
monitoring efforts. The federal government’s monitoring and data reporting
requirements generally exceed those of other funders, and can be used to
demonstrate a state’s attentiveness to quality, performance, cost, and
accountability.

- **Building provider support.** Health care providers are most interested in adequate
and timely payment, MCO and state responsiveness to their concerns, and
quality care for beneficiaries. Data on timeliness of MCO claims payments,
provider surveys, HEDIS and CAHPS reports, and EQRO reports can be used to
respond to these provider interests and concerns.

- **Building consumer support and understanding.** Individual consumers and
advocacy groups generally make little use of HEDIS and CAHPS measures or
other kinds of managed care data. Consumers have a greater need for basic
information on how to navigate the managed care system.

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**Sources and Methodology**

The report is based on:

- A review of the relevant literature.
- A short October 2000 mail survey asking all state Medicaid directors to rank the usefulness of various kinds of Medicaid managed care data.
- A review of state Web sites to identify examples of effective uses of data.
- A Mathematica review of the results and uses of state surveys of Medicaid managed care beneficiaries.
- Interviews with actuaries and other consultants who work with multiple state Medicaid managed care programs on rate setting and other data issues.
- In-depth interviews with state Medicaid officials, MCOs, and consumer groups in Arizona, Connecticut, Minnesota, and Texas, and review of documents from those states.
- More limited interviews with state Medicaid officials and others in California, Indiana, Maryland, New Jersey, New York, Oregon, Pennsylvania, West Virginia, and Wisconsin, and review of documents from those states.
Objectives of the Report

The report is designed to help states focus their data collection, analysis, and use efforts on meeting their most important managed care goals, and on maximizing the value of their investment in data. The report focuses primarily on capitated risk-based managed care programs, although some states have used the kinds of data discussed in the report to measure performance in their primary care case management (PCCM) programs. The report seeks to help states:

- Gain insight into what other states are doing—what types of information are being collected, how they are being used, and how useful states perceive various kinds of information to be.
- Plan data collection and analysis efforts, tailoring these efforts to address specific audiences and program needs.
- Understand the strengths and drawbacks of specific data sources, such as the encounter data submitted by MCOs.
- Make sound decisions about the level of resources to be devoted to data collection and analysis.
- Determine whether to curtail or reconfigure existing monitoring activities and/or initiate entirely new approaches.
- Get the most value out of whatever efforts are made.

Encounter Data: Opportunities and Challenges

Encounter data reported by MCOs represent potentially the richest source of data for Medicaid managed care, but only a small number of states so far have been able to tap its potential.

Encounter data can be used to set MCO capitated rates, and to monitor the volume and cost of Medicaid services down to the level of individual providers and beneficiaries. The data can be aggregated to show trends over time, comparisons among MCOs and providers, and patterns of care and beneficiary access. To fulfill this promise, however, the data must be reasonably complete and accurate, states must have sophisticated analytic resources, and there must be clearly defined uses and audiences for the data. If any of these ingredients is missing, encounter data tends to accumulate largely unused, MCOs increasingly question the utility of collecting and reporting it, and its promise remains unfulfilled.
It is important for states to assess how complete and accurate their encounter data are so they can use currently available information appropriately and identify areas where the data collection process should be altered.

**Using Encounter Data To Set MCO Rates**

Several states that have been successful in collecting and using encounter data—Arizona, Colorado, Maryland, Minnesota, and Oregon—have found that the key to getting reasonably complete and accurate data is to use it for rate setting. Wisconsin is an exception. It did not focus initially on the use of encounter data for rate setting, but instead worked closely with its MCOs over several years to obtain limited amounts of encounter data for some key performance indicators, and has been successful in gathering increasingly useful and extensive data with this approach. New York also has been successful in collecting and using encounter data for quality monitoring purposes, but has not yet been able to use it for rate setting.

It is possible to set MCO capitated rates without encounter data by using MCO financial reports and other actuarial “work-around” approaches. If MCOs in a state are satisfied with these approaches to rate setting, and if a state does not have the analytic resources or the audience demand needed to make full use of encounter data, a state may want to consider limiting the encounter data it requests from MCOs to the minimum needed to comply with federal Medicaid statutory and regulatory requirements, which are currently fairly flexible and evolving.

**Using Encounter Data for Other Purposes**

If a state is able to obtain reasonably complete and reliable encounter data, they have a wide range of potential uses beyond setting MCO rates. Measures of access to care (emergency room use, physician visits) can be calculated, as can quality measures (HEDIS, appropriate use of drugs), and cost measures (hospital admissions and lengths of stay, use of generic vs. brand-name drugs). Encounter data also can be used to respond to legislative and media inquiries by putting individual cases in a larger context. Substantial analytic resources are needed, however, to use encounter data for these purposes, and there are limitations on the usefulness of encounter data that states should consider before investing major resources. Some of these limitations likely will be eased as broader federal requirements for standardization and electronic transmission of data are implemented, but those changes may not be phased in fully for several years.

**Using HEDIS and CAHPS to Influence Perceptions and Behavior**

HEDIS and CAHPS are the most fully developed tools available to states to measure MCO performance. They permit standardized comparisons among MCOs, and can show trends over time. Even though research and state experience suggest that consumers generally make only limited use of these measures in choosing among MCOs, they have
become a valuable purchasing tool for Medicaid agencies, and a significant stimulus for MCOs to improve their performance.

It may take states and MCOs a period of time to collect and refine the data that are needed to report reliable HEDIS measures. States may therefore want to begin with a relatively limited set of measures, and hold off on publication of comparisons among MCOs until the data are reasonably reliable. Ultimately, however, MCOs are not likely to take the effort seriously unless the results are published and specific MCOs are identified by name.

Because HEDIS and CAHPS are especially useful for public comparisons, states can use these measures to influence the perceptions of key stakeholders, including legislators, health care providers, advocacy groups, and the media.

Handling Bad News

Some state officials are reluctant to release HEDIS measures and CAHPS and other beneficiary surveys if the results show weaknesses or shortcomings in their Medicaid managed care programs. Some also are uneasy about releasing managed care data if they are not able to put the results in context by comparing managed care to fee-for-service Medicaid. Others argue that trying to hide bad news is always a mistake, that a low starting point establishes a baseline for improvement, that highlighting problems is the first step toward getting them fixed, and that publishing these measures demonstrates that state officials are aware of and attending to program shortcomings.

Targeting and Economizing

If states conclude that HEDIS and CAHPS are most useful as tools for MCO monitoring and public accountability, rather than as direct aids to consumer choice, they can focus their publication and distribution efforts accordingly. Summary comparisons among MCOs can highlight dimensions likely to be of most interest to key stakeholders. Reports on plan performance could be made available at enrollment offices, on the web, and on request, rather than being mailed to every enrollee. It may not be necessary to compile and report the results every year, especially if MCO performance and participation in the Medicaid market has become fairly stabilized.

Other Data Sources and Uses

Other sources of data have strengths and limitations that states should carefully consider in determining how to use them in specific state contexts.

Complaint and Grievance Reports

Both states and MCOs track data on enrollee complaints and grievances for internal management purposes, looking for patterns and trends and making sure that follow-up is
appropriate. Difficulties with standardization and interpretation limit the usefulness of these reports for external reporting and comparisons among MCOs. States and MCOs use the reports to help resolve individual problems at an early stage, and to provide early warnings of potential systemic problems that warrant further investigation. Responding effectively to these reports signals to legislators, advocates, and others that states and MCOs are concerned about quality and accountability. The data are timely and relatively easy to collect.

**Enrollment and Disenrollment Trends**

These data also are timely and easy to collect, but can be difficult to interpret unless the specific reasons for disenrollment are accurately obtained and recorded. In addition, since disenrollment rates for reasons other than loss of Medicaid eligibility are usually very low, only major differences among MCOs or major changes in trends are likely to be significant. Nonetheless, it is important to be able to identify such differences and changes when they occur, and to follow up quickly to determine the underlying causes. Again, tracking this measure sends a signal that states and MCOs are concerned about quality and performance.

**Provider Participation Reports**

States can calculate and report the number of physicians per enrollee in Medicaid MCO networks, and compare that with the number of physicians per enrollee in the Medicaid fee-for-service program. The state also could determine whether there are physicians participating in managed care who are not participating in fee-for-service. These measures of beneficiary access to care can be enhanced if the state is able to determine, through claims and encounter data or otherwise, the actual extent of physician participation (number of services provided and patients seen, for example).

**EQRO Reports**

EQROs can perform a wide variety of managed care quality monitoring and reporting functions for states, including in-depth clinical studies, medical record reviews, encounter data validation and analysis, MCO readiness reviews, and beneficiary surveys. States receive enhanced federal matching payments for work done by EQROs (75 percent rather than 50 percent), and 1997 federal legislation made a wider range of organizations eligible for EQRO status, expanding state options and increasing competition. Because EQROs are somewhat independent of state Medicaid agencies, external audiences may attach greater credibility to their work than to reports from either states or MCOs.

**MCO Financial Reports**

Many states find MCO financial reports to be their single most valuable monitoring tool. Other states — especially if state staff lacks financial expertise — make little use of
them. These reports provide timely (monthly or quarterly) data on service utilization, revenues, and costs for each MCO, usually in standard forms prescribed by state insurance regulators and/or the state Medicaid agency. The data are most useful when the Medicaid line of business is broken out separately. States use financial reports primarily for internal monitoring of MCOs rather than for external reporting, although states in which MCOs have had solvency problems may find significant external interest in these reports. MCO financial reports also can be used to help set MCO capitated rates, especially when claims or encounter data are not sufficient for rate setting.

Recommendations

While major differences in state Medicaid managed care programs and the contexts in which they operate make it difficult to develop a set of general findings or recommendations from a study of this nature, our work suggests the following recommendations:

• **Medicaid agencies should approach their data collection and analysis efforts in a deliberate, strategic manner, with careful attention to the audiences for their data.** Because Medicaid managed care programs are fundamentally altering the way health care is accessed, delivered, and funded for many of a state’s neediest citizens, these programs understandably generate a great deal of interest among governors, legislators, MCOs, providers, advocates, and Medicaid and other executive agency leaders and staff. It is important that the state’s data collection and analysis efforts result from a sound, well-planned effort. Consultation with key audiences on their data needs can help shape this effort.

• **States should involve MCOs in their data planning and implementation efforts.** While each state ultimately must decide what information will be required of its MCOs, many states are finding that they end up with more useful information when they talk through their data objectives with their MCOs. Such discussions can provide valuable input on how meaningful and comparable information can best be compiled.

• **States should perform a “data inventory” of the encounter data they require MCOs to submit.** Encounter data hold enormous potential as a resource in addressing a variety of program needs, and federal regulations require states to collect and report encounter data. However, to date, the challenges involved in capturing complete and consistent data have severely limited the usefulness of many states’ encounter data sets. The data inventory can help keep various constituents’ expectations in line with what encounter data analyses can be responsibly undertaken in the short term, and can help prevent states from over-investing in analyses that cannot yet produce valid findings. The data inventory also can help states identify the weak spots in these data sets and address them.
• Sound, timely information from MCOs on the financial performance of their Medicaid lines of business is critical to state program monitoring efforts, and can compensate for gaps in encounter data. MCO financial and solvency problems can be troublesome and time-consuming for states to deal with, so early warning of potential problems is crucial. MCO financial reports also can be used to assess the adequacy of the state’s capitated rates, and to help guide future rate setting.

Chapter 1: Using Data Strategically

State Medicaid agencies have a variety of priorities and goals for their managed care programs. To achieve those goals, agencies often must try to change the perceptions or behavior of MCOs, funders, providers, consumers, advocates, and the media. One potential way of doing that is by using data that show what is or is not happening in the managed care program.

There are both internal and external audiences for these data. Internal audiences are Medicaid agency managers and those with whom they work in MCOs and elsewhere in state government. External audiences are those that see the data only when they are made public in some form.

Developing a Data Strategy

In developing a strategic framework for using data, state agencies should ask the following kinds of questions:

• Whose perceptions or behavior are we trying to influence?
• What do we want or expect them to do in response to the data?
• How likely are the data to have the impact we want or expect?
• How costly are the data to obtain and analyze, compared to their likely impact on perceptions and behavior?

Data Inventory

The Medicaid agency should begin by conducting an inventory of what data are currently available, how costly or difficult they are to obtain and analyze, and what they could be used for. Table 1, on the next page, illustrates what such an inventory might look like. Individual states may of course reach differing conclusions regarding the difficulty of obtaining specific types of data and their potential uses, depending on state circumstances and resources.
Table 1. Inventory of Sources and Uses of Medicaid Managed Care Data

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>How Hard to Obtain?</th>
<th>Potential Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims/encounter data</td>
<td>Hard, but required in some form by Centers for Medicare and Medicaid Services (CMS) and very useful for rate setting</td>
<td>Rate setting, analysis of utilization patterns, <em>ad hoc</em> analyses, HEDIS measures</td>
</tr>
<tr>
<td>HEDIS measures</td>
<td>Costly for MCOs, but becoming more routine</td>
<td>Improving MCO performance, public reporting/advocacy</td>
</tr>
<tr>
<td>CAHPS/beneficiary surveys</td>
<td>Costly for state, but becoming more routine</td>
<td>Improving MCO performance, public reporting/advocacy</td>
</tr>
<tr>
<td>Provider surveys</td>
<td>Costly for state, but several useful survey and reporting models exist</td>
<td>Improving MCO and state performance, public reporting/advocacy, improving state/MCO relationships with providers</td>
</tr>
<tr>
<td>Complaint/grievance reports</td>
<td>Easy to get, but deciding what to collect and how to report requires careful thought</td>
<td>Improving MCO performance, early warning system</td>
</tr>
<tr>
<td>Enrollment/disenrollment reports</td>
<td>General data are easy to get, but accurate detail on reasons for disenrollment may not be</td>
<td>Improving MCO performance, early warning system</td>
</tr>
<tr>
<td>EQRO reports, clinical studies, etc.</td>
<td>Required by CMS, 75 percent federal match</td>
<td>Improving MCO and provider performance, public reporting/advocacy</td>
</tr>
<tr>
<td>MCO financial reports</td>
<td>Required by state insurance departments, but may not break out Medicaid line of business</td>
<td>Assessing MCO viability/solvency problems, rate setting and rate negotiations with MCOs</td>
</tr>
<tr>
<td>Budget expenditure tracking reports</td>
<td>Routine in most states</td>
<td>Comparing capitation payments to budget and to reported encounter data</td>
</tr>
</tbody>
</table>

By taking such an inventory and looking at their data with fresh eyes, a Medicaid agency should be in a better position to direct resources toward areas that are most useful in relation to their cost, and away from areas where the data are less useful or cost more than they are worth.
State Rankings of Usefulness of Medicaid Managed Care Data

Our study included a brief mail survey in which we asked state Medicaid directors to rank the usefulness of the various kinds of data they collect in their managed care programs. The 43 states that responded ranked each type of managed care data on a scale of one = “not useful” to five = “extremely useful.” The average usefulness rankings for each type of data for internal management and external reporting purposes are shown in Figure 1 on the next page. 1

In general, the survey results suggest that, at least from the Medicaid agencies’ perspective, the data they are collecting have high utility. Out of 612 ratings, 185 (30 percent) were “extremely useful” (a rating of five), while only 42 (seven percent) were “not useful” (a rating of one). The types of data states appear to find most useful are:

- HEDIS measures, CAHPS, and other beneficiary surveys, probably because the data are already shaped in ways that tell a story and are generally standardized, facilitating comparisons among MCOs and even among states.

