



Report

Developing a Health Care Information Portal for California Children's Services Providers: Functions, Models, and Issues

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Abstract

The growth of health information technology, including the adoption of electronic medical records in hospitals and community practices, presents opportunities and challenges to the state to maximize the capacity of this new constant in health care. Concurrently, families and providers have expressed a strong desire for greater coordination of clinical services, and of eligibility confirmation, billing and payment, especially as they relate to the care of children with special health care needs. At present, these various functions are being performed independently. To address this fragmentation, this report recommends creation of a statewide health care information portal that would, in part, integrate the administrative functions that currently exist in the CCS and Medi-Cal programs with the capability to confirm patient eligibility and submit service authorization requests. Expansion of such an administrative system would allow coordination of clinical information among providers. Potentially, private health plans participating in Covered California also could make use of this portal.

Executive Summary

The California Children’s Services (CCS) program provides condition-related health care services—including diagnostic, treatment, dental, medical case management, physical therapy and occupational therapy—to children with specific CCS-eligible medical conditions. At least half of CCS families who responded to a 2010 survey also reported MediCal or Healthy Families coverage, and 26 percent reported private insurance. The common occurrence of multiple payers among CCS families—where CCS is the second payer but only for services related to CCS-eligible conditions—suggests the complexity of managing payment for children with special health care needs in California, when CCS providers are rarely in the child’s MediCal or commercial insurance primary care network. Not surprisingly, surveyed physicians also reported difficulty with payment complexity and coordination of patient care.

Reflecting a process of questioning key informants and stakeholders of the CCS program, a 2010 study formulated 5 priority objectives for CCS.¹ Of these, three (including the highest priority) speak to the difficulty that CCS providers and parents encounter in coordinating care for the “whole person” across payers and systems of care. All reflect longstanding issues and needs that have been identified in reports from the Lucile Packard Foundation for Children’s Health and others.²

This report describes the CCS program’s current IT systems and presents alternative models for much enhanced functionality.

This report describes the CCS program’s current IT systems (which focus on notification of prior authorization and claims submission) and presents alternative models for much enhanced functionality: specifically, an enhanced physician portal that would offer CCS providers access to timely information extracted from Medi-Cal electronic claims submissions. At a minimum, this portal could help CCS and Medi-Cal providers identify the services their patients have received and providers associated with each service. Some of the challenges and implementation issues associated with such a portal (such as the challenge of capturing timely information about CCS patients’ service use and concerns about patient privacy) are described, and opportunities (such as the potential to coordinate with California’s Health Information Exchange and Patient-Centered Medical Home initiatives) are considered. Finally, the potential start-up and operating costs of an enhanced CCS physician portal are presented based on other states’ experiences with building a similar model, and potential next steps are suggested.

1. Family Health Outcomes Project. Title V CSHCN Needs Assessment Report: California Children’s Services (CCS) Program Systems. Issues and Priority Action Objectives (June 14, 2010). Available at [<http://www.dhcs.ca.gov/services/ccs/Documents/TitleV/TitleVReport.pdf>], accessed July 7, 2013
2. For example, see: Kathryn Smith et al. California’s Service System for Children and Youth with Special Health Care Needs: Analysis and Recommendations for a Service System That Works for Children and Families. Report prepared for the Lucile Packard Foundation for Children’s Health (December 2009). Available at [<http://www.lpfch.org/californiaservicesystem/>], accessed July 12, 2013.

Rationale and Models for a Medi-Cal/CCS Health Care Information Portal

At present, CCS providers can and do communicate electronically with the CCS program through various unrelated portals, hosted by Medi-Cal or its financial intermediary, and developed only for administrative purposes: (1) a portal to confirm the status of service authorization requests (SARs); and (2) several portals that allow physicians and pharmacists to submit medical and pharmacy claims electronically. Although it has not happened in practice, it seems feasible to develop a single portal that would integrate these functions and also allow providers to confirm CCS and Medi-Cal eligibility.

In addition, this portal might offer CCS (and Medi-Cal) providers some of the basic clinical information they need to help coordinate care for the “whole person” across multiple providers and payers. Specifically, information might be extracted from the CCS and Medi-Cal medical and pharmacy claims reported to the financial intermediaries, as well as information from the encounter data reported directly to Medi-Cal, to populate a service history for each CCS and Medi-Cal patient and made available to their authorized providers through the portal. From this portal—in this report, called a Health Care Information Portal (HCIP)—CCS providers might access service records for the approximately 70 percent of CCS children enrolled in Medi-Cal. Each patient’s service history might identify the services the patient received (when billed to Medi-Cal or CCS), the date and location of service, the diagnosis at the time of service, and the provider’s name and contact information. If CCS were transitioned into a Medi-Cal managed care model, an HCIP would compile a continuous record for patients as they move among care settings and health plans within Medi-Cal.