- Complaint and grievance reports, probably because they are quickly and readily available, and provide early warning signs of problems states and MCOs can address directly.

- EQRO reports and studies, probably because the data are usually analyzed and reported in ways that tell a story and focus attention on problem and issues states and MCOs can address.

Of the categories surveyed, states gave the lowest utility score to claims/encounter data, which accounted for nearly half of the “not useful” ratings. This presumably reflects in part the difficulty states have had in collecting encounter data they consider to be reasonably complete and accurate. Many states commented that they expected their encounter data to be more useful in the future.

Our interviews with selected MCOs suggest they would probably, as a group, assign lower utility ratings to much of this data. While MCOs may use similar data themselves for internal management purposes, states often require that the data be extensively reformatted or provided at a level of detail that MCOs may consider excessive. Also, MCOs are typically not as optimistic as state Medicaid staff about the actual utility of the information being collected.

1 All states did not use all types of data. The usefulness rankings are the averages for those states that respond using the data. The number of states using particular types of data for particular purposes corresponded closely with the usefulness rankings. More states used data that had higher usefulness rankings, and vice versa.
Figure 1

Medicaid Director Rankings of Usefulness of Medicaid Managed Care Data

Internal Management and Working with MCOs vs. External Reporting

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Internal Mgmt, Working w/MCOs</th>
<th>External Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encounter data - setting capitated rates</td>
<td>2.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Encounter data - analyzing utilization patterns</td>
<td>3.1</td>
<td>3.7</td>
</tr>
<tr>
<td>HEDIS measures</td>
<td>3.1</td>
<td>3.6</td>
</tr>
<tr>
<td>CAHPS/beneficiary surveys</td>
<td>4</td>
<td>4.4</td>
</tr>
<tr>
<td>Provider surveys</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Complaint/grievance reports</td>
<td>3.4</td>
<td>3.9</td>
</tr>
<tr>
<td>EQRO reports</td>
<td>3.6</td>
<td>4</td>
</tr>
<tr>
<td>EQRO clinical studies</td>
<td>3.2</td>
<td>3.9</td>
</tr>
<tr>
<td>MCO financial reports</td>
<td>3.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Budget/expenditure tracking reports</td>
<td>3.3</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Using Data to Support Managed Care Goals

States have varying Medicaid managed care goals and priorities, depending on the size, structure, and maturity of their managed care program, the marketplace context, and the degree of attention paid to the program by the governor, legislature, providers, consumer advocates, and the media. States’ ability to use data to support their managed care goals also will be shaped by the financial, staffing, contractor, and other resources they have available.

The following discussion of how states can use data to achieve their managed care goals is based on our research and interviews, and on our experience in working with a wide variety of states. The discussion concludes with brief summaries of how Arizona, Connecticut, Minnesota, New York, and Texas have dealt with data strategy issues.

Improving MCO Performance

The Medicaid agency’s ability to influence MCO behavior is determined in large measure by the marketplace context (managed care penetration rates, number of viable and interested MCOs), the capitated rates the state is able and willing to pay, and the agency’s relationships with its MCOs (adversarial regulator vs. business partner). If Medicaid is an attractive business for MCOs, Medicaid agencies have substantial ability to influence MCO behavior; if it is not, they do not.

Medicaid agencies also should keep in mind that influencing MCO behavior is only the first step in improving performance. MCOs in turn must influence the behavior of the doctors with whom they contract, and that is not a trivial task.¹

Collaborating and prescribing. In general, successful data collection and analysis likely involves a partnership approach, in which states work collaboratively with MCOs over time. This may be easier to achieve in some states than others. If MCOs take a minimalist approach to data sharing and reporting, states may have to impose and enforce formal reporting requirements. Formal requirements can support informal collaboration, especially when the state needs timely and standardized data that may be costly for MCOs to produce. In Wisconsin, for example, the state worked extensively with its MCOs over a period of 18 months to develop and implement new and expanded encounter data reporting requirements that took effect in 2000. But those requirements also were supported by a new provision in MCO contracts, allowing the state to

impose liquidated damages of $1,500 per day if the MCOs failed to submit the required data on time and in the required format.¹

**Sharing data.** States should share the data they collect with MCOs. Encounter-based analyses of utilization, HEDIS measures, beneficiary and provider surveys, complaint and grievance reports, and EQRO clinical studies and reports all can help MCOs improve their performance, especially if these data are used to compare them to their competitors or to other benchmarks. The form of distribution can vary by state, depending on the market context, Medicaid agency relationships with the MCOs, and MCO relationships with each other. The impact of this data sharing on MCO behavior also will depend on the MCOs’ interest in improving their performance and the resources they have to do so.

**Public reporting.** Publicly reporting the results of HEDIS measures and beneficiary and provider surveys likely will lead MCOs to take those results more seriously, but the public audience for this information may be fairly limited unless the managed care program has been in the news recently, either because it is a new program or because it has had visible problems. States must be especially cautious about public reporting if it is based on self-reported and unaudited MCO data, or on data that have not been adequately reviewed by MCOs and others who may be able to identify methodological or other problems. If not done carefully, public reporting can paint a powerful but inaccurate picture of the high-performing MCOs.

**Rates and rate setting.** Medicaid agency ability to influence MCO behavior may be quite limited if the MCOs believe that the capitated rates they receive are too low to make Medicaid an attractive business. This is an issue that may have to be addressed in a political forum, but sharing encounter and financial data with MCOs may help them better understand the basis for the rates and the risks they are being asked to bear. While better MCO understanding may not help much if the rates really are too low, reducing uncertainty and building trust are important elements of a business relationship, and sharing data can help with that. In the early stages of a Medicaid managed care program, the baseline data needed to calculate rates are the fee-for-service claims data held by the state, which the state should provide to existing and prospective MCO contractors. As the fee-for-service base erodes under an expanding managed care program, however, much of the key rate-setting information needed to keep the program on a sound actuarial footing must flow from the MCOs to the Medicaid agency in the form of encounter data, financial reports, or both.

**Performance incentives.** Decisions by most Medicaid beneficiaries to enroll in specific MCOs are not likely to be influenced significantly by measures of MCO performance. Thus, at least in Medicaid, it is hard to reward good MCO performance through this consumer-choice

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mechanism. (In addition, MCOs may not always view additional Medicaid enrollment as a benefit). Medicaid agencies can reward MCOs more directly for good performance by paying modest additional amounts to high-performing MCOs in the form of percentage add-ons to capitated payments, one-time bonuses, and the like. States that “auto-assign” beneficiaries who do not specifically choose an MCO can assign extra new enrollees to high-performing MCOs. Non-financial incentives such as plaques and publicity can have a beneficial impact by raising a plan’s public profile and image. Data on MCO performance provide the basis for such rewards, and as long as the benefits at stake are relatively modest and take the form of rewards rather than penalties, the data need not be perfect.

**Demonstrating Value to Funders**

Funders of Medicaid managed care programs all want the programs to produce value, but they attach different weights to the cost, quality, and access elements that define value, and obtain their information on Medicaid managed care in differing ways. How can a state Medicaid agency use data to demonstrate managed care’s value to its funders?

**General strategy.** In broad terms, there are two imperatives for Medicaid agencies: 1) keep costs under control; and 2) be prepared to deal effectively with anecdotes. If state Medicaid managed care programs can succeed on those dimensions, they likely will have the ability to pursue a more expansive set of quality and access initiatives that funders will at least accept, and perhaps embrace.

**Containing costs.** All funders care about costs, although the extent of their concern may vary. Failing to keep costs within expected limits is a reliable way of attracting unwanted attention to a program. CMS focuses primarily on whether managed care costs are exceeding state projections of what would have been spent under fee-for-service, while governors, budget directors, and legislators are generally concerned about any increases over the amounts included in state budgets. States should monitor MCO financial reports and budget expenditure tracking reports for signs of emerging problems, and should deal with them as soon as possible, including providing appropriate warnings to the governor, state budget director, and key legislators. Regular submissions to the state budget agency, legislative budget testimony, and budget tracking reports can be used to highlight managed care cost trends and provide early warning of cost problems. Since Medicaid agencies must demonstrate periodically to CMS that managed care costs are below projected fee-for-service costs, the Medicaid agency should feature those “good news” savings estimates in its budget submissions and in legislative testimony, and provide appropriate early warnings to the governor, budget director, and legislators if the news is not good.

**Dealing with anecdotes.** People and their problems are the face of policy for most funders. Medicaid agencies must be prepared to deal with those problems quickly, and on their own terms. Complaint and grievance reports are an especially good way for Medicaid agencies to identify issues that likely will find their way to governors, legislators, and the media if not dealt with quickly and effectively. Good data can help put those individual cases in a larger context.
and perhaps put a different face on the issue, but that approach can appear defensive and evasive unless the individual case is also addressed directly. Good data can help Medicaid managers deal appropriately with individual cases.

**Highlighting patterns, trends, and comparisons.** Managed care permits states to measure what is happening in the health care system and focus accountability in ways that are generally not feasible in the fee-for-service Medicaid system, with its fragmentation and diffusion of responsibility. Without good data, however, managed care can be just an arbitrary way of saying no. States can use a variety of methods — budget submissions, legislative testimony, reports, press releases, short handouts — to use data to highlight patterns, trends, and comparisons in managed care. Potential examples include:

- Trends in emergency room and inpatient hospital utilization.
- Trends in early prenatal care and low-birth-weight babies.
- Trends in immunizations and well-child visits.
- EQRO clinical studies of asthma and diabetes treatment.
- Comparisons of MCOs to each other and trends over time, using HEDIS and CAHPS.
- Trends in costs per beneficiary.
- Comparisons of managed care to fee-for-service.

Comparisons of managed care to fee-for-service in the Medicaid context will often show that managed care results in better access and quality, so this comparison can be especially useful in demonstrating managed care’s value.

**Building Provider Support**

Physicians in general dislike managed care because it reduces their income and autonomy and increases hassle and paperwork. MCOs have the initial responsibility to deal with these issues, but MCOs also are agents of the Medicaid agency, so building provider support for managed care is a joint enterprise. The Medicaid agency can insist that MCOs pay claims on time and respond to provider complaints responsibly. Information systems should carefully track MCO performance on these dimensions. Beyond that, there are a number of ways Medicaid agencies can use data to help build provider support for managed care.

**Sending messages.** Provider surveys send the message that Medicaid agencies are concerned with provider satisfaction or lack thereof, and likely will result in ideas for improving MCO performance. HEDIS measures and beneficiary surveys signal that the Medicaid agency is concerned with quality and access as well as cost.

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Providing clinically relevant data. The Medicaid agency, in partnership with MCOs, may also be able to provide physicians and other providers with clinically relevant information on patients’ claims and service utilization histories, and on special medical or social support needs. They also may be able to work with MCOs to develop disease registries, immunization registries, reminder systems, and other tools that physicians would find helpful.⁶

Building Consumer Support and Understanding

Consumer report cards. Many states distribute or make available to consumers report cards on MCO performance, using data from HEDIS, CAHPS, and other sources. These performance measures represent a major advance over the Medicaid fee-for-service system, which has few usable measures of health care quality and access. Although current research and state experience suggest that these report cards may not have a significant impact on beneficiary choice of MCOs, they serve a variety of other important functions in the Medicaid managed care system, and may over time have a greater impact on consumer choices. (What Kinds of Data Do Consumers Want and Use summarises current research on consumer use of managed care data and report cards.)

The limited direct impact of report cards on consumer choices is due in part to the fact that in many states there are only a small number of MCOs for Medicaid beneficiaries to choose among. Even when there are several MCOs, they may not vary significantly on the dimensions measured by HEDIS and CAHPS. Beneficiaries generally are also more interested in information about individual doctors than about abstract entities like health plans. The choice of a health plan may also not be that important for generally health Temporary Assistance for Needy Families (TANF) and related beneficiaries who have many other pressing concerns in their lives. (As discussed below, disabled and chronically ill Medicaid beneficiaries may have a greater interest in data on their MCO choices.)

Collecting and reporting this information on MCO performance can nonetheless serve important state goals. HEDIS and CAHPS measures can influence MCO behavior if the Medicaid agency treats MCO performance on these dimensions as important, even if Medicaid consumers generally do not directly act on it. Consumer advocacy organizations may have more interest in this kind of information than individual consumers, and generally like to see it collected and reported. Legislators, providers, other stakeholders, and the media also are important potential audiences. Medicaid agencies may be able to economize on the collection, distribution, and use of this information if they realize that it is primarily MCO behavior and public perceptions they are trying to influence, not the behavior of individual consumers. Report cards could be given to consumers at enrollment, for example, and made available on request, but not mailed to all potential enrollees. States might want to focus more efforts on

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⁶See Felt-Lisk S. and Kleinman L.C. “Effective Clinical Practices in Managed Care,” for examples of these approaches.
getting the data to major program stakeholders and the media, and on making the reports easily accessible on state web sites. In stable programs, data on these measures might be collected every other year rather than every year.

**Disabled and chronically ill consumers.** SSI and related Medicaid managed care beneficiaries present very different issues from those that arise for TANF and related beneficiaries. For disabled and chronically ill beneficiaries, access to and quality of providers and MCOs is one of the most important things in their lives. Providers who serve them may receive a substantial portion of their funding from Medicaid, and thus may be more attentive to the Medicaid program than other providers. Medicaid agencies should make special efforts to obtain and make available data on managed care for this group of Medicaid consumers.

**Developing and Using Data Workgroups**

The data collection and analysis process can be adversarial. For instance, health plans might see their Medicaid agency as playing a dictatorial role and having very little regard for the administrative burdens they impose upon their health plans. At the same time, a state might view its health plans as being resistant to providing each and every piece of information the state requests, and as generally trying to play keep-away with the state when it comes to data sharing and reporting.

Increasingly, however, states and health plans are moving away from this adversarial model. States are establishing data workgroups to arrive at a mutually agreed-upon data collection and analysis agenda. Through these workgroups, issues such as the following can be addressed:

- Taking a usefulness inventory of each piece of information the state requires health plans to submit. This effort would include an assessment of the administrative burden each item entails for a health plan and state staff, and the degree to which the information has been (or could be) used to strengthen the program and/or achieve sound oversight.

- Selecting data studies that are most likely to yield valid findings, and developing a data collection methodology that minimizes the risk of a futile exercise occurring.

- Fostering consistent collection of data around a certain issue (EPSDT compliance, for example, or physician appointment waiting times), such that the comparative analyses and program-wide statistics the state produces are valid.

- Identifying new types of reports that would yield valuable information without imposing undue administrative burdens on the health plans or the Medicaid agency.

- Making optimal use of encounter data (examples of which are discussed in *Guidelines and Tips on Effective Visual Display of Data* (Chapter 6)).
This partnership model does not change the fact that the state needs to fulfill its program oversight role effectively, nor does it prevent plans from discontinuing their Medicaid line of business. However, the partnership approach fosters a well-planned data-reporting effort that maximizes the value of the information being collected and analyzed.

**How Some States Use Data Strategically**

The states we interviewed varied in the emphasis they give to different types of Medicaid managed care data, and the use they make of it for different audiences. Several of the states we interviewed use Medicaid managed care data in a way that reflects a strategic assessment of their context and needs:

- **Arizona**'s Medicaid managed care program, the Arizona Health Care Cost Containment System (AHCCCS), began in 1982, and has generally strong support from the legislature, governor, and CMS; stable and generally well-performing MCOs; and extensive in-house resources for data collection and analysis. There is relatively little media focus on the program, and consumers are reasonably familiar with the program and their choices. The state agency focuses primarily on working directly with its MCOs to improve their performance, taking advantage of the extensive encounter and financial data the state has available on each MCO. That same data can be used to respond quickly and reliably to legislative questions and concerns, which further increases legislative support for the agency. The agency puts out relatively few public reports aimed at the media or the legislature, although a good deal of information is available on the agency’s web site. The agency also does not publish consumer report cards, since focus groups with enrollees following a member survey in 1996 found that few members showed any interest in receiving the results. (“We’re not killing a lot of trees to give consumers data that only about two percent of them would ever use.”) There also is not a great deal of variation among Arizona Medicaid plans on most HEDIS and CAHPS measures. (“Our standards for plans are quite high and detailed; we don’t have bad plans.”) Our interviews with consumer representatives supported this Medicaid agency perspective. The program works fairly well, these consumer representatives said, and the state and MCOs respond well to complaints. The consumer representatives said they had little time to analyze or read comparative data on MCOs, and doubted individual consumers did either.

- **Connecticut**'s program has operated since 1995 and has grown over the past few years with the addition of the State Children’s Health Insurance Program (SCHIP) population. The Medicaid agency has used a combination of in-house resources, contractors, and outside agencies and organizations to collect and analyze data for program monitoring. The program has good support from the legislature and some parts of the advocacy community. Part of this support stems from the Medicaid agency’s use of an outside entity, the Children’s Health Council, to perform monitoring activities and conduct beneficiary surveys. The agency has relied heavily upon enrollment, MCO utilization reports, and MCO Medicaid-specific financial data to manage the program, and has found these reports to be invaluable because of the staff’s ability to quickly identify changes in performance across time or among MCOs.
by reviewing key indicators. Medicaid staff members also have found HEDIS reports to be extremely helpful because they allow for performance comparisons on several levels (e.g., across plans and payers, and between Connecticut’s and other states’ Medicaid MCOs). Through the use of basic utilization data, the state has been able to demonstrate the program’s success in improving primary care access, reducing emergency room visits, and lowering inpatient admissions and lengths of stay. While encounter data have been collected since the program’s inception in 1995, the data have largely been used to track Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) service provision and performance. In the EPSDT and child health area, the data are considered to be reliable and are used to respond to ad hoc requests and issues that arise. However, the encounter data lack some of the finer detail that might be needed to look at full screens vs. partial screens. (This detail is also not part of fee-for-service claims data.) In trying to broaden the use of the encounter data, the state has found limitations in their completeness, particularly for services that the MCOs contract for on an at-risk basis, such as behavioral health. The state is working to improve the data quality and timeliness so it can support additional monitoring, ad hoc reporting, and rate setting.

• Minnesota’s mandatory Medicaid managed care program began in 1985. Like Arizona, Minnesota has developed fairly extensive in-house resources for data collection and analysis. The state has collected encounter data since 1995, and began using it for rate setting in 2000. Both state and MCO officials agreed that this in-house data capacity enables the state to respond effectively to issues and concerns raised by the legislature and others, although MCO officials complained about the volume of data they are required to collect and report. The media pay substantial attention to the Medicaid managed care program, and tend to focus on negative aspects of managed care, both in Medicaid and more generally. Legislative attitudes toward Medicaid managed care are mixed, reflecting to some extent the negative media focus, but legislators are generally supportive of the program and not especially demanding in terms of data or reports. MCOs in the Medicaid program are generally performing well, according to both state officials and consumers with whom we spoke. The state collects and publicly reports CAHPS and HEDIS measures, and also publishes EQRO and other reports. State officials believe that publication improves MCO performance, since it helps to focus top-level MCO management attention on these quality issues. The media tend to focus on the negative aspects of these reports, which state officials accept as an inevitable consequence of publishing them in the existing media environment. The state does not distribute CAHPS and HEDIS measures or other kinds of MCO report cards to consumers, since past experience has demonstrated that consumers are generally not interested in this kind of information. The consumer representatives we spoke with agreed, saying Medicaid consumers in Minnesota do not understand or use consumer report cards. The consumer representatives emphasized that Medicaid beneficiaries had much greater need for very basic and simple guidance on how to navigate the managed care system. The state and Medicaid MCOs currently mail large amounts of information to beneficiaries, these consumer representatives said, but it is “overwhelming and confusing.”
• **New York** is unique because of the longevity of its Medicaid managed care program (voluntary enrollment began in 1978) and the overall responsibility of the State Department of Health for all managed care oversight. In addition to collecting enrollee satisfaction data, the agency collects, analyzes, and publishes an extensive set of measures known as the Quality Assurance Reporting Requirements (QARR) report. The annual QARR reports are disseminated broadly and are available on the agency’s website. The reports give MCO performance for commercial, Medicaid, and Child Health Plus (SCHIP) enrollees across more than 70 measures. The QARR report is generated using encounter data, and because the data have been collected, analyzed, and publicized for a number of years, the state views the data as reliable and complete. Because the agency has been a leader in managed care quality oversight, the measurement and data analysis systems are well developed and highly sophisticated, but may not be easily replicated by other states with more limited resources. A number of other Medicaid-specific reports and surveys also are used to monitor performance on an ongoing basis.

• **Texas** began its Medicaid managed care program in 1993 and is developing a comprehensive approach to collecting data and reporting on program performance. The state agency, in conjunction with an external group, recently produced an extensive review of the program. Because the agency worked with external stakeholders on the report, the report is viewed as objective and the agency has outside support for the recommended next steps to improve the program’s performance on key indicators of quality and access. The use of encounter data has been limited, largely due to systems issues, so the state agency has relied on MCO utilization reports (with some validation by its EQRO contractor) to monitor inpatient admissions and stays, emergency room visits, and immunizations. The agency has created a report card on the findings of a recent CAHPS survey, conducted by the EQRO, which provides some comparative information on the MCOs. The public nature of the report card makes it meaningful to the senior level staff at the MCOs, spurring action as a result of the findings.

**Key Findings and Recommendations**

While the limited number of states we reviewed and the great differences among states make it difficult to develop detailed recommendations that will apply in all circumstances, we believe the following findings and recommendations warrant states’ consideration:

- Medicaid agencies should approach their data collection and analysis efforts in a deliberate, strategic manner, with careful attention to the audiences for their data. Because Medicaid managed care programs are fundamentally altering the way health care is accessed, delivered, and funded for many of a state’s neediest citizens, these

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7 [http://www.health.state.ny.us/nysdoh/manicare/qarrfull/qarr00.pdf](http://www.health.state.ny.us/nysdoh/manicare/qarrfull/qarr00.pdf)
programs generate a great deal of interest among governors, legislators, MCOs, providers, advocates, and Medicaid and other executive agency leaders and staff. It is important that the state’s data collection and analysis efforts result from a sound, well-planned effort. States that have gone through this process already might consider revisiting the approach every few years.

- States should involve MCOs in their data planning and implementation efforts. While each state must ultimately decide what information will be required of its MCOs, many states find they end up with more useful information when they talk through their data objectives with the MCOs. Through regular data committee meetings and other participation-oriented approaches, states can gain a full appreciation of the strengths, limitations, and resource requirements involved in a given data request from the MCOs’ perspective.

- States should perform a “data inventory” of the encounter data they require MCOs to submit to be sure they are not requesting more than the state needs or can use. Encounter data hold enormous potential as a resource in addressing a variety of program needs, and federal regulations require states to collect and report encounter data to CMS. However, to date the challenges involved in capturing complete and consistent data have severely limited the usefulness of many states’ encounter data sets. The data inventory can help keep various constituents’ expectations in line with what encounter data analyses can be undertaken responsibly in the short term, and can help prevent states from over-investing in analyses that cannot yet produce valid findings. The data inventory also can help states identify and address weaknesses, overlaps, and duplications in the encounter data and other data they are requiring MCOs to submit. Better encounter data, for example, may enable states to rely less on costly collection and analysis of medical records.

- Sound and timely information from MCOs on the financial performance of their Medicaid lines of business is critical to state efforts to monitor programs, and can compensate for gaps in encounter data. MCO financial and solvency problems can be troublesome and time-consuming for states to deal with, so early warning of potential problems is crucial. MCO financial reports also can be used to assess the adequacy of MCO capitated rates. State policymakers are squeezed hard from several directions with regard to their rate-setting efforts, with many constituents urging that the MCOs not be allowed to operate “too profitably” and many MCOs teetering on the edge of curtailing their involvement in Medicaid due to what they perceive to be inadequate rates. To strike an appropriate balance, states clearly need to obtain accurate, detailed medical cost information from their MCOs, ideally specific to each payment rate cohort being used. Such financial reports can be used to help guide future rate setting.
Chapter 2: Encounter Data: Opportunities and Challenges

This chapter discusses how encounter data can be used to set MCO capitated rates and to achieve other strategic goals, such as improving MCO performance and demonstrating value to funders. Collecting and using encounter data effectively requires major investments in analytic resources by both states and MCOs. States that are unable to make those investments may want to consider less ambitious ways of meeting their rate-setting and other strategic goals. The chapter concludes with a brief summary of current federal requirements for collection and reporting of encounter data, and a short description of how five states have used encounter data.

What is Encounter Data?

Encounter data are records that include claim elements with largely the same information that would be captured on a traditional medical claim record in the fee-for-service setting. These fee-for-service claims typically constitute a very large subset of any MCO encounter database. However, many MCOs pay for some services on a capitated or other non-fee-for-service basis, so providers do not have to submit detailed claims for the services covered by capitation. Therefore, encounter data collectors must seek to capture information for these non-fee-for-service services that is similar to what would be captured via a fee-for-service claim. An MCO’s fee-for-service claims information then can be merged with the non-fee-for-service encounter data to create a full file on the covered services rendered to each MCO enrollee.

Encounter Data Consists of Many Data Elements

While exact contents of encounter data sets may vary, some of the key information typically captured for each claim/encounter include:

- Enrollee ID number.
- Enrollee date of birth.
- Beginning date of service.
- End date of service (for institutional services).
- Diagnosis-related group (DRG) (for hospital inpatient services).
- Primary diagnosis code.
- Secondary diagnosis code.
- Provider ID number.
- Provider name.
- Procedure code.
- Type of service code.
- Amount charged.
- Amount paid.
This list represents a substantially abridged version of the more detailed fields many states now are capturing. The encounter data fields included in the Medicaid Statistical Information System (MSIS) — a CMS-sponsored effort that seeks to strengthen the consistency of the information captured within and among states — are quite detailed and represent an important benchmark and guide for state efforts.

**Encounter Data Have Been Difficult to Collect and Use**

Because they provide transaction-level detail, encounter data represent potentially one of the most useful sources of information on access to and quality of care in Medicaid managed care. So far, however, most states and MCOs have found encounter data to be difficult to collect and use.

There are three main reasons for this difficulty:

1) Health care providers, who are the source of these data, have little incentive to submit complete and accurate data unless payment for their services is contingent on their doing so, as it is in the fee-for-service Medicaid system. In Medicaid managed care, as noted above, many providers receive a flat monthly payment for each enrollee, and do not bill for individual services.

2) Providers, MCOs, and states frequently use different classification and coding systems for these data, making consistency and valid comparisons difficult.

3) Because the data can be so voluminous, considerable staff skills and resources may be needed to use the files properly (linking data correctly, checking for completeness and accuracy, summarizing results clearly).

There are ways for states to deal with these problems, and to obtain at least some of the many benefits that encounter data promise. As with other kinds of data discussed in this report, the key for each state is to focus on what it needs the data for, and to require MCOs to submit only the data that are needed and that the state plans to use.

It also is important to recognize that encounter data may not be the best way to address specific program monitoring and implementation issues.

The main potential uses by states of encounter data are:

- Setting MCO capitated rates.
- Measuring service utilization for HEDIS and other access and utilization reports.
- Exploring in more detail potential problem areas raised by complaint, grievance, enrollment, and disenrollment reports.
• Identifying service areas or problems that warrant more detailed EQRO analysis of medical records.

• Responding to *ad hoc* problems raised by legislators, advocates, the media, providers, and others.

• Analyzing MCO financial performance.

MCOs have a major self-interest only in the first potential use — setting capitated rates. If encounter data are used to set rates, MCOs that submit incomplete or unusable encounter data will likely be paid lower rates. The other purposes for which the state might use encounter data are aimed primarily at making it easier for the state to pursue its regulatory agenda — to look over MCOs’ shoulders and tell them what to do.

Even though MCOs likely will want to collect fairly complete encounter data for their own internal management purposes, they have relatively little incentive to report that data to states in the form in which states want to receive it, unless their capitated rates depend on their doing so. State contractual requirements for the submission of encounter data, even when enforced by fines and penalties, generally have not been successful in getting MCOs to do more than submit the bare minimum of data needed to avoid sanctions.

**Using Encounter Data to Set MCO Rates**

Several states that have been successful in collecting and using encounter data — Arizona, Colorado, Maryland, Minnesota, and Oregon — have found that the key to getting reasonably complete and accurate data is to use the data for MCO rate setting. The head of rate-setting for Oregon’s program says that basing MCO payment on encounter data is the “skeleton key” to getting good encounter data. The state’s outside actuary agrees: “If you don’t use it, you won’t get it.” The head of rate setting for Maryland Medicaid and the head of Arizona’s Medicaid managed care program confirmed the importance of using encounter data for rate setting, as did all of the actuaries whom we interviewed. Wisconsin is an exception, since it has been able to obtain usable encounter data without using the data for rate setting. Working closely with its MCOs over a period of several years, the state focused initially on obtaining a limited amount of encounter data for some key publicly reported performance indicators, then gradually expanded encounter data reporting requirements to meet specific performance measurement needs.