We identified two models for this type of multi-use portal:

- Launched in 2010, Community Care of North Carolina (CCNC) maintains a secure web-based Provider Portal that permits all providers involved in a Medicaid patient’s care to share information about that patient. The portal is populated with information from Medicaid enrollment files, paid claims data, and hospital admission/transfer-discharge (ADT) reports from 48 large North Carolina hospitals. In general, the information through the portal is current within 2-4 weeks of the date of service; ADT reports are refreshed every 12 hours and uploaded. At present, approximately 1,750 primary care physicians and physician practices throughout North Carolina have access to the portal. The patient health record available through the Provider portal shows 15-month claims history, but the user can reset the timeline to view encounters for as much as the past 5 years and filled prescriptions for the past 2 years.
- More recently, Salient Management has developed and currently maintains an IT solution for New York State Medicaid. Salient’s solution allows providers and care managers to query a data mart that contains information about care provided in the provider’s own system as well as in other systems—offering a relatively complete picture of what is happening with the patient. The data mart extracts and integrates Medicaid claims data with EMR and medical workflow data, offering all (and somewhat more) of the capability an HCIP would require, and is built on a scalable platform so users in multiple sites across the state can query the data electronically to analyze patterns. With appropriate privacy agreements, they also can isolate a single patient’s utilization history, for all services and drugs billed to the New York State Medicaid program within the past five years.

Costs, Challenges, and Opportunities

Based on the experience of these potential models, we estimate that an HCIP in California might cost approximately \$8 million to build, at current levels of enrollment in Medi-Cal (or Healthy Families). Maintaining an HCIP, including staffing and hosting client-owned servers, might cost about 20 cents per average member month, or approximately \$1.6 million per year in California at current levels of enrollment in Medi-Cal (or Healthy Families). In both North Carolina and New York, the Medicaid program bears these costs.

An HCIP would confront a number of development and implementation challenges. These might include identification and resolution of legal issues, especially related to patient privacy; the coordination of data streams that currently reside in different organizations into a single portal; the development of common coding protocols; ensuring compatibility with existing and developing electronic medical record systems; improving the timeliness of information submitted to Medi-Cal and its intermediaries; and building provider capacity to use new information technology.

It might also confront programmatic challenges—the foremost being potential reluctance within Medi-Cal and its fiscal intermediary to engage in large-scale system change. The systems that DHCS and its fiscal intermediaries have built suggest a history of incremental program design. To develop an HCIP that offers providers streamlined access not only to Medi-Cal and CCS administrative functions but also to current information about their patients' service use and providers would require strong leadership within and across agencies and organizations, as well as a clear and shared vision of how the HCIP would be implemented and maintained.

If Medi-Cal financed an HCIP, federal matching funds might cover a large share of the cost.

However, the opportunities for an HCIP are equally significant. If Medi-Cal financed an HCIP to support care coordination for Medi-Cal and CCS enrollees, federal matching funds might cover a large share of the cost of development and operation. In addition, federal incentives for meaningful use of EMRs have catalyzed a surge in the development of EMR systems; the opportunity to establish EMR protocols and standards that ultimately would facilitate integration with an HCIP will never be greater. Finally, California's new health insurance Marketplace (Covered California) offers the potential for expansion of an HCIP to include private insurance claims data—including claims for many CCS-eligible children who might “churn” between private insurance and Medi-Cal.

A. Introduction

The California Children's Services (CCS) program provides condition-related health care services—including diagnostic, treatment, dental, medical case management, physical therapy and occupational therapy—to children with specific CCS-eligible medical conditions.³ Children with an eligible medical condition must also satisfy income criteria to enroll in CCS: they must have a family adjusted gross income of \$40,000 or less in the most recent tax year, or the expected cost of care to the family for the child's CCS-eligible medical condition must exceed 20 percent of the family's adjusted gross income.

In 2010, the Family Health Outcomes Project (FHOP) conducted a series of interviews with and surveys of key informants as the basis for Action Priorities for the CCS program for FY2010-2015.⁴ While confirming the high value that both physicians and parents place on the CCS program, the surveys identified significant problems that these groups frequently encounter.

Among families who responded to the FHOP Survey,⁵ the prevalence of multiple payers for services was striking: at least half of CCS families also reported MediCal or Healthy Families coverage, and 26 percent reported private insurance. The common occurrence of multiple payers among CCS families—where CCS is the second payer, but only for services related to CCS-eligible conditions—suggests the complexity of managing payment for children with special health care needs in California, when CCS providers might rarely be in the child's MediCal or commercial insurance primary care network. Of families with private insurance coverage, 26 percent reported that also having private insurance actually made it harder to get the care their child needed.

Not surprisingly, physicians also reported difficulty with payment complexity and coordination of patient care. In the FHOP survey,⁶ questions related to billing and payment elicited some of the strongest agreement – both that billing and payment problems presented a significant barrier to physician participation, and that addressing these problems would substantially improve physician

3. CCS-eligible medical conditions include, but are not limited to, cystic fibrosis, sickle cell disease, hemophilia, cerebral palsy, heart disease, cancer, infectious diseases producing major sequelae, traumatic injuries and handicapping malocclusion.

4. This report summarized conclusions from a stakeholder process convened with CMS funding, in compliance with federal requirements for Title V funding in California. See: The Family Health Outcomes Project, Title V CSHCN Assessment Report: California's Children's Services (CCS) Program Systems Issues and Priority Action Objectives (June 14, 2010). Available at [<http://www.dhcs.ca.gov/services/ccs/Documents/TitleV/TitleVReport.pdf>], accessed January 22, 2013.

5. Family Health Outcomes Project. Title V CCS Needs Assessment 2010: Responses to FHOP Survey of CCS Families (undated). Available at [<http://www.dhcs.ca.gov/services/ccs/Documents/TitleV/TitleVApp25.pdf>], accessed January 25, 2013. In total, 392 parents participated in the survey; of those who responded to questioning about coverage, 70 percent reported that their children had CCS coverage.

6. Family Health Outcomes Project. Title V CCS Needs Assessment 2010: Responses to FHOP Survey of Physicians (undated). Available at [<http://www.dhcs.ca.gov/services/ccs/Documents/TitleV/TitleVApp26.pdf>], accessed January 25, 2013. In total, 148 physicians participated in the survey. Of these, 68 percent were located in the Los Angeles area, and 88 percent were CCS-paneled.

participation. Most physicians also reported difficulty in coordinating care: 75 percent strongly agreed (53 percent) or somewhat agreed (22 percent) that it would be more efficient and effective to have one system of care, including primary care providers and specialty providers, caring for all of the health needs of children with CCS-eligible conditions instead of having CCS providers give care for only the CCS-eligible conditions.⁷

Based on key informant interviews and stakeholder focus groups, FHOP presented priority objectives for CCS for the next five fiscal years (Table 1). Each of the highest-priority objectives reflect the longstanding difficulties families and providers have had in coordinating payment and care across providers for children with CCS-eligible conditions. One of the priorities called for the development of information technology (IT) and other solutions to facilitate rapid determination of eligibility and authorizations and communication between CCS and providers. Three of the five—including the highest priority—speak to the difficulty that CCS providers and parents encounter in coordinating care for the “whole person” across payers and systems of care. All reflect longstanding issues and needs that have been identified in reports from the Lucile Packard Foundation for Children’s Health and others.⁸

Table 1: California Children’s Services (CCS) Program Systems Needs Assessment: Top Five Priority Objectives

Rank	Priority Objectives
1	Modify the CCS program, with appropriate funding, to cover the whole child
2	Expand the number of qualified providers of all types in the CCS program
3	CCS will work with appropriate partners to define and create and implement standards for Medical Homes for CCS children
4	Develop and implement IT and other solutions to facilitate more rapid determinations of eligibility and authorizations and communication between CCS and providers
5	Develop a system to implement and evaluate the quality of care provided by the CCS program with the goal of ensuring that each child gets the right care at the right time by the right providers

Source: Family Health Outcomes Project. Title V CSHCN Needs Assessment Report: California Children’s Services (CCS) Program Systems. Issues and Priority Action Objectives (June 14, 2010). Available at [<http://www.dhcs.ca.gov/services/ccs/Documents/TitleV/TitleVReport.pdf>], accessed July 7, 2013.

Note: The Stakeholders individually used weighted criteria they had developed together and a tool provided by FHOP to rate each objective. The individual rating scores were summed and ranked.

7. These findings are consistent with findings from an internet survey that the Lucile Packard Foundation for Children’s Health conducted in 2012, indicating strong interest in improving care coordination. Most respondents in nonprofit human services agencies (56%) and half of non-physician health care service providers (50%) identified care coordination as the top priority, as did many families (29%) responding to the survey. See: Lucile Packard Foundation for Children’s Health. California Advocacy Network for Children with Special Health Care Needs: Survey Findings (August 2012). Available at [<http://www.lpfch.org/sites/default/files/networksurvey2012.pdf>], accessed July 12, 2013.

8. For example, see: Kathryn Smith et al. California’s Service System for Children and Youth with Special Health Care Needs: Analysis and Recommendations for a Service System That Works for Children and Families. Report prepared for the Lucile Packard Foundation for Children’s Health (December 2009). Available at [<http://www.lpfch.org/californiaservicesystem/>], accessed July 12, 2013.

This report explores the potential for IT solution that would address CCS providers' difficulty not only with coordinating payment across multiple payers, but also with coordinating care for the whole child. Specifically, it considers the feasibility of developing an electronic portal, integrated with or drawing information from the portal that CCS providers currently use to submit and monitor claims status. This enhanced portal would offer CCS providers access to timely information extracted from CCS and Medi-Cal electronic claims submissions, identifying the services their patients have received and providers associated with each service.

This rest of this report is organized in six sections. In Section B, the CCS program's current IT systems—which focus on notification of prior authorization and claims submission—are described, and a vision for much enhanced functionality is outlined. In Section C, two potential models are presented—specifically, the physician portal that serves primary care physicians who participate in Community Care of North Carolina (CCNC), the Medicaid program's partial capitation primary care network; and the data and software solution developed by Salient for New York State's Medicaid program. In Section D, technical and implementation challenges to the development of an enhanced physician portal for CCS providers are considered—including especially the challenge of capturing timely information about CCS patients' service use. In section E, programmatic challenges and opportunities are discussed—specifically, concerns about patient privacy and the potential to coordinate with California's Health Information Exchange and Patient-Centered Medical Home initiatives. In Section F, we explore the potential start-up and operating costs of an enhanced CCS physician portal, based on other states' experiences with building a similar model. Finally, in Section G, we offer a brief summary and suggest next steps.

This report explores the potential for IT solutions that would address CCS providers' difficulty not only with coordinating payment across multiple payers, but also with coordinating care for the whole child.

B. Why a Health Care Information Portal

CCS (and Medi-Cal) providers are responsible for confirming eligibility and insurance status with each patient at the point of service. At present, this process is entirely manual and presents some likelihood of error that would result in denial of a Service Authorization Request (SAR) or denial of a claim for primary CCS payment. The fact that the patient may or may not be holding a “permanent” Medi-Cal card is not sufficient documentation of their current status, in that the patient may not yet have received a permanent card or their eligibility may have lapsed.