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8 Maureen King, Actuarial Services Coordinator for the Oregon Office of Medical Assistance Programs, May 1, 2001 slide presentation.
9 Sandra Hunt, Pricewaterhouse Coopers, December 18, 2000 phone interview with Jim Verdier.
New York State is also something of an exception. The state publishes an extensive MCO quality monitoring report that relies heavily on encounter data. As in Wisconsin, however, the encounter data used for quality measurement are not by themselves sufficient to set rates, so New York has not yet been able to use its encounter data for rate setting.

Since our study focused in particular on states that have been leaders in using encounter data for rate setting, it is not surprising that we found some strong proponents of this use of encounter data. States with fewer analytic resources or different rate setting needs may find that less data-intensive approaches to rate setting are more feasible.

The next section discusses briefly the kinds of encounter data that are most needed for rate-setting purposes, and how encounter-based approaches to rate setting compare to other approaches.

**Minimum Encounter Data Needs for Rate Setting**

The actuaries with whom we spoke agreed that MCO rates could be set adequately with reasonably complete encounter data for inpatient hospital, emergency room, pharmacy, physician, and lab and x-ray services. Even this more limited subset of encounter data may not always be readily available, however. Some states have reported difficulty in obtaining usable hospital encounter data, and encounter data on physician services can be difficult for MCOs and states to obtain if physicians are paid by the MCO on a capitated rather than a fee-for-service basis.

If the encounter data that MCOs submit to the state are incomplete or inaccurate in some key service areas, states and their actuaries have a variety of ways of working around these data gaps:

- **Using MCO financial reports.** MCO financial reports contain income statements, balance sheets, and utilization data broken out by type of service (inpatient days per 1,000 enrollees, physician visits per 1,000 enrollees, etc.). If these data are shown separately for the Medicaid program — a requirement in some states, such as Arizona — actuaries can use the data to make judgmental adjustments to incomplete encounter data. Some states, such as Maryland, require Medicaid financial data to be reported down to the level of specific capitated rate cells, which can be even more useful for rate setting. For states that choose not to make major investments in collecting encounter data, these financial reports can provide the main basis for rate setting.

- **Using fee-for-service claims data.** Actuaries can also supplement the managed care encounter data with Medicaid fee-for-service data from areas of the state or from eligibility categories not included in managed care, and from periods of time before managed care was instituted. Fee-for-service data from other states and from the commercial sector can also be used. These fee-for-service data from other sources and contexts are obviously less useful the more removed they are from the contexts, populations, and time periods for which the Medicaid rates are being set.
• **Putting less emphasis on plan-specific rates.** As a matter of policy, states may want to set separate plan-specific rates to reflect differences in the conditions and care needs of plan enrollees, the efficiency with which plans operate, and the completeness and accuracy of their encounter data. This approach maximizes the likelihood that plans will submit good encounter data, since their capitated rates will likely be lower if they do not. However, at least during a transition period, states may choose to compensate for inadequate encounter data from some plans by relying on the data submitted by more compliant plans to fill in gaps. The more compliant plans may consider this to be unfair, however, and it dilutes the incentive for plans to submit good encounter data.

### Risk Adjustment

When states adjust their capitated rates to take into account the higher financial risk that MCOs face if their enrollees have predictably higher care needs and costs, as Colorado, Oregon, Maryland, and several other states have done, the encounter data MCOs submit will likely have a fuller and more complete record of elements that are used in the risk adjustment process than of other elements. Hospital and physician encounter records, for example, are more likely to have complete information on the diagnosis of the patient, since that is a major element in most risk adjustment systems. In Oregon, where lab and x-ray services are used as part of the risk adjustment calculation, encounter data on those services are more complete than they otherwise might be. If capitated rates rely heavily on diagnostic information, states may want to audit the encounter data periodically to be sure that the diagnoses recorded there are consistent with medical records and other data.¹²

### Using Encounter Data for Other Purposes

States that have obtained reasonably complete and reliable encounter data for rate-setting purposes can use that same data for a variety of other purposes. In terms of the strategic purposes discussed earlier, encounter data are likely to be most useful in improving MCO performance. To the extent MCO performance is improved, other state goals, such as demonstrating the value of the program to funders and building provider and consumer support, may also be advanced.

### Improving MCO Performance

¹¹This approach runs the risk of becoming a new means of cost-based reimbursement unless the state also builds comparisons to other MCOs or external benchmarks into its rate-setting system.

¹²For an example of such a review, see Colorado Department of Health Care Policy and Financing, “Colorado Medicaid Encounters: Encounter Data Validation Study.” Available at www.chcpf.state.co.us/mcc/mccindex.html.
As noted earlier, most MCOs are likely to have extensive service utilization and cost data for their own internal management and quality improvement purposes. For the state to play a role in improving MCO performance, the state must be able to measure that performance in a way that permits MCOs to be compared to each other and to other benchmarks. That is the rationale for requiring MCOs to submit encounter data to states using uniform formats and definitions.

We list below some aspects of MCO performance on access, quality, and cost that can be measured using the kind of encounter data most commonly used in rate setting, and that states have some reasonable expectation of being able to influence through monitoring and performance incentives.

**Access to care**

- **Number of emergency room visits per 1,000 enrollees, by type of enrollee.** Unusually high numbers of emergency room visits may indicate problems with access to primary care services. Adults, children, pregnant women, the elderly, and disabled enrollees are likely to have different levels of utilization, so breakdowns by eligibility category facilitate valid comparisons. Emergency room encounter data are likely to be reasonably complete, and to have accurate enrollee eligibility data. States and MCOs have a number of levers they can use to influence emergency room use, including provider reimbursement, enrollee education, and cost sharing.

- **Number of physician visits per 1,000 enrollees, by type of enrollee.** Encounter data on the number of physician visits by type of enrollee are likely to be reasonably complete and accurate, even though information on the specific services provided in the visit may not be. In general, states and MCOs should want to encourage certain kinds of physician visits, such as those for preventive care, immunizations, EPSDT screening, and prenatal care, so obtaining better encounter data on those types of physician services can be especially useful. Again, states and MCOs can influence the number and type of physician visits in a variety of ways, including increasing reimbursement for some types of services. Such a policy obviously would encourage physicians to submit better encounter data for those services.
Quality of care

- **HEDIS measures.** Many HEDIS measures can be calculated using encounter data, although using MCO administrative data or medical records often may be more efficient or reliable.\(^3\) States and MCOs have invested substantial resources in collecting data for HEDIS measures. Because these measures are standardized and widely publicized, both states and MCOs have developed a number of ways of improving performance on the dimensions measured by HEDIS.

- **Appropriate use of prescription drugs.** Prescription drug data are the most complete, accurate, and timely encounter data that states are likely to receive. Although the type or volume of drugs used does not by itself tell a full story with respect to quality of care, drug data can be quite illuminating if combined with data on diagnoses. What percent of enrollees infected with HIV, for example, are receiving drugs that are appropriate for that diagnosis? What percent of enrollees with viral infections are inappropriately receiving antibiotics?

Cost of care

- **Use of brand-name drugs instead of equivalent and less expensive generics.** Readily available prescription drug encounter data facilitate the analysis of this issue, and states may find it illuminating to compare the mix of drugs occurring in the managed Medicaid setting with the mix occurring among the population in fee-for-service Medicaid.

- **Inpatient admissions and average length of stay, by type of enrollee.** Basic hospital inpatient encounter data (number of admissions and lengths of stay) should be reasonably complete and reliable, but breakdowns of the data by DRG or other elements may not be. If an MCO's inpatient utilization is unusually high, after appropriate adjustment for its mix of enrollees and pregnancy admissions, it may suggest shortcomings in primary and preventive care services, and potential difficulty in covering the cost of hospital services.

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\(^3\)Oregon produced a Medicaid managed care HEDIS report that relies almost entirely on encounter data, although only a limited number of HEDIS measures were calculated. See Oregon Department of Human Services, “Oregon Health Plan: Managed Care HEDIS 1999 Performance Measures Report.”
Complementing and Supplementing Other Data Sources

Once encounter data are reasonably complete and accurate, they can be used to help states and MCOs “drill down” into potential problem areas identified through complaint and grievance reports and MCO financial reports. They can be used to help focus EQRO analysis on areas where detailed medical record review and clinical focus studies may have the greatest payoff. They can also be used to respond to anecdotes and ad hoc problems raised by legislators, advocates, the media, providers, and others.

Here are some examples:

- **Complaints about inadequate access to providers.** Encounter data on MCO services can be used to show how many providers per enrollee actually are providing services in particular geographic areas, and how many visits per enrollee they provide each year. The data can be used to compare MCOs to each other, and to services provided in Medicaid fee-for-service.\(^{14}\)

- **Declining MCO profit levels.** If a particular MCO shows declining profits or increasing losses as a percent of revenue over the course of a year, encounter data can be used to determine whether the trend may be due to changes in the mix of enrollees, hospital or prescription drug utilization that exceeds the assumptions used to set rates, or other factors.

- **EQRO clinical focus studies.** For a study of diabetes management by Arizona’s Medicaid MCOs, the state used AHCCCS encounter and pharmacy data to identify all Medicaid enrollees with diabetes enrolled in MCOs. The EQRO then identified a random sample of cases to explore in more detail using medical records. This sampling procedure assured that costly analysis of medical records was focused on the appropriate type and number of cases.\(^{15}\)

- **Response to ad hoc problems.** In response to complaints from legislators and mental health advocates about perceived inadequate access to mental health services in the Minnesota Medicaid managed care program, the state used its encounter data to produce detailed reports on mental health service utilization by plan and by age of enrollee from

\(^{14}\)For an example of this kind of analysis with respect to dental providers, see William M. Mercer, Inc., “Geographic Managed Care Dental Program Evaluation,” prepared for the Medi-Cal Policy Institute, April 2001.

1995 to 1999, including the percentage of enrollees who received mental health services, and the number of services per enrollee month.\textsuperscript{16}

Limitations of the Usefulness of Encounter Data

A state’s ability to conduct any of these kinds of assessments is dependent, of course, on the people and systems the state has available to work with their data. Even with substantial analytic resources, however, states are likely to encounter significant obstacles in collecting encounter data, and limitations in the completeness and consistency of the data that are collected. This can limit the usefulness of the data for operational and policy purposes. These problems are discussed below, along with some recent federal data reporting requirements that may lead to improvements.

Completeness

A health plan’s encounter data set is almost entirely comprised of information submitted to the health plan by providers. The level of detail available for any particular service rendered to a health plan enrollee is entirely dependent on what the providers choose to submit. In a fee-for-service payment structure, the providers have a strong incentive to submit all the information needed to secure payment. However, many managed care providers are paid on a capitation basis, and since it costs providers time and money to collect and submit encounter data, they have a disincentive to provide any encounter information to the health plan, let alone make the effort necessary to make this information as complete and accurate as possible. Health plans require their providers to submit encounter data. However, concerns are routinely expressed that providers often ignore this requirement altogether or comply only partially. This results in major shortcomings in the analyses that can be credibly conducted, partly because the data are incomplete, but primarily because it is unclear how incomplete the data are.

In the EPSDT arena, for example, the general perception exists that the data submitted to the health plans (and in turn by the health plans to the state) substantially understates the true level of access and adherence to the indicated preventive services schedule. Primary care providers that are paid on a capitated basis are particularly unlikely to completely convey preventive services data to the health plans. States often ultimately find themselves relying on chart audits, rather than on their encounter data sets, to estimate compliance with EPSDT standards.\textsuperscript{17} (Some aspects of EPSDT screens, such as the actual extent of individual screening

\textsuperscript{16} Jim Verdier phone interview with Mary Kennedy, Assistant Commissioner for Health Care, Minnesota Department of Human Services, December 13, 2000, and Managed Care Mental Health Service Utilization reports, January 18, 2001.

\textsuperscript{17} It cannot be safely assumed that encounter data statistics are understating actual usage. One state, somewhat shocked at how low its EPSDT compliance figures were as produced from their encounter data, conducted extensive chart audits and determined that actual EPSDT compliance rates were lower still than what was indicated via the encounter data.
exams and whether follow-up treatment occurs, can only be effectively monitored through medical chart audits.)

Beyond the issue of encounter data sets potentially not capturing any information about a given service lies the issue of the completeness of the information about those clinical encounters that are reported. Even in the fee-for-service setting, for example, some providers are not required to share substantial detail about the services rendered. In the outpatient hospital and clinic setting, for example, care is often paid for on a bundled “per-visit” basis. The health plan may receive information indicating that “Patient X received care on Date Y,” but with very little accompanying detail about what occurred. Diagnosis data and CPT-code detail on the services provided may be absent, for example. Again, medical chart reviews may be the only way to obtain these data. In some cases, these data shortcomings are grounded in the fact that many traditional “safety net” providers have served Medicaid patients on a large scale for years without providing the level of detail that is now encouraged or required under Medicaid managed care. Many of these providers are ill-equipped to make this change, as they lack the sophisticated billing expertise and information systems needed to capture this level of detail.

A more minor data completeness issue concerns the time lag between the date of service and the date the information is sent to the health plan. For some providers, this time lag can be several weeks and even months. Thus, it is not possible for health plans to capture encounter information that is both complete and highly current—even in the best of circumstances accommodations must be made for data submission time lags. There are then further lags between health plan receipt of data, its submission to the state, and state review and analysis.

Consistency

All claims data sets are limited by inherent inconsistencies in the way such information is captured and coded. If five physicians were to treat the same patient in the same way, for example, each one might assign a different diagnosis code to the visit. As noted earlier, providers can vary substantially in the level of detail they report about the services they render.

These data consistency issues are magnified in an encounter data set, particularly as information is sent to the state by multiple health plans. Health plans may have entirely different systems for identifying providers, for example, limiting analysts’ ability to conduct provider profiling that combines data across health plans. Also, health plans may have their own specific rules regarding how certain services should be coded (e.g., some plans will allow for the “global delivery” CPT codes to be used, others will not). Typically, plans will create a coding structure that fits their own administrative needs. Aggregating different health plans’ data together is a process that is potentially laden with inconsistencies and pitfalls.

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18 Current Procedural Terminology (CPT) codes are five-digit codes that are used to identify types of medical services.
Substantial effort often is devoted — by states and their contractors — to resolving these data consistency issues. However, a hefty investment in this area may not pay off if the completeness barriers discussed earlier are not addressed as well. Also, it is simply not possible to achieve data consistency in certain areas where providers have wide latitude, such as how diagnosis codes are assigned.