CCS providers also are responsible for confirming whether the patient is covered by one or more other payers, and for billing all other potential payers first, before billing CCS. CCS is second payer for an estimated 70 percent of CCS children enrolled in Medi-Cal,⁹ as well as for CCS children enrolled in private insurance.¹⁰

It appears that the information necessary for CCS physicians to meet these obligations is obtained by DHCS separately, and could be made available to CCS physicians electronically—but it is not. That is, DHCS maintains an electronic database of Medi-Cal eligibility information (the Medi-Cal Eligibility Data System, or MEDS); this information is updated every 30 days. However, while the Medi-Cal fiscal intermediary (in most counties, Xerox State Healthcare¹¹) can access MEDS to confirm Medi-Cal enrollment, providers cannot.¹²

At present, CCS providers can communicate electronically with the CCS program through various unrelated portals, developed for administrative purposes:

- **Confirming service authorization.** CCS providers must submit a SAR for CCS approval of any diagnostic or treatments service, except in an emergency. While SAR submission is a paper process,¹³ providers with approved access to the Children’s Medical Services Network (CMS Net)

9. See: <http://www.dhcs.ca.gov/services/ccs/Pages/ProgramOverview.aspx>, accessed July 17, 2013.

10. CCS has been first payer for authorized services only for children enrolled in Healthy Families(see: Insurance Code Sections 12693.62, 12693.64 and 12693.66, relating to the California’s Healthy Families Program, which provides that the services authorized by the CCS program to treat a Healthy Families plan’s subscriber’s CCS-eligible medical condition are excluded from the plan’s responsibilities.)

11. Clients who reside in Napa, San Mateo, Santa Barbara, Solano, Marin or Yolo counties are served by a County Organized Health System, which is contracted by the department to serve these counties as the Medi-Cal Fiscal Intermediary. In Los Angeles County, Hewlett Packard (HP) is the fiscal intermediary. Claims may be submitted electronically or hand-delivered to the fiscal intermediary.

12. When asked why providers could not be given access to this information, we were told that the fiscal intermediary simply is “not set up” to make this information available to providers, either before providing service or when submitting a claim. Personal communication with Tammy Warmuth, Xerox State Healthcare (May 10, 2013).

13. Providers may fax, mail or hand deliver SARs to the appropriate CCS county or state regional office.

Provider Electronic Data Interchange (EDI) website can check the status of these requests on line.¹⁴ The information obtained through the CMS Net Provider EDI is current with a one-day lag.

■ **Submitting claims electronically.** CCS providers submit claims for authorized services directly to the Medi-Cal fiscal intermediary. To submit claims electronically, Medi-Cal providers (including CCS providers) must enroll and complete an Electronic Health Care Claim Payment/Advice Receiver Agreement, and submit it to the California Department of Health Care Services (DHCS). The agreement obligates the provider to safeguard the confidentiality of protected health information in accordance with California and federal statutes and/or regulations.¹⁵ Enrolled providers can submit Computer Media Claims (CMC) via a modem or on the Medi-Cal website. Compound and non-compound pharmacy claims (and some Network Claims) may be submitted electronically

CCS is second payer for an estimated 70 percent of CCS children enrolled in Medi-Cal, as well as for CCS children enrolled in private insurance. through DHCS's Point of Service (POS) network;¹⁶ single compound and non-compound pharmacy claims can be submitted over the internet using the Real-Time Claims Internet Pharmacy (RTIP) claim submission system.¹⁷

Neither the portals nor the data feeds for each portal are linked in any way. While the state's fiscal intermediary has access to various key data feeds—including the SAR information available to providers through the CMS Net Provider EDI and the information identifying CCS patients' eligibility for Medi-Cal services—and will reject incoming claims with missing or invalid eligibility information or SAR numbers, these data feeds are not merged and made available to CCS or Medi-Cal providers.

14. An interview with a CCS regional program official about SAR procedures and review of the state website offering guidance to providers suggested some of the reasons that providers might be frustrated with the SAR process. Not only must SARs be submitted on paper, but also when a SAR is denied (for example, medical documentation indicates that the patient does not have a CCS condition, or the provider requested a SAR number without the prefix number indicating a CCS service), the electronic denial includes no explanation. Instead, a copy of the Notice of Action (NOA) or denial letter with the reason for denial of service will be sent to the client, parent or legal guardian with a courtesy copy to the provider via mail. If a service is denied, only the parent may appeal the denial. If the SAR is incomplete and lacks supporting documentation to substantiate medical necessity, CCS will request the provider to submit additional information—again, a paper process; CCS will take no further action on the SAR until it receives the requested information.

15. Specifically, 45 Code of Federal Regulations Parts 160 and 164, which implements the information privacy provisions of the federal Health Insurance Portability and Accountability Act (HIPAA). See: [<http://www.hhs.gov/ocr/privacy/hipaa/administrative/privacyrule/index.html>], accessed July 15, 2013. The agreement provides that any breach of security or unlawful disclosure of protected health information shall be reported to the Department within 24 hours of the Provider/Receiver learning of such breach or disclosure and may be grounds for termination of the agreement.

16. The POS network uses the CMS-1500 online claim format, which includes a 60-character remarks field. Claims requiring additional documentation must be billed "hard copy" or through CMC.

17. This research was unable to confirm the proportion of Medi-Cal, Healthy Families, or CCS claims that are submitted electronically.

Although it has not happened in practice, it seems feasible to develop a single portal that would integrate, at a minimum, the two functions physicians already can conduct in electronic format— (1) confirming SAR status and (2) submitting claims and confirming claims status. Such a portal could also support at least two other administrative functions of value to providers: (3) to confirm CCS and Medi-Cal eligibility (helping providers correctly identify order-of-payment responsibility by extending to Medi-Cal and CCS providers the information that Medi-Cal’s fiscal intermediary already has on hand); and (4) to submit SARs electronically (which they cannot do now).

However, much greater functionality also could be possible. The portal might not only support these administrative functions but also convey some of the basic clinical information that CCS providers need to help coordinate care for the “whole person” across providers and payers. Specifically, it might be possible to extract information from CCS and Medi-Cal medical and pharmacy claims that are reported to the financial intermediaries as well as information from the encounter data reported directly to Medi-Cal.¹⁸ This information could be used to populate a service history for the approximately 70 percent of CCS children enrolled in Medi-Cal. Each patient’s service history might identify the services the patient received (when billed to Medi-Cal or CCS), the date and location of service, the diagnosis at the time of service, and the provider’s name and contact information.¹⁹ It would also document drug fills — confirming adherence to prescribed drug regimens. All of this information could be uploaded to, and made accessible to providers through, the same portal.

Fully implemented, such a portal—here called a “health care information portal” or HCIP—could fill significant information gaps for CCS providers and also for Medi-Cal providers more broadly. For each of their patients, it would integrate eligibility confirmation, service authorization, and the patient’s Medicaid and CCS service history. Further developed, an HCIP might be linked to a communications system that would notify Medi-Cal providers electronically of certain events—for example, an emergency department (ED) visit or hospitalization. CCS providers could be notified either when their patients have experienced any such event, or only when it is clinically related to their CCS condition—for example, an ED visit or hospitalization for one or more specified diagnosis codes.

[A portal] would integrate eligibility confirmation, service authorization, and the patient’s Medicaid and CCS service history.

18. Medi-Cal’s fiscal intermediaries (Xerox, plus several county-assigned fiscal intermediaries) have fee-for-service (FFS) and point-of-service (POS) claims information for all Medi-Cal and CCS patients. Managed care organizations (MCOs) that enroll Medi-Cal patients report encounter records to DHCS monthly.

19. Provider contact information could be generated from the Provider Identification Number (a code used as validation of an enrolled provider’s identity), the national provider ID, or by matching the two. The Provider Identification number, or PIN, is used when a provider conducts business transactions with the Medi-Cal program and the fiscal intermediary—for example, to verify recipient eligibility or submit a Computer Media Claims (CMC) Agreement for electronic billing.

While Medi-Cal providers (especially those in MCOs or large group practices) increasingly have access to EMRs, HCIP records would be more complete in at least two respects. First, they would capture information about services that their patients have received from providers outside the MCO or group practice (whether from a CCS provider or any other provider, when billed to Medi-Cal or CCS); these services are not easily captured in any one provider's medical record system. Second, HCIP records could identify whether written prescriptions are actually filled. An HCIP might be especially useful if it were built so that providers could import utilization records from HCIP into their EMR systems, rather than the two systems functioning side by side.

In summary, an HCIP could help CCS and other providers who see Medi-Cal and/or CCS children to coordinate care across clinical settings. Even if built only around Medi-Cal and CCS claims and encounters, an HCIP could offer CCS providers the basic information they need to understand the "whole patient" for most of their patients, even as California pursues the more distant objective of fully interoperable EMRs. If CCS were transitioned into a Medi-Cal managed care model, an HCIP would compile a continuous record for patients as they move among care settings and health plans within Medi-Cal.

C. Potential Models

In research conducted for this report, we were able to identify two operating models for an HCIP: (1) a provider portal launched in 2010 by Community Care of North Carolina (CCNC); and (2) a system developed for New York State by Salient Management Company. While the Salient model is designed for cost management, it also collects and could report back to individual providers all of the service-use information envisioned for an HCIP.

Community Care of North Carolina's Provider Portal

CCNC is a partially capitated enhanced primary care case management program that serves primarily non-dual Medicaid beneficiaries. CCNC has an Informatics Center²⁰ that has developed and maintains several user applications. Among these is a secure web-based Provider Portal that permits all providers involved in a Medicaid patient's care—including primary care practices, emergency departments, hospitals, local mental health management entities, public health departments, and state mental health facilities—to share information about that patient.²¹ At present, approximately 1,750 primary care physicians and physician practices throughout the state have access to the portal,²² having signed a standardized confidentiality agreement as a condition of access.

Currently, the Informatics Center populates the provider portal with records from three primary sources: (1) Medicaid enrollment files; (2) Medicaid paid claims data; and (3) real-time hospital admission/transfer-discharge (ADT) reports.²³ Medicaid provides a monthly update of Medicaid enrollment files and refreshes paid claims weekly; most paid claims flow into the portal 2-4 weeks from date of service. ADT reports, which come from 48 large North Carolina hospitals, are refreshed every 12 hours and relayed to the Informatics Center for upload to the provider portal.²⁴

20. CCNC's Informatics Center is electronic data exchange infrastructure sponsored by the North Carolina Department of Health and Human Services Division of Medical Assistance, the state Office of Rural Health and Community Care, and the federal Centers for Medicare & Medicaid Services (CMS).