**Policy-Making Limitations**

A final limitation with encounter data is that the information produced may raise more questions than it will provide answers. Typically, information reported from an encounter database is quickly determined to be incomplete and inaccurate, due to some combination of the above-described limitations. However, even when complete and accurate information exists, encounter data often will not provide the definitive guidance that policy makers might be hoping to obtain.

As an example, if encounter data are being used to set capitated rates, states still must determine as a policy matter how much weight to give to past MCO utilization patterns, even if it is assumed that those patterns are accurately reflected in the encounter data. Suppose, for example, that the encounter data clearly indicate that Health Plan A is using inpatient services at a rate that is 23 percent higher than Health Plan B. Upon more detailed analysis, after adjusting for differences in the birth rate and for each plan’s demographic mix, Plan A’s inpatient use remains 18 percent above Plan B. To what extent, if any, should these figures be taken into consideration in negotiating or establishing future payment rates with each health plan? Should Plan A receive a higher capitation than Plan B to cover its higher inpatient costs? If so, the state runs the risk of rewarding Plan A for being less cost-effective and penalizing Plan B for doing a better job at curtailling unnecessary hospitalization. Should the rate be set below what is needed to cover Plan A’s costs but above what is needed to cover Plan B’s, to penalize Plan A’s apparent overuse of hospitalization and reward Plan B’s apparent greater cost-effectiveness? There will probably be widely varying opinions on whether and how to bring encounter data into the rate-setting process.

**Potential for Improvements**

As states and MCOs become more familiar with the requirements and uses of MSIS (discussed further below), some of these completeness and consistency problems may diminish. More broadly, the increasing standardization and electronic transmission of health care data promised by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) will also likely ease some of these problems, although the HIPAA administrative simplification standards will not be fully implemented for several years.
Making the Most of Encounter Data in an Imperfect World

Given the great potential of encounter data sets, the importance of having some means of tracking care effectively when Medicaid moves to a capitated structure, and the many pitfalls associated with encounter data, it is not surprising that opinions vary widely on the ways and degree to which encounter data should be relied upon. To date, the effort to create and use encounter data has been somewhat of a struggle, and each state’s encounter data will have its own mix of strengths and weaknesses. While it is not possible in this general overview to provide detailed guidance on how to maximize the utility and cost-effectiveness of any given state’s encounter data, our research and interviews with states and MCOs have highlighted several lessons and guidelines that may help states develop and use their encounter data effectively:

Obtaining usable output is a slow process. To build an effective encounter data set, states need to take a long-term perspective. Stellar program-monitoring data are unlikely to be produced during the first several years of encounter data collection, except in a few areas where the data limitations can be overcome or side-stepped.

Keep expectations realistic. When it comes to monitoring program performance through encounter data, it is quite easy for states to over-promise and under-deliver. Encounter data sets typically have significant limitations, and the policy-making and advocacy communities need to be given realistic expectations about the quality, quantity, and timing of the information that can be produced. A lowering of expectations is sometimes needed within the Medicaid agency, as well as among external constituents.

Data limitations need to be understood. To put an encounter data set to its best use, it is critical to understand what its limitations are. For which health plans and provider types is the information complete, consistent, and accurate? What are the major holes in the information? What information can be obtained only from medical record reviews? With this knowledge, states can focus on producing reports that are not overly compromised by the data limitations, avoid producing information that is of little or no value, and make sound decisions regarding what investments are appropriate in shoring up the encounter data sets for future use.

Consider focusing on selected areas. Encounter data are least likely to support complete, accurate, and meaningful analyses in areas such as preventive services and other physician services, especially when physicians are capitated. In these areas, the barriers discussed above come into play most prominently. However, the sports adage of “taking what the defense gives you” is applicable to encounter data, as there are many important areas (inpatient services, pharmacy services, and perhaps emergency room services) where complete, consistent data sets may be attainable. It will be beneficial for many states to focus their encounter data analysis and reporting efforts on those areas where complete and consistent data have been captured.
Identify specific program features where encounter data support is needed. An example of this in the rate-setting arena is risk-sharing. One state has established a medical loss ratio target range of 82 to 88 percent for those health plans serving an identified special needs population. If medical costs are above this range, the state shares in a portion of the costs; if below, the state is entitled to a refund. Given that many of the health plans are provider-sponsored and could game this arrangement by inflating the cost of their medical services, encounter data will be needed to determine whether the amounts the health plan is paying for services exceed the prevailing fee-for-service Medicaid payment schedule.

Track the costs incurred against the informational value. There are likely going to be areas where further investments in the encounter data sets are simply not cost-effective. While it is important for encounter data to be given the chance to succeed – with adequate funding over a long period of time – it is equally important for states to abandon pursuit of encounter-based analyses that cannot be credibly produced at a reasonable level of effort and cost. In some cases, states may need to consider backing away from even current levels of effort and investment.

Federal Encounter Data Requirements

For states that do not have the analytic and other resources needed to make credible use of encounter data, a reasonable approach might be to focus their efforts on complying with basic federal requirements for encounter data, with the expectation that state and industry focus on meeting these requirements, combined with greater HIPAA-induced standardization, will make fuller analytical use of encounter data more feasible in the future. States that are able to comply with these federal requirements likely will find that the encounter data they collect and report to the federal government will be more than adequate to meet most, if not all, of their own data needs. This section briefly outlines these federal requirements and how states might take advantage of them.

The BBA requires states to submit Medicaid claims data electronically to CMS in the format specified by CMS and consistent with MSIS, “including detailed individual enrollee encounter data and other information that [CMS] may find necessary.”

The BBA regulations that were reissued as a proposed rule on August 20, 2001, and that are currently scheduled to go into effect on August 16, 2002, provide that:

* The State must require, at a minimum, that each MCO and PIHP comply with the following:

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19Social Security Act, Section 4753(F).
• Collect data on enrollee and provider characteristics as specified by the State, and on services furnished to enrollees through an encounter data system or such other methods as may be specified by the State.

• Ensure that data received from providers is accurate and complete by:
  • Verifying the accuracy and timeliness of reported data.
  • Screening the data for completeness, logic, and consistency.
  • Collecting service information in standardized formats to the extent feasible and appropriate.

• Make all collected data available to the State and upon request to CMS, as required in this subpart.  

The CMS requirements for submission of encounter data through MSIS are quite detailed and specific, although CMS so far has given states considerable latitude in meeting these requirements.

MSIS includes eligibility files for each person covered by Medicaid with data on age, sex, race, and eligibility category. These eligibility files are linked to paid claims files that include information on the types of services provided, the providers of services, service dates, costs, types of reimbursement, and diagnoses. There are separate paid claims files representing inpatient, long-term care, prescription drugs, and non-institutional services.

These data must be submitted using standard forms and formats, so states can be compared to each other, and trends over time can be tracked. Because the data are in electronic form, they can be used for analysis more readily than the hard-copy data that many states had previously submitted to CMS. The MSIS data are not yet complete and fully accurate in all states, but all but a handful of states have been able to meet CMS standards for their 1999 MSIS data, and the 2000 data are reported to be even better. States are having more trouble with the encounter data portions of their MSIS submissions, but CMS contractors reviewing encounter data submissions for 21 MSIS states for the first quarter of federal fiscal year 1999 report that 12 of the states had health plans that submitted data that were sufficiently complete to warrant further analysis, and that a preliminary review of subsequent quarters in 1999 for these states shows some continued improvement. The contractors say that there is still variability among these inaugural encounter data submissions, but note that one of the goals in their contract with CMS is to give feedback to the states so that the overall quality of the encounter data in MSIS can be improved over time.

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21Jim Verdier conversation with Sue Dodds of Mathematica Policy Research, Inc. (MPR), September 25, 2001. MPR has a major contract with CMS to assist it and states with state MSIS data submissions.
22Jim Verdier telephone conversation with Kathe Fox and Kate Sredl of The MEDSTAT Group, September 21, 2001, and follow-up e-mail from Kathe Fox on October 8, 2001.
In the future, if the MSIS encounter data are reasonably complete and accurate for an individual state, they will provide more than enough data to meet managed care rate setting and other needs. If reporting and use of MSIS data becomes sufficiently widespread, the costs and challenges involved in analyzing the data likely will decline, since standardization and electronic formatting will permit actuaries and other data analysts to develop standard software programs that facilitate analysis in multiple states. States themselves likely will be able to use such standard programs for their own analyses. Comparisons with other states also will be easier, adding an important new dimension to analyses of cost and utilization.

Summary of Five States’ Experience with Encounter Data

Five of the states we reviewed had especially extensive and instructive experiences with encounter data collection and reporting. This section provides a brief overview of those experiences as reported by state agency staff, and in some cases by MCO representatives.

Arizona

Arizona has a long history of working collaboratively with its MCOs on encounter data and related issues. Most of the MCOs are home-grown and serve the AHCCCS (Medicaid) population almost exclusively. They have developed specialized systems to deal with the state’s reporting requirements for encounter and other data. When Arizona began collecting encounter data in the early 1990s, it collected as much data as it could. (“We went whole hog,” a top Arizona official told us.) In part this was because of HCFA requirements for Arizona’s Section 1115 waiver. Arizona officials say they would now advise other states to be more selective, and to work with plans when developing and refining reporting requirements:

“If you cannot articulate to the plans why you need the data and what you propose to do with it, perhaps you don’t really need it. The plans can often help determine a better way to collect the data, and help you figure out how best to use it.”

The Arizona MCO representatives with whom we spoke confirmed the state’s approach to working with plans. “AHCCCS is very receptive to changes in reporting requirements,” one said, echoing comments from others. The state relies heavily on the encounter data to set MCO rates, further increasing the incentive for MCOs to submit complete data.
California

California has undertaken a thorough inventory of its encounter data that provides a useful framework for other states to consider, to help them avoid producing encounter data findings that may have low credibility or usefulness. The data inventory study evaluated California’s encounter data for completeness, coding consistency and accuracy, and timeliness.\

The study found that the 1999 encounter data were transmitted to the state in a timely fashion, and that most fields (e.g., procedure codes and diagnosis codes) seemed to be coded consistently and accurately. However, significant limitations were identified regarding the data’s completeness. Overall, the encounter data files were estimated to be less than 40 percent complete for services other than pharmacy (which were estimated to be 76 percent complete). It appeared that there was wide variation in how complete different health plans’ data submissions were, as well as in the completeness of a given health plan’s submissions across time. In addition, provider identification information was not coded consistently between health plans, limiting the ability to profile any given provider’s services across health plans and/or to compare a provider’s managed care activity with fee-for-service Medicaid.

These limitations highlight the difficulties in developing an encounter database that can fulfill the objectives of policymakers and researchers. California may be a particularly challenging state due to the widespread use of capitation as a payment method between health plans and their providers, making it more difficult for the health plan to obtain complete information in the first place. The process California’s state Medicaid agency went through to assess its encounter data is of great value. Due to the data inventory efforts that were made, Medi-Cal administrators and researchers now can design encounter data-based studies with a sound understanding of what can and cannot credibly be quantified at the current time. Completeness and consistency issues have been pinpointed and can be addressed to strengthen the encounter data system going forward. Ideally, encounter data inventories would be redone (perhaps annually) to assess the level of improvement that is occurring, until such time as a state’s data sets can be trusted to be accurate, consistent, and complete.

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Jim Klein, California Department of Health Services, “Report on the Use of Medi-Cal Managed Care Encounter Data for Research Purposes,” 2001 (forthcoming). This report was prepared for the California Endowment Foundation and the California Wellness Foundation.
Maryland

Maryland determined early in the process of developing its mandatory Medicaid managed care program (implemented in 1997) that it would use encounter data to adjust MCO rates for risk. The state hired a consultant to operate and manage its encounter data system and conducted detailed assessments of the capabilities of MCOs’ information systems before contracting with them. The state held several encounter data workshops before implementation of its new HealthChoice managed care program, and distributed an encounter data guide that included detailed specifications for data elements, file layouts, submission requirements, potential problems, and solutions to these problems. It also established an encounter data technical assistance center to assist participating MCOs. After several years of effort, the state concluded that the encounter data submitted by the MCOs for 1999 were complete enough to use for risk adjustment, and has used that data to risk adjust the 2001 MCO payment rates. Maryland also used its encounter data to prepare reports for the legislature in late 2000 on access to dental services and timeliness of children’s initial health screenings in HealthChoice, and is making extensive use of encounter data in a comprehensive evaluation of the program scheduled to be completed in late 2001.

Minnesota

Minnesota has been collecting encounter data since 1995, but the data from the earlier years are not as complete as those for recent years. The data quality substantially improved after the state announced that the encounter data would be used to adjust MCO rates for risk starting in 2000. The state has gradually built up its own internal data analysis staff, which develops encounter data specifications, verifies MCO data submissions, sets MCO rates, and prepares analyses of quality and utilization. The relationship between the state and Medicaid MCOs on encounter data issues does not appear to be quite as collaborative as in Arizona and Wisconsin. One of the MCO representatives with whom we spoke said the initial encounter data requirements were very difficult to meet and required substantial administrative investments. The specifications were unclear, and MCOs were required to match the state system, which used some local procedure codes and ways of identifying providers that some MCOs found it difficult to use. The MCO representatives we spoke with agreed that most of the technical problems have been resolved, but suggested that the state still was requiring too much detail in the encounter data. They also expressed some frustration that the state was not reporting back to them encounter data they submitted in ways they could use, and did not appear to use encounter data extensively for other purposes. They acknowledged, however, that the state is planning a large number of reports that would

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be based on the encounter data. The state has already completed encounter-based reports on mental health and dental care.

**Wisconsin**

Wisconsin has developed its encounter data requirements slowly and gradually since 1997, working closely with its MCOs. The state’s initial quality and utilization comparisons among MCOs and fee-for-service Medicaid were based largely on state surveys of MCOs, and covered only a limited number of service areas, such as EPSDT visits for children. The state’s initial encounter data requirements were very limited; only 13 data elements were required. Starting in 2000, the state began requiring MCOs to report more comprehensive encounter data, including more than 80 data elements. The new requirements were developed over 18 months by the state and an MCO Technical Advisory Workgroup. The group successfully resolved a wide range of technical issues, including encounter definitions, data editing, and the submission process. The state so far has used the encounter data primarily for quality and utilization reporting, using more aggregated MCO data on services and charges for MCO rate setting, with some cross-checks against the encounter data. The state plans to begin using encounter-based performance measures as part of the rate-setting process in the next year or two, and has developed detailed data specifications to support that effort.

**Common Themes**

Several common themes emerge from these state experiences:

- Getting usable encounter data requires substantial time and analytic resources.
- Working closely with MCOs on data requirements and implementation is crucial.
- Unless encounter data are used for MCO rate setting or other comparably important purposes, they will remain incomplete and have little utility.
- Selectivity is better than comprehensiveness; states should collect only what they are reasonably sure they need and will use.