21. The other applications are a Case Management Information System and a Pharmacy Home. Community Care networks access this information to identify patients in need of care coordination; to facilitate disease management, population management, and pharmacy management initiatives; to enable communication of key health information across settings of care; to monitor cost and utilization outcomes; and to monitor quality of care and provide performance feedback at the patient, practice, and network level. For example, care managers use CMIS to track patients and identify and prioritize at-risk and highest-cost patients for care management—such as patients on several medications, or patients who have visited an emergency department or who have not seen a primary care physician. Clinical pharmacists use the Pharmacy Home to reconcile and manage patient medications.

22. Personal communication with Anne Schotton, CCNC (July 25, 2013).

23. The Informatics Center also receives data from a number of other sources to populate its Case Management Information System. These additional data sources include health information about program participants obtained directly from health care providers and care managers and/or the primary care medical record, as well as Labcorps (laboratory results) for the statewide Medicaid population, all Part D Medicare claims, real-time Surescripts pharmacy data for dual eligibles in the CMS 646 Demonstration waiver program, and patient data for one large private employer for which CCNC serves as a medical home.

24. Hospitals report the ADT data to Truven, which provides them to CCNC as an adjunct to work Truven is conducting for CMS. At least one additional hospital system (Novant) that does not report to Truven sends a separate data feed to the CCNC Informatics Center, and those data also are fed into the portal.

In addition, CCNC downloads information from the state's immunization registry 3 times per week for upload to the portal, and anticipates that it will soon download information from the state's lead testing registry as well.

Abstracted from Medicaid claims data, the patient health record contains patient demographic and contact information, provider contact information, the patient's health care visit and pharmacy claims history, and clinical care alerts. Through the portal, providers are able to see information about encounters (hospitalizations, emergency department visits, primary care and specialist visits, laboratory, and imaging), including care that occurred outside a provider's local clinic or health system. The portal also provides contact information for the patient's case manager, pharmacist, mental health therapy provider, durable medical equipment supplier, and home health or personal care service provider. Providers can identify whether prior prescriptions were filled and what medications have been prescribed for the patient by others. Built-in clinical care alerts appear if the claims history indicates the patient may be overdue for recommended primary care, including periodic screening and tests specific to their medical condition.

The secure web-based Provider Portal permits all providers involved in a Medicaid patient's care to share information about that patient.

The patient health record available through the Provider portal shows 15-month claims history, but the user can reset the timeline to view encounters for as much as the past 5 years. Due to the volume of prescription drug information flowing into the system, filled prescriptions are shown for the past 2 years.

One source for this report indicated that independent physicians (who are not linked into a group-practice EMR system) or providers who may see a patient just once (including county health department clinics) tend to use the Provider Portal frequently. However, because the portal is not linked to physician practices' EMR systems, physicians in these practices tend to rely on them less—even though the portal offers information (such as real-time ADT or immunization registry data) that might not be in their records.²⁵

25. Personal communication with Don Mundy, Community Care Partners of Greater Mecklenburg (July 19, 2013).

Salient Management's Solutions for New York State Medicaid

Working with county-level Medicaid agencies and the New York State Association of Counties (NYSAC) over the past four years, Salient Management has deployed Medicaid data management solutions in a dozen counties in New York State.²⁶ In 2009, Salient expanded these efforts, partnering with New York State's Office of the Medicaid Inspector General (OMIG) to develop a statewide data solution to help eliminate fraud, waste, and abuse in the Medicaid program.²⁷

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warehouse to answer questions about utilization and cost patterns, the state retained Salient to build a cost management information solution that could be queried easily to answer questions about specific sources of cost and cost trends. Their solution uses an associative-database model; Salient maintains client-owned servers that use random access memory (RAM), allowing users to access up to five years of records instantly on their desktop computers.

Salient's portfolio also contains a software solution that integrates Medicaid claims data with EMR and medical workflow data, allowing providers and care managers to measure their performance on patient engagement, access to care, costs and quality outcomes for Medicaid recipients. Using simple queries, a provider can access information about care and the cost of care in her own system, and also by providers outside her system—offering a relatively complete picture of what is happening with the patient.²⁸ At present, the system allows easy identification of population health trends and comparison with benchmarks by disease cohort, age group, location, access, provider, and other factors.

While Salient's portfolio in New York State does not offer a direct model for an HCIP, it appears to offer all of the capability an HCIP would require. The software accesses data that Salient extracts from Medicaid claims and encounter records. These data include unique provider and patient identification, service and drug utilization information, dates of service, and diagnostic information associated with each instance of service utilization. Built on a scalable platform, the software allows users in multiple sites across the state to query the data electronically to analyze patterns. In addition, (with appropriate privacy agreements restricting access to their patients only) users can isolate a single patient's utilization history, for all services and drugs billed to the New York State Medicaid program within the past five years.²⁹

26. These include Albany, Chemung, Monroe, Nassau, Onondaga, Westchester, and others.

27. Salient's platform for this effort is a user-friendly data-mining toolset that enables OMIG staff to visualize the behaviors of providers, recipients, pharmacies and others involved in Medicaid service and drug utilization. The base data for Salient's solution are extracted from medical claims and other Medicaid data-warehouse sources. OMIG staff can perform complex queries and analyses of these data.

28. These data reside in a Salient-hosted, client owned data mart, which pulls from the providers' EMRs and the Medicaid data warehouse.

29. See: New York State Department of Health. A Plan to Transform the Empire State's Medicaid Program: Better Care, Better Health, Lower Costs – Multi-Year Action Plan. Available at [http://www.health.ny.gov/health_care/mcicaid/redesign/docs/mrtfinalreport.pdf#page=30], accessed August 21, 2013.

D. Technical and Implementation Challenges

While the development of an HCIP is possible in principle, it would need to confront a number of apparent technical and implementation challenges. These include the following:

- **Identification and resolution of legal issues.** California has in place a number of legal agreements that protect the privacy of electronic information submitted to or received from DHCS or its fiscal intermediaries. These agreements should be reviewed and modified as may be needed to protect the additional information that would be contained in an HCIP (CCNC's privacy protections might offer a model for comparison). In addition, any legal impediments to electronic submission of SARs should be identified and, if possible, resolved. Eliminating the current paper process might facilitate not only SAR submission, but also expedite their review and approval.
- **Coordination of disparate data streams into a single portal.** California and Xerox currently maintain different portals, allowing providers to respectively (1) monitor SAR status; and (2) submit claims and monitor claims status. Each of these portals represents different flows of information, and each uses "behind the scenes" data streams that providers cannot access. Ideally, an HCIP would allow access to both portals through a single interface. In addition, it would bring forward the patient eligibility information stream that DHCS and the Medi-Cal intermediaries use, making it accessible also to providers.
- **Common coding protocols.** An HCIP would require data extraction from the Medicaid, Healthy Children, and CCS claims and encounter records already received by DHCS and resident in its data warehouse. If these records do not use common coding protocols for diagnoses, medical services, and hospital stays (i.e., ICD, CPT, and DRG codes), common coding would need to be established. Common provider codes (in particular, National Provider Identification, or NPI, codes) resolve many if not all of the problems of identifying specific providers—if not uniquely at the specific provider level, at least at the level of the provider's group practice. However, an HCIP would require that patients also be uniquely identified across providers and payment systems. In addition, the patient identifier should span potential interruptions in patient eligibility, linking all months in which the patient was eligible for services from Medi-Cal or CCS over a period of at least the past three years.
- **Compatibility with providers' existing or developing EMR systems.** While an HCIP would offer considerable value as a freestanding system, CCNC's experience suggests it would be of considerably more value if providers could integrate the information into their own EMR systems. This might require re-tooling existing EMR systems to link to the HCIP, and also encouraging that emerging EMR architectures be built to link to the HCIP and/or accept HCIP data. At a minimum, the HCIP should coordinate with California's efforts to develop interoperable EMRs.

■ **Timeliness of utilization information.** To be valuable, the information contained in an HCIP record must be reasonably current. This in turn depends on the timeliness of the claims and encounter record that are extracted to populate an HCIP record. In California, the timeliness of claims (and likely also encounter data) submission may be problematic: to qualify for prompt reimbursement, providers must submit a claim within 6 months of providing an authorized service.³⁰ (In contrast, Salient reports that New York State Medicaid typically pays claims within 45 days of the date of service; reported claims are uploaded to the data mart weekly.) While more widespread and comprehensive exchange of information electronically in the Medi-Cal system might encourage more prompt claims submission, rules shortening the time for claims submission to receive prompt payment might also be helpful.

■ **Provider capacity to use new information technology.** The ability of providers to successfully use desktop information technology may be a nontrivial challenge. Users of an HCIP would require some training, probably in direct proportion to their familiarity with other desktop information applications. However, the architecture of these systems can be made increasingly user-friendly, even if the HCIP were free-standing. With the growing use of EMRs, providers' marginal effort (if any) to access an integrated HCIP should be negligible.

30. Late claims require special handling to check for acceptable justification. These claims are typically processed within 45-60 days from the date of receipt. Justified claims that are received over one year from the date of service are automatically forwarded to the State's regional office for additional review. The State's review period typically takes four weeks.

E. Programmatic Challenges and Opportunities

The challenges of building an HCIP include, foremost, potential reluctance to engage in cooperative system change. The systems that DHCS and its fiscal intermediaries have built suggest a history of incremental, intra-organizational program design. To develop an HCIP that offers providers streamlined access not only to Medi-Cal and CCS administrative functions but also to current information about patients' service utilization would require strong leadership within and across agencies and organizations. It would also require a clear and shared vision of how an HCIP would be implemented and maintained, and successful engagement of the providers who would use it.

However, the opportunities for an HCIP are equally significant. Federal incentives for meaningful use of EMRs have catalyzed a surge in the development of EMR systems nationwide and in California. The opportunity to establish EMR protocols and standards that would facilitate integration with an HCIP will be never be greater.

In addition, the development of California's health insurance Marketplace (Covered California) offers the potential for expansion of an HCIP to include private insurance claims data. The effort to integrate claims information from the private health plans offered in Covered California could greatly facilitate care coordination for all enrollees, including especially low-income enrollees who might "churn" between private insurance and Medi-Cal.

At present, California's effort to build an all-payer claims database (APCD), managed by the Pacific Business Group on Health, obtains information from just a few issuers that offer data voluntarily; Medi-Cal does not participate. The issuers that do participate will submit data just once per year, on an annual cycle; PBGH received the first data in June 2013.