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25 The information on Wisconsin in this section comes primarily from two presentations by Angela Dombrowicki, Director of the Bureau of Managed Health Care Programs in the Wisconsin Department of Health and Family Services. The first (“How Wisconsin Medicaid Managed Care Uses Data for Accountability”) was made at the CHCS State Medicaid/CHIP Purchasing Institute in Princeton, NJ on March 12, 2000. The second (“Realizing the Promise of Value-based Purchasing and Using Data Effectively in Implementing and Evaluating Value-based Purchasing Initiatives”) was made at the AHRQ User Liaison Program in San Antonio, TX on December 12, 2000. Wisconsin Department of Health and Family Services, Bureau of Managed Health Care Programs, “Medicaid Encounter Data Driven Improvement Core Measure Set (MEDDIC-MS).” Draft, August 2001.
Chapter 3: Using HEDIS and CAHPS to Influence Perceptions and Behavior

HEDIS and CAHPS are among the most fully developed tools available to states to measure MCO performance. They permit standardized comparisons of MCOs, and can show trends over time. Even though research and state experience suggest that consumers generally make limited use of these measures in choosing MCOs, they have become a valuable purchasing tool for Medicaid agencies, and a significant stimulus for MCOs to improve their performance.

Who Uses HEDIS and CAHPS?

States

State Medicaid directors reported that they found HEDIS measures and CAHPS and other beneficiary surveys to be quite useful for both internal management and external reporting purposes. Thirty-three out of 43 responding states reported that they used HEDIS for internal management and working with MCOs, ranking its usefulness for these purposes at 4.0 on a scale of one = not useful and five = extremely useful. Thirty states reported that they used HEDIS for external reporting, giving it an average usefulness rating of 3.9 for this purpose. Thirty-six states reported using CAHPS and other beneficiary surveys for internal management and working with MCOs, giving the surveys an average usefulness ranking for these purposes of 4.0. Thirty-four states reported using surveys for external reporting, giving them an average ranking of 4.4 for this purpose.

Consumers

Medicaid consumers did not appear to find HEDIS and CAHPS useful in making decisions about enrollment in MCOs. Current research on consumer use of managed care quality measures generally confirms the limited impact of these measures on consumer choice. (What Kinds of Data Do Consumers Want and Use? summarizes this research.) Nonetheless, both state officials and MCO representatives told us that MCOs take these measures seriously and try to improve their HEDIS and CAHPS statistics, especially when the data are publicly reported and the health plans are ranked.

Managed Care Organizations

If consumers do not seem to pay much attention to these measures, why do MCOs? The answer we received from most of our interviewees is that MCOs are competitive, and HEDIS and CAHPS are reasonably objective and accepted measures of how they are doing compared to other MCOs. State Medicaid agencies as purchasers generally take these measures seriously, and most MCOs doing Medicaid business view state purchasers
as their principal customers. MCOs seeking new Medicaid business in other states or localities can cite their performance on these measures as part of their track record.

Some MCOs noted that HEDIS and CAHPS measures by themselves often were not precise enough to enable them to determine how best to deal with any performance shortcomings they identified. If eye exams for people with diabetes are below standard in HEDIS, for example, or if a plan gets a low CAHPS rating for how its doctors communicate with their patients, identifying the particular providers whose performance is below standard is not possible using HEDIS or CAHPS alone. Once HEDIS or CAHPS identifies a general problem area, however, plans can use their own data sources to get a better understanding of the problem and develop appropriate responses.

Using HEDIS and CAHPS Strategically

If HEDIS and CAHPS measures do not directly affect consumer choices, but nonetheless appear to affect MCO behavior, how can states make the most effective strategic use of these tools?

Influencing the Perceptions of Key Stakeholders

HEDIS and CAHPS results can affect the perceptions and behavior of several audiences whom state Medicaid agencies and MCOs are concerned about, including governors, legislators, taxpayers, the media, providers, and consumer advocates. Devoting resources to collecting and reporting these measures sends the signal that both the Medicaid agency and MCOs are concerned about quality and access as well as cost containment. HEDIS and CAHPS are especially valuable tools for influencing these audiences because the data they report are standardized and measure dimensions of managed care that are related to access and quality. HEDIS and CAHPS can be used to compare Medicaid MCOs to each other, to commercial MCOs, to MCOs in other states, to national benchmarks, and in some cases to fee-for-service Medicaid. They can be used to show trends over time in fairly reliable ways. Because they were developed and are supported by nationally respected entities, they have a credibility that other measures may not.

For HEDIS and CAHPS measures to have an impact on perceptions and behavior, they must be reasonably timely and published in easily understood formats. The developers of both HEDIS and CAHPS have devoted considerable resources to developing such formats.28

States should make special efforts to ensure that the media have an opportunity to feature the results, and that key legislators and advocates are briefed on them. MCOs should be consulted extensively in advance of any public release of the data so they are able to respond appropriately when the results are released.

Handling Bad News

Some of the state officials we interviewed said they were reluctant to release HEDIS measures and CAHPS and other beneficiary surveys if the results showed weaknesses or shortcomings in their Medicaid managed care programs. Others made the point that it was better for the state and MCOs to highlight those problems and put them in context than to wait for others to raise them in the form of anecdotes or media stories accusing the state of covering up bad news. Further, a low starting point establishes a baseline for improvement, and highlighting problems is the first step toward fixing them. Finally, publishing these measures of how a publicly funded program is doing demonstrates that state officials are taking their stewardship and accountability responsibilities seriously.

Targeting and Economizing

If states are trying to influence audiences other than Medicaid consumers, they can focus their publication and distribution efforts accordingly. HEDIS and CAHPS reports on plan performance need not be mailed to every enrollee, for example, but simply could be made available at enrollment offices, on the web, and on request. Among the states we interviewed, both Arizona and Minnesota followed this limited-distribution approach.

If the main strategic purpose of HEDIS and CAHPS is to influence MCO behavior and the perceptions of key stakeholders, it may not be necessary to compile and report the results every year, especially if MCO performance and participation in the Medicaid market becomes fairly stabilized. The news value of these reports may be diminished if they come out every year and show only modest changes. Minnesota has adopted the approach of rotating the collection of HEDIS measures to help reduce MCOs’ reporting burden and to focus on high-priority areas for measure development.29

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28 For HEDIS, see National Committee for Quality Assurance, “HEDIS 2001 Volume 1: Narrative – What’s In It and Why It Matters.” (Ordering information at www.ncqa.org.) For CAHPS, see AHCPR, “CAHPS 2.0 Survey and Reporting Kit: Primer,” October 1999, AHCPR Pub. No. 99-0039A. (Ordering information available from Westat by e-mail at CAHPS1@westat.com.)

Chapter 4: Other Data Sources and Uses

States have a variety of other sources of Medicaid managed care data that are less resource-intensive than encounter data, HEDIS, and CAHPS. This chapter focuses on how states can make optimum use of data they can collect relatively easily (complaint and grievance reports, MCO enrollment and disenrollment trends, provider participation reports, and MCO financial reports), and data collection and analysis for which states can get a 75 percent federal match (most things that External Quality Review Organizations do).

Complaint and Grievance Reports

Recording and reporting the nature and the volume of the complaints and grievances levied against health plans imposes relatively little extra burden on the health plans and/or state staff or enrollment broker contractors who sometimes capture and compile this information. At the same time, these reports often are useful in identifying areas for more targeted oversight and potential corrective action.

State Medicaid directors gave relatively high usefulness rankings to complaint and grievance reports, especially for internal management purposes (a ranking of 3.9, with 40 out of 43 states using the reports for internal purposes). States found the reports much less useful for external reporting, with a usefulness ranking of 3.4 percent, and only 31 of 43 states using the reports for external reporting purposes.

One reason why states may find complaint and grievance reports less useful for external than for internal purposes is that there often are no standard definitions of a “complaint” or “grievance,” so it is difficult to compare plans to each other or to analyze trends over time. Even if terms are defined and reporting requirements are standardized, however, there are inherent ambiguities with these measures: Complaints and grievances may be low because there are few problems, because the complaint and grievance mechanisms are difficult to use or insufficiently publicized, because MCO staff are hesitant to record verbal feedback as complaints, because people do not think complaining will do any good, or all of the above. States may find that trying to resolve all these ambiguities and provide appropriate interpretations of the data for external reporting purposes is more trouble than it is worth.

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For a useful discussion of these and other issues, see Rawlings-Sekunda J. “Addressing Complaints and Grievances in Medicaid Managed Care.” Portland, Maine: National Academy for State Health Policy. January 1999. See especially pp. 5-7 for a discussion of definitional issues.
However, states with whom we spoke found these reports to be extremely useful as an internal management tool. The reports highlight how well plans are doing on important dimensions of consumer satisfaction (responsiveness to consumer concerns, fixing problems before they reach the complaint stage), and can provide the state and MCOs with early warnings of potential systemic problems that warrant investigation. While complaints and grievances may not be adequate stand-alone measures of quality, they can be timely guides to useful interventions by MCO managers and state monitors.

For external reporting, states may want to provide limited reports of trends and comparisons among plans to demonstrate to legislators, advocates, and the media that the state is keeping track of and using these measures.

**MCO Enrollment and Disenrollment Trends**

We did not ask state Medicaid directors in our survey to rank the usefulness of data on MCO enrollment and disenrollment trends, so we do not know from that source how useful states find these data. MCOs certainly welcome Medicaid enrollment data by MCO and by zip code, since it indicates each MCO’s level of marketing success. Our interviews and experience also suggest that enrollment and disenrollment data can be useful for state internal management and MCO monitoring purposes, provided the reasons for disenrollment can be identified reliably. Doing so requires that the state determine, often through its contract with an enrollment broker, why MCO disenrollees are leaving, and record their answers on standard forms, preferably electronically.

**Interpreting Enrollment and Disenrollment Trends**

MCO enrollment and disenrollment data must be interpreted in light of the choices beneficiaries have. If managed care enrollment is voluntary, beneficiaries are choosing between managed care and fee-for-service. If enrollment in some form of managed care is mandatory, they may be choosing between PCCM and risk-based managed care, or between or among MCOs. Beneficiary movement between one MCO and another raises different policy and operational issues than movement between MCOs and some other form of care.

Medicaid beneficiaries move on and off the eligibility rolls quite frequently (especially TANF and related beneficiaries), so high turnover rates are common in Medicaid MCOs for reasons that have little to do with MCO performance. Once these involuntary disenrollments are removed from the data, rates of disenrollment are usually very low, since switching from one MCO to another can be time-consuming for enrollees. In addition, the switching that does occur often is related to the beneficiary realizing that certain desired providers were not in the former health plan’s network.
If disenrollment rates in a particular MCO are unusually high because enrollees’ doctors have moved out of the plan, that can be an early warning that the plan may be having difficulties in maintaining its provider network. Similarly, if a significant number of those who are disenrolling say they are doing so because of dissatisfaction with MCO customer service or quality of care, that is a sign of potential problems that warrant state and MCO follow-up.

If new enrollment in an MCO increases sharply in a given geographic area, the state may want to ensure that the MCO has sufficient administrative and network capacity to handle the increased enrollment, and the state also may want to assure that the MCO’s marketing practices are appropriate. If new enrollment declines significantly, it would be important for the state to find out why.

A variety of enrollment and disenrollment patterns can signal the need for further state and MCO investigation. These reports are usually not good stand-alone measures of quality or performance. Nonetheless, because the data are relatively timely and easy to get, and making the data publicly available signals that the state is monitoring potentially important indicators, using the data for external reporting is generally useful.

Provider Participation Reports

Provider participation reports can be used to demonstrate the value of Medicaid managed care by documenting the level of physician and dentist participation in Medicaid, with and without managed care.

Medicaid managed care programs often substantially broaden the sphere of physicians the Medicaid population can access. Medicaid payments in the fee-for-service sector traditionally have been such that many private practitioners do not accept Medicaid patients, or do so only with substantial restrictions (closing their practices to new Medicaid patients, for example, or accepting only existing patients who become covered by Medicaid).

States that are not able to justify the expense of raising their fee schedules to the point necessary to attract a substantial proportion of the state’s practitioners to the program may find that they can (or have) achieved this same result at no cost through implementing managed care. West Virginia, for example, was able to demonstrate a substantial increase in overall Medicaid physician participation by comparing its health plans’ provider lists with those physicians serving fee-for-service Medicaid patients.

The number of physicians participating in fee-for-service Medicaid, by specialty and county, can be contrasted against the number of additional physicians participating in managed Medicaid. This is accomplished by consolidating network data across the state’s Medicaid health plans. At an additional investment, these figures can be compared with the number of active physicians practicing in each county and specialty, to capture a sense of the level of physician access Medicaid offers. A similar analysis may be of value.
for dental services, to the extent that dental services are included in the health plans’ benefits package.

In producing these reports (for fee-for-service Medicaid and for each MCO), it may be worth the effort to discern whether each practitioner is available to new enrollees. For example, many physicians appear on lists as “accepting Medicaid” but in fact are not available to new patients (and may even be limiting the Medicaid patients they accept to just a handful of persons). Otherwise, it might appear that, say, 88 percent of a county’s physicians are accepting Medicaid patients – when under closer scrutiny a much smaller number of physicians can be accessed by the next person who becomes a Medicaid beneficiary in a given locality.

**External Quality Review Organization Reports**

The Balanced Budget Act of 1997 gives states substantial additional options for quality-related data collection, analysis, and reporting by expanding both the types of organizations that can qualify as EQROs and the kind of quality-related work that the federal government will fund at a 75 percent matching rate (as opposed to the 50 percent match rate that applies to most other administrative activities).³¹

States have been required since 1986 to contract with independent external review organizations to conduct annual assessments of the quality of services provided to Medicaid beneficiaries in HMOs. In recent years, states have used EQROs to perform a variety of managed care quality-related functions, including reviews of medical records, validations of encounter data, focused clinical studies, analyses of utilization and access patterns, enrollee and provider surveys and focus groups, performance measurement validations and audits, contract compliance reviews, pre-enrollment MCO readiness reviews, and CMS-required managed care program evaluations.³²

The Balanced Budget Refinement Act of 1999 further expands the type of EQRO work for which states may obtain a 75 percent federal match to include all “medical or utilization review functions,” in Medicaid fee-for-service as well as in risk-based managed care.³³ While regulations implementing this provision have not yet been issued, it may be easier now to obtain 75 percent matching payments for analyses that compare Medicaid managed care to Medicaid fee-or-service, or that identify gaps or overlaps in Medicaid fee-for-service that could be dealt with by an expansion of managed care.

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³¹For details, see the HCFA proposed rule issued on December 1, 1999. *Federal Register*, Vol. 64, No. 230, pp. 67223-67235.
The advantages to states of using an EQRO-like organization for data analysis and reporting work – in addition to the 75 percent match – are that these organizations are independent of the state, thus giving their reports additional credibility, and that they may be better able than many states to hire and retain sophisticated data analysis staff.

However, some states have expressed dissatisfaction with the performance of the EQROs with whom they contract, especially in terms of their ability to conduct sophisticated data analysis, and to report the results of their analyses in ways that focus clearly on the issues that are important for management, policy, and public understanding. Many EQROs are strong in medical record reviews and narrowly focused clinical studies, but are less able to handle analyses of large volumes of claims or encounter data, or to conduct sophisticated statistical analyses.34

Recently, EQROs have become more involved in partnering with other contractors who have the specialized expertise needed for a specific engagement, and a wider range of consulting organizations is obtaining the credentials needed to bid for EQRO work. These developments bode well for states seeking to use the EQRO vehicle more broadly in the years ahead, increasing both their options and the likelihood of obtaining quality work.

**MCO Financial Reports**

Some of our state interviewees said MCO financial reports were the single most useful source of data they received. They represented states in which MCOs reported their Medicaid financial data separately from their other lines of business, which obviously makes the data much more useful to the Medicaid agency. Not all Medicaid programs require this kind of separate breakout of Medicaid financial data.

In our survey of state Medicaid directors, MCO financial reports received a usefulness ranking of 3.6 on a scale of one to five for internal management and working with MCOs (with 34 of 43 states using them for these purposes), but only 3.3 for external reporting purposes, with 28 states using them for this purpose.

Financial reports should be readily available to Medicaid agencies. They are highly standardized, frequently audited by independent entities, and usually submitted in some form to state departments of insurance or other regulatory agencies. MCOs must keep financial records of this sort for their own internal business purposes, so it represents little additional administrative burden for them to submit the same information to the Medicaid agency.

For the Medicaid agency to make the best use of these reports, however, there must be people on the agency staff with financial and accounting knowledge to interpret them. (The state interviewees who ranked these reports highly have such backgrounds.)

**Monitoring MCO Solvency**

For many state Medicaid agencies, the most pressing issue regarding their Medicaid managed care program has become whether a sufficient number of health plans can be retained to keep the program in place as structured. At least two health plan options are required for mandatory enrollment to be used, and several states have three or fewer plans participating in many geographic areas.

Fundamental to understanding how each health plan is faring is a financial report that conveys the plan’s financial performance – both overall and specific to the plan’s Medicaid line of business. Many states require this information quarterly, in the same format for the Medicaid line of business as is produced for the plan as a whole for the state’s department of insurance. HMOs use a nationally uniform financial report format, so this information is generally something the plan’s staff and systems are accustomed to producing. These reports tend to be reviewed avidly by Medicaid agency staff in assessing the viability of their health plan contractors.

While these reports generally do not provide the information needed for risk adjustment, they can be of substantial value to the overall rate-setting process. For many states and health plans, the key rate-setting issues are not risk-adjustment issues but whether, on the whole, there is sufficient money flowing to the HMOs for them to achieve and maintain a financially viable Medicaid line of business. If these reports are consistently showing highly favorable Medicaid medical loss ratios from the health plans’ perspective (below 80 percent, for example), the state has leverage in minimizing future rate increases. Conversely, if the plans that remain are all experiencing losses and high medical loss ratios (95 percent or higher), the program as structured is probably not sustainable without considerable payment rate increases.

Financial reports can be especially useful in identifying early indications of MCO financial difficulty, which could lead the MCO to drop out of Medicaid or scale back on important elements of its contractual responsibilities to the state. To provide this kind of early warning, states should receive these reports at least quarterly.

Key indicators in MCO financial reports that states should monitor include:

- Capitation payments received average monthly and per member per month (PMPM).
- Profit or loss as a percent of revenue.
- Medical costs as a percent of revenue and PMPM.
- Administrative costs as a percent of revenue and PMPM.
- Net worth or equity.
• Debt/equity ratio.
• Incurred but not reported claims liability.
• Percentage of claims adjudicated within 30, 45, and 90 days.

Medical Cost Experience by Payment Rate Cohort

The broader financial reporting described above can be refined to illuminate how well the state’s risk adjustment model is functioning. One report that might be useful for ongoing payment rate adjustment purposes would be a breakdown of a health plan’s capitation revenues and medical costs by state payment cohort. A hypothetical sample of this type of report is shown in Exhibit A, for a program that has seven demographic rate categories in each geographic rating region.

Exhibit A. Financial Performance Summary by State Payment Rate Cohort

Health Plan: ____________________
Time Period: ____________________

<table>
<thead>
<tr>
<th>Geographic Region and Eligibility Category</th>
<th>Medicaid Member Months</th>
<th>Premium Revenue, Total $$</th>
<th>Medical Costs, Total $$</th>
<th>Premium Revenue, PMPM</th>
<th>Medical Costs, PMPM</th>
<th>Medical Loss Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Region 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TANF &lt;1</td>
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<tr>
<td>TANF 15-44F</td>
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<td></td>
<td></td>
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<tr>
<td>TANF 15+ M</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>TANF 45+F</td>
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<td></td>
</tr>
<tr>
<td>SSI &lt;19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSI 19+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat Same Info For All Rate Regions</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

This report, in total, can be required to be tied to the health plan’s overall Medicaid line of business financial statements. A more detailed version of this report could separate the medical costs into subcategories (e.g., inpatient hospital, outpatient hospital, pharmacy, all other). It is probably not necessary to require health plans to produce this detailed report more than once or twice a year. States also may want to be flexible in terms of the precise reporting format they require. While MCOs often track their costs in this way for
their own internal management purposes, it may represent an undue burden to require them to convert the data from their format to the state’s.

The report can be used to compare the appropriateness of the state’s premium levels overall and in each rate cohort, as well as compare the health plans’ medical cost levels with one another. If most or all health plans are faring particularly well or poorly in a certain rate cohort, that information would be highly useful in guiding rate adjustments in the upcoming year.

**Catastrophic Case Reports**

In the vast majority of health insurance programs, a small number of patients are responsible for a large proportion of overall health care expenditures. It is a near-impossible task to obtain definitive information on the degree to which the various health plans serving Medicaid may have an enrollment selection bias (vis-à-vis one another, and/or vis-à-vis persons enrolled in fee-for-service Medicaid). Nonetheless, obtaining information on the claims cost distribution of the enrollees can provide valuable insight into this issue. Exhibit B provides a sample of this report, in a format that ties together with the information plans would provide under Exhibit A.

Again, states should be sensitive to the burden that producing such reports may place on MCOs, and be willing to work with them on issues of format, frequency, and level of detail.

**Exhibit B. Catastrophic Claims Report**

<table>
<thead>
<tr>
<th>Geographic Region and Eligibility Category</th>
<th>Medicaid Member Months</th>
<th>Medical Costs, Total $</th>
<th># Individuals with more than $15,000 in Medical Costs</th>
<th># Individuals with more than $50,000 in Medical Costs</th>
<th>Total Costs of Persons in Previous Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATE REGION 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TANF &lt;1</td>
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<td>TANF 15-44F</td>
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</tr>
<tr>
<td>TANF 45+F</td>
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</tr>
<tr>
<td>SSI &lt;19</td>
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<tr>
<td>SSI 19+</td>
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</tr>
<tr>
<td>Repeat Same Info For All Rate Regions</td>
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</tr>
</tbody>
</table>
Chapter 5: What Kinds of Data Do Consumers Want and Use?

Consumers sometimes say that they would like to have quality-of-care information to help them choose among health plans, but in reality, consumers most often rely on simpler measures like physician availability, geographic convenience, and recommendations of friends when choosing their plan.

Not all consumers have access to quality-of-care indicators, but even when they do, they do not, according to numerous researchers, rely on such indicators when they actually choose a health plan. While researchers and experts prefer clinical outcomes as the means to measure health plan quality, consumers tend to choose a health plan on the basis of what researchers call “process variables.” For instance, whether their current provider is part of a plan is typically of greatest importance to Medicaid consumers (Kaplan et al. 2000, Restuccia 2000, Schur et al. 1998). In the mind of the consumer, the participation of his/her physician in a plan is often a proxy for quality of care (Stevens and Mittler 2000, Gibbs et al. 1996). Other important factors that are important to consumers are access to services, convenience in terms of location and appointment times, waiting times, respectful treatment by providers, and the scope of benefits offered by the plan (Restuccia 2000, Kaplan et al. 2000, Wicks and Meyer 1999, Gibbs et al. 1996).

Even when consumers specifically report that quality-of-care information is important when choosing a health plan, objective, clinical quality-of-care measures are not likely to play a part in their decisions. A recent national survey by the Agency for Health Care Quality (AHRQ) and the Kaiser Family Foundation (2000) found that although respondents are likely to say that quality-of-care is their biggest concern when choosing a health plan, they are still more likely to choose doctors and hospitals with which they are familiar over those that may be more highly rated. Furthermore, they are more likely to rely on the recommendations of friends, family, and/or health professionals they know rather than on standardized quality indicators.

Similarly, focus group research has found that among all discussion participants, regardless of their type of insurance (Medicaid, Medicare or private), input from trusted friends and relatives is often preferred over published information. In the same focus groups, Medicaid enrollees did not generally trust information from anyone who had not had used publicly funded services (Gibbs et al. 1996). Restuccia (2000) comments that even if a health plan has a high rating in terms of clinical quality outcomes, Medicaid beneficiaries may not trust these measures or believe that they apply uniformly to all patients served by that plan. Medicaid beneficiaries are often wary of what they perceive to be “second-class care” or substandard treatment from a health plan.

Consumers in a range of insurance coverage groups have difficulty understanding managed care and the role of quality-of-care measures in managed care. Medicaid consumers often have more trouble than those with other kinds of coverage understanding some aspects of quality-of-care indicators.
In recent years, states and other health care purchasers have made a great effort to provide consumers with information about the quality of health care plans, typically in the form of report cards containing a range of quality-of-care indicators. The purpose of this effort was to cultivate a proactive, informed population of consumers, which is expected to foster competition among health plans, giving them an incentive to provide high-quality care at a lower cost. Despite the “worthiness” of this effort, there is growing evidence that consumers have difficulty understanding what quality-of-care indicators mean and why quality-of-care measures might be important to their choice of a health plan.

**Consumer understanding of managed care is limited.** At the most basic level, consumer knowledge about managed care is limited (Kaplan et al. 2000, Restuccia 2000, Reschovsky and Hargraves 2000, Gibbs et al. 1996, Hibbard et al. 1996, Molnar et al. 1996). Consumers who are more familiar with the fee-for-service system of care often fail to understand how managed care plans can have an impact on the quality of care delivered or the behavior of individual physicians. In one study, consumers failed to understand that plans could have an important influence on whether or not consumers receive preventive care. Focus group participants in this study could not imagine that plans might have the technology to monitor utilization in order to encourage the use of preventive care. Similarly, consumers did not comprehend how plans might facilitate satisfactory care, such as allowing adequate time for appointments and rewarding physicians who provide high-quality care. Instead, consumers viewed physicians as solely responsible for quality (Gibbs et al. 1996). Another study found that consumers failed to grasp that “under treatment” is a concern in managed care; instead, they believed that, if anything, there is a tendency toward over treatment (Jewett and Hibbard 1996). Consumers also failed to see any connection between a plan and quality of care, and some felt that their care was none of the plan’s business (Jewett and Hibbard 1996).

**Consumers have difficulty understanding quality-of-care measures.** Gibbs and colleagues (1996) used focus groups to better understand beneficiaries’ reactions to consumer ratings and quality-of-care measures. All groups participating in the study (Medicare and Medicaid beneficiaries and privately insured individuals) expressed a desire for information that would allow them to compare and evaluate plans. Most focus group participants described the process of choosing a health plan as difficult and frustrating. Medicaid enrollees in particular had trouble understanding the information because it was expressed in quantitative terms; aggregated data in particular presented a problem. Several Medicaid enrollees across different focus groups spontaneously said they would rather hear the opinions of individual plan members rather than look at the aggregated data. They felt more confident of their ability to assess the truthfulness of individuals than in their ability to evaluate numerical ratings.

Focus groups and surveys conducted by Jewett and Hibbard (1996) reveal that consumers are often uncertain about what quality indicators are intended to tell them. As a result, consumers tend to view the information as unimportant, often ignoring it and relying on
what they do understand to help them choose a plan. Among all insurance groups studied – the uninsured, the privately insured, and Medicaid beneficiaries – consumers believe that patient ratings of quality and satisfaction provide the best information about all aspects of care except preventive care. Consumers also believe that patient ratings of overall quality give more useful information about the monitoring and follow-up for a condition than do HEDIS indicators specifically designed for this purpose.

In addition to a limited understanding of managed care, consumers in all coverage groups have a limited understanding of health conditions, issues, and treatment. This lack of understanding is another factor that makes it difficult to understand quality-of-care indicators. For instance, Jewett and Hibbard (1996) conducted focus groups in which some consumers did not know what a mammogram was or what it is intended to measure. Others did not know what asthma is. Still others were misinformed about the significance of low birth-weight or about the purpose of cholesterol screening and Pap smears. Others did not know whether high hospitalization rates for asthma or high rates of C-sections were good or bad.

Medicaid beneficiaries typically had more trouble than other consumers understanding quality-of-care measures. Like the participants in focus groups conducted by Gibbs and colleagues, those in groups led by Jewett and Hibbard had trouble interpreting quantitative information such as rates, aggregate data, comparison data, and population-based statistics. Compared with privately insured individuals, Medicaid and uninsured consumers were three times more likely to have trouble understanding rates and two times more likely to have trouble with aggregate or comparison data.

Of all measures, consumers were most likely to understand and respond to ratings of quality and satisfaction from other consumers, though again, Medicaid enrollees were less likely than their uninsured or privately insured counterparts to understand these ratings. Least understood by all groups were “undesirable event” indicators (e.g., pediatric asthma hospitalization, rates of low birth-weight babies, C-section birth rates, hospital-acquired infection rates). “Desirable event” indicators (rates of mammograms, immunizations, cholesterol screening, Pap smears) were also not well understood. And again, Medicaid enrollees were less likely than privately insured individuals to understand desirable-event rates.

Jewett and Hibbard defined this limited understanding about health care among all focus groups participants in one of two ways: as misinformation and as an acknowledged lack of information. Misinformation refers to an incorrect understanding about the meaning of a health care condition, issue, or topic as evidenced by statements made by participants that were clearly incorrect. Lack of information refers to an acknowledged inability on the part of the consumer to understand quality-of-care information.

Across all insurance groups, half of the limited understanding was due to misinformation and the other half to lack of information. Interestingly, while the limited understanding
of the privately insured group was due to lack of information 63 percent of the time and misinformation 27 percent of the time, the reverse was true among Medicaid beneficiaries and the uninsured. The privately insured sought information or admitted that there was a gap in their knowledge twice as often as those in the Medicaid group.

That privately insured individuals are more apt to seek information and discuss their lack of understanding about quality-of-care measures led Jewett and Hibbard to infer that the privately insured may have an advantage over Medicaid beneficiaries in becoming informed consumers. If the inference is valid, misinformation and/or an unwillingness to confront a lack of knowledge may prove to be significant barriers to educational efforts targeted at Medicaid beneficiaries.

Can anything be done to improve consumer comprehension of quality-of-care indicators?

Presenting information clearly is the most important factor in terms of whether consumers will understand health care data well enough to use it to choose a plan that is appropriate for them. The information, expressed as simply as possible, should be geared to the literacy level and needs of the population it is intended to reach (Kaplan et al. 2000, Wicks and Meyer 1999, Hibbard and Jewett 1997, Lubalin et al. 1999). For the Medicaid population in particular, a fourth- to sixth-grade reading level is typically recommended (Kaplan et al. 2000). Other factors considered essential to a clear understanding of health plans include limiting the number of concepts to a maximum of four per page, using illustrations, and using type and text formatting that does not look small and squeezed (Kaplan et al. 2000).

Unfortunately, however, valid, accurate quality-of-care information is not, by nature, easily expressed in such terms. According to Wicks and Meyer (1999), health plan descriptions that are complete and accurate will contain a relatively sophisticated level of information that is difficult for many consumers to understand. For example, references to the statistical significance of plan results and information on whether plans adjust for differences in risk among their enrolled populations may pose comprehension problems for consumers, especially those who have trouble with rates, aggregate data, or quantitative information in general. Including such information also can make report cards longer than they should be from a consumer usability perspective.

Although concepts like statistical significance and risk adjustment may be too complex to convey effectively in report cards, Jewett and Hibbard (1996) suggest several types of information that may help consumers to understand the content of quality data. For instance, they suggest that the report cards should state explicitly what each quality-of-care indicator measures and how it should be interpreted. The values for each indicator should be presented clearly and directly, benchmarks from national data sets should be provided and defined, and diseases that are often poorly understood should be clearly defined to dispel myths and improve consumer knowledge. In addition, Jewett and Hibbard suggest several other pieces of information that will help consumers to understand managed care, the links between quality indicators and care, and how
informed consumer choice can influence quality of care. However, the utility of such additional information should be balanced against the fact that it will undoubtedly lengthen report cards and may cause them to appear more complex.

**Conclusion**

Creating complete, user-friendly report cards is clearly not an easy or a small task. Many have argued that report cards and quality-of-care indicators will become easier for consumers to understand and more relevant to their choices among health plans once consumers have more experience with managed care and those who create report cards become more adept at presenting the information (Wicks and Meyer 1999, Hibbard and Jewett 1997, Galvin 1998). Hibbard and Jewett, among others, repeatedly stress the need for consumer education and its relevance to effective consumer choice (Hibbard and Jewett 1997, FACCT 2001). According to Meyer (1999), the challenge is to “meet consumers where they are but at the same time try to move them to a higher plateau.” Educating consumers about managed care and about how they can make the best use of the health care system may be the most achievable goals. What is less clear is whether widespread consumer use of more complex comparisons of quality indicators is also achievable.

**Chapter 6: Guidelines and Tips on Effective Visual Display of Data**

To be most useful strategically, data should tell a story. Graphs can be an effective means of presenting data in a way that makes it easy for an audience to understand the key elements of the story. Many software packages now have graphing capabilities that make it easy to produce a variety of graphs and charts that present your data in a compelling manner. This resource includes some general guidelines on designing and using informative graphics, illustrated with some hypothetical and actual examples. It also contains references to a number of web sites that contain effective examples of Medicaid data use, and to some general sources on graphing and effective uses of data.

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General Graphing Guidelines

Choosing an Appropriate Format

A pie graph shows proportions most clearly. A pie graph is best for visually comparing numbers that are expressed as percentages of a whole. For example, a pie graph could be used to show how the total number of Medicaid managed care enrollees is distributed among four MCOs. Figure 1 shows the proportion of total Medicaid enrollees that is enrolled in each MCO.

Figure 1

![Distribution of Medicaid Enrollees Among Four MCOs, 2001](image)

A pie graph cannot be used to show trends over time – although a series of pie graphs, each graphing the same type of data for different times – can show a trend. Also, a pie graph can be misleading if it is used to compare numbers that do not logically add together to form a total. For example, a pie graph should not be used to compare the number of physicians contracting with certain MCOs, because some physicians may contract with more than one MCO, distorting the relative sizes among the MCOs and making the total number too large because of double-counting.
Bar graphs are appropriate for showing comparisons of a measure at a single point in time. Bar graphs emphasize the raw numbers. Figure 2 shows that MCOs A, B, and C all have substantially more contracted physicians than MCO D.

Figure 2

Bar graphs also are useful for comparing the relative size of different measures. For example, Figure 3 adds enrollment data to Figure 2, showing the ratio between numbers of contracted physicians and number of enrollees in thousands (the physicians-per-1,000 enrollees ratio, for example). MCOs A, B, and C all have about the same proportion of physicians per 1,000 enrollees. However, MCO D clearly has a much higher proportion of enrollees to physicians, although the numbers of each are smaller than the other three MCOs. The bar graph enables the reader to see clearly that the proportions for MCO D are different than for the other MCOs, indicating a potential area for further inquiry.
Data on different entities and different points in time can be combined into a single multi-bar graph, as shown in Figure 4. This graph shows two things at once: that the number of physicians contracted with each MCO changes from year to year, and that certain MCOs have larger provider panels than other MCOs.

Figure 4
Line graphs are best for showing trends, because the use of small dots and connecting lines instead of large solid bars focuses the reader on the trend, not the absolute value of the measure at each point in time. Figure 5 emphasizes the fact that the number of physicians contracting with MCO A increased for two years, but recently decreased.

**Figure 5**

![Number of Physicians Contracting with MCO A 1998-2001](image)

Furthermore, the slope of the connecting lines in a line graph shows the magnitude of the changes from year to year. Figure 5 also shows that between 1998 and 1999 the number of contracted physicians rose moderately, but from 1999 to 2000, the number rose more sharply. From 2000 to 2001, the number of contracted physicians decreased, but the decline was more moderate than the previous year's increase.

Line graphs will generally be perceived as showing trends. Even if that is not the intent, readers might infer it from the connecting lines. Therefore, a line graph should not be used to compare measures at a single point in time, as the dots and lines will incorrectly imply that there is a trend or relationship, as shown in Figure 6. A bar graph, such as that used in Figure 2, is more appropriate for these kinds of comparisons.
Telling a Story

You should use a graph when it can tell a story better than words or a table. Very often a graph that does not tell a story can be turned into one that does by rethinking how to use the data. Use different scales, for example, or percentage changes rather than actual levels. When showing relationships, make sure the relationships you want to show are visually close to each other. Figure 7 on the next page shows the relationship between physician visits and hospital emergency room use in different MCOs (using hypothetical data). Physician visits and emergency room visits per 1,000 enrollees are on different vertical scales, so the trend lines can be visually closer to each other, and the graphs for all four MCOs are on one page to facilitate visual comparisons.

**All graph elements should contribute to telling the story.** This includes headings, arrows, labels, shading, and placement of elements. If something in the graph is more important than the other information, use visual effects to make it stand out. In Figure 7, for example, the headings on the vertical axis (physician and emergency room visits per 1,000) are in bold to help highlight the fact that different scales are being used.

**Use cues to help the audience quickly grasp the point of the story.** Keep asking yourself, “If I were seeing this graph for the first time, knowing only what my audience knows, would I understand it right away?” If the answer is no, your graph needs more work. In Figure 7, it might be useful to add an interpretive heading saying something like “Increases in physician visits reduce emergency room use.”
Figure 7
Managed Care Organization (MCO) Performance
Annual Physician Office and Hospital Emergency Room Visits Per 1,000 Enrollees
Children Ages 0-18
1998-2000

Balancing Complexity and Simplicity

Graphs can distill large quantities of complex information into one understandable form, show multiple dimensions in one place, and reframe complicated issues. But they do this by superimposing an essential simplicity on the underlying complexity. Good use of data is complexity made simple.

Figure 7 shows trends over three years for two different kinds of Medicaid services for four different managed care organizations, all on one page. While the data are complex, the story is relatively simple: MCOs that improve access to physicians generally are able to reduce emergency room use.

Do not feel the need to graph everything – tables or text are often more appropriate. Graphs that show just one or two dimensions – that one number is bigger than another number, for example – are generally not worth doing. The same information can be conveyed just as effectively in a table or in text. The only exception is when there is a reason to visually drive home a simple message (e.g., children received more immunizations this year than three years ago).

Showing Trends and Comparisons

Knowing that 30 percent of pregnant women in an MCO began receiving prenatal care in their first trimester in the year 2000 is not very useful unless you also know how that compares to 1998 and 1999, and unless you know how it compares to other Medicaid MCOs in the state, commercial MCOs, Medicaid fee-for-service, or national benchmarks.

Trends over time. Because changes in behavior in Medicaid generally occur slowly, the impact of events or interventions will likely not show up right away. Looking at trends over several years or even a decade will reveal results that might otherwise be undetectable.

Inflation adjustment. Dollar amounts should generally be adjusted for inflation, especially when looking at periods of longer than two or three years. Because some audiences may not be familiar with inflation adjustment, be sure to indicate clearly when you are doing it. It may be useful to show trends both with and without inflation adjustment if your audience is likely to find the adjustment confusing.

Comparisons. When making comparisons, try to maintain the same graphic architecture throughout to visually reinforce the comparisons. Figure 7 uses the same graphic architecture, scale, and labeling for all four MCO charts on the page. Maintaining the same graph format and structure simplifies the presentation and facilitates audience understanding. It takes advantage of the investment in learning your audience has made in looking at the first set of graphs. As in Figure 7, you can show multiple comparisons on a single page by repeating the same graph type several times on the page, using different data in each graph. When repeating graphs, be sure to
maintain the same scale, or at least alert the audience that the scale is different in apparently similar graphs.

**Showing Correlation and Causation**

If possible, graphs should show causation, or at least correlation, as in Figure 7. The purpose of early prenatal care, to take another Medicaid example, is to produce better birth outcomes: healthier babies and fewer problem pregnancies. The data on prenatal care should therefore be linked, if possible, with data on birth weight, the cost of hospital care (a proxy for the complexity of the delivery), and the cost of health care for the baby in the first year of life (a proxy for the baby’s health). All of these different kinds of data cannot be linked in a single graph, of course, since they represent different dimensions and would make the graph too complicated. A series of graphs, or a number of panel graphs on a single page, as in Figure 7, may be a solution.

The data may also have to be adjusted in various ways before they can tell a credible and reliable story. For instance, a mother’s behavior and her economic, social, and cultural circumstances can influence prenatal care, so differences among beneficiaries in education, age, and income may have to be taken into account when assessing how to graph the data. A graph might, for example, show data separately for lower- and higher-income women. In addition, MCOs cannot begin prenatal care before a pregnant woman is enrolled, so data on birth outcomes for MCO enrollees should probably be shown separately for women whose MCO enrollment occurred early and late in their pregnancies.

If an event at a point in time caused a trend line to change, consider showing that event with an arrow or similar icon and an appropriate label in your graph. If, for example, an MCO began doing business in a new area in the state during the period shown in your graph, there may be a dip in physician visits per 1,000 enrollees while physician networks and physician-enrollee relationships are being established in that area. Identifying that event at a point in the trend line helps the reader to better interpret the graph and signals an issue to track. States may want to monitor, for example, how long it takes for physician visits to get back to expected levels.

**Keeping Graphs Understandable and Visually Clear**

**Use familiar graphic architecture.** Build on what people are used to seeing: line graphs, bar charts, pie charts, area charts, stack charts, map charts, etc. Most graphing software has everything you need to create clear, communicative charts. Look for good examples of effective graphs in newspapers, magazines, and reports, and keep a file of them.

**Use as little ink as possible.** Keep lots of “white space” in your graph by, for example, using short headings and a minimum of background lines. Avoid the excessive use of shading and elaborate patterns as “fill” for bars, pies, and other graph features. Be judicious in the use of advanced features, such as 3-D columns or pictorial symbols (e.g., a stack of dollar bills); think
about using standard columns instead. If used selectively, these advanced features can help capture your audience's interest, but if overused, they can have the opposite effect.

Make sure the graph is self-explanatory. Everything necessary to understanding the graph should be in the graph itself, though explanatory text should be used sparingly. Footnotes can be a useful and unobtrusive explanatory device, but keep them short, using them mainly for small, but necessary, technical details, such as sources of data.

Maintaining Integrity

Telling a story, balancing simplicity and complexity, showing trends and comparisons, and showing correlation and causation inevitably involve selecting and adjusting data and experimenting with graph design. Build your audience’s confidence in the credibility of your information. Do not omit crucial data that would change the story in important ways; do not use graphing “tricks” like shifting scales, cutting off the bottom or middle of bar graphs, or “smoothing” line graphs by leaving out important intermediate fluctuations. Label and explain anything that might be misinterpreted by your audience, and be prepared to justify the choices you made in selecting your data and in constructing your graphs. Trust and credibility, once lost, are not easily regained.

Examples of Effective Medicaid Managed Care Graphs

Wisconsin Medicaid HMO Comparison Reports

The Wisconsin Medicaid agency's HMO comparison reports contain simple and effective graphs showing MCO performance on a wide variety of access and quality measures. The same basic graph architecture (almost exclusively bar graphs) is used throughout all the reports, facilitating comparisons across graphs and creating a consistent “look” to guard against confusion. The reports for 1996, 1997, and 1998-1999 are on the state’s web site at http://www.dhfs.state.wi.us/medicaid4/provpub.htm.

HEDIS Charts and Graphs

The National Committee for Quality Assurance (NCQA), the developers of HEDIS, includes guidelines on using charts and graphs to display HEDIS information in its basic introductory volume on HEDIS. (“HEDIS 2001 Volume 1: Narrative – What’s In It and Why It Matters”). Ordering information is available at http://www.ncqa.org/communications/publications/hedispub.htm.
CAHPS Charts and Graphs

The Agency for Health Care Policy and Research (now called the Agency for Healthcare Research and Quality [AHRQ]) published a primer on CAHPS in 1999 that includes a chapter entitled “Using CAHPS Reports for Consumers and Other Audiences.” The primer also contains sample charts and graphs. See AHCPR, “CAHPS 2.0 Survey and Reporting Kit: Primer,” October 1999, AHCPR Pub. No. 99-0039A. Ordering information is available from Westat by e-mail at CAHPS1@westat.com.
Sources for More Guidelines and Tips on Graphing and Data Display


References


Stevens B. and Mittler J. “Making Medicare+Choice Real: Understanding and Meeting the Information Needs of Beneficiaries at the Local Level.” Report submitted to The Robert...