In contrast, Covered California operates with broad authority to obtain information from issuers that offer products under its aegis. It could require submission of claims data more frequently to support an HCIP claims data feed, including critical data fields (for example, identifying claims records that correct one or more prior claims but may not represent new service use). It also has the authority necessary to assemble and maintain high-quality data—that is, to obtain data not reported (e.g., "lost months"), obtain replacement data for claims reported incorrectly, and resolve anomalous coding.³¹ With this authority, Covered California could develop a physician portal supporting care coordination for all enrolled Californians, even when they move to another health plan.

The development of California's health insurance marketplace offers the potential for expansion of an HCIP to include private insurance claims data.

31. We were unable to obtain an interview with Covered California for this report, but understand that a Covered California APCD is planned. Personal communication with Ted von Glahn, Pacific Business Group on Health (July 18, 2013).

F. Potential Cost and Cost Allocation

Estimates of cost for an HCIP are necessarily tentative. For this report, we attempted to get some sense of the cost of each of the potential models we identified, CCNC and the Salient system in New York State. The specific cost of the CCNC model was particularly difficult to pinpoint. While CCNC built its provider portal from scratch, it was built around an existing “Rx Home” application and algorithms.³² Building the portal, while also maintaining Rx Home, occupied three to four programmers (with guidance provided by a family physician consultant) using an “off the shelf” Microsoft suite. CCNC recently hired two additional staff members, to provide general support and quality assurance, respectively, for both the physician portal and Rx Home.

In both North Carolina and New York State, the Medicaid program has borne the cost of the information portals for Medicaid providers.

CCNC started its physician portal with four servers, but subsequently built out to approximately 30 (some small) as it took on more data and pilot projects with CMS and others.³³ At present, CCNC’s physician portal has only read capability—while Rx Home has a read/write communications module (using an embedded template) to support communication from the pharmacist to the care manager, and it is building read/write communication from care managers to providers.³⁴

Salient developed its model for New York State Medicaid in less than a year—like CCNC, building on capabilities already developed (in this case, cost identification and tracking for Medicaid county clients and OMIG). Salient estimates that the system required (in current dollars) approximately 75 cents to a dollar per average monthly enrollment to build—in California, as much as \$8 million at current levels of enrollment in Medi-Cal or Healthy Families.³⁵ Maintaining the data mart, including staffing and hosting client-owned servers, would cost about 20 cents per average member month, approximately \$1.6 million per year in California at current levels of enrollment in Medi-Cal or Healthy Families.³⁶

32. Extraction and data transformation algorithms are used to maintain the relational databases that feed to Rx Home and the physician portal.

33. For example, CCNC is the care manager for Glaxo Smith Kline’s “high need” employees.

34. Personal communication with Ann Schotten, CCNC (July 25, 2013).

35. Estimate is based on monthly enrollment of 7.85 million Medi-Cal recipients in January 2013, and approximately 140,000 Healthy Families enrollees in August 2013. See: “Trend in Medi-Cal Program Enrollment - January Month of Enrollment for 2000-2013,” available at [http://www.dhcs.ca.gov/dataandstats/statistics/Documents/1_1_Annual_Historic_Trend.pdf], accessed August 25, 2013; and “HFP Subscribers Enrolled by Age by Gender,” available at [http://www.mrmib.ca.gov/mrmib/HFP/July_13/HFPRpt4.pdf], accessed August 25, 2013.

36. Personal communication with Pauline Clark, Salient Management (August 6, 2013).

In both North Carolina and New York State, the Medicaid program has borne the cost of the information portals for Medicaid providers—in effect, securing federal matching funds to help support their development and operation. The logic for this cost allocation rests on the program's interest in improving the quality and efficiency of care provided to Medicaid patients. However, the Medicaid program can use the same data compiled for the portal to monitor population health and cost trends that may not be apparent to individual providers, and (as in New York) also to identify cost “hot spots” that might indicate problems of fraud and abuse. Although CCNC's portal originated in the pursuit of better care management, while New York's was built initially in response to the state's concerns about program cost, both have evolved to approximately the same point and serve the multiple objectives common to all Medicaid programs—better care, better health, and lower cost.

G. Summary and Next Steps

In California, CCS providers might benefit substantially from the development of a physician portal that would integrate the administrative functions that CCS and Medi-Cal physicians already can conduct in electronic format (confirming SAR status, and submitting claims and confirming claims status), but also allow physicians to confirm CCS and Medi-Cal eligibility electronically and submit SARs electronically—neither of which they can do now. However, much greater functionality also could be possible, expanding a relatively simple portal to support administrative functions to a Health Care Information Portal, or HCIP, that would convey some of the basic clinical information that CCS providers need to help coordinate care for the “whole person” across providers and payers.

This report describes an HCIP that would extract information about service utilization, drug fills, and provider identification from CCS and Medi-Cal medical and pharmacy claims and from the encounter data reported directly to Medi-Cal. The information extracted from claims could be used to populate a service history for the approximately 70 percent of CCS children enrolled in Medi-Cal. Each patient’s service history would identify the services the patient received (when billed to Medi-Cal or CCS), the date and location of service, the diagnosis at the time of service, and the provider’s name and contact information. It would also document drug fills—confirming adherence to prescribed drug regimens. All of this information could be uploaded to, and made accessible to providers through, the same portal.

Fully implemented, an HCIP could fill significant information gaps for CCS and Medi-Cal providers. It would integrate eligibility confirmation, service authorization, and the patient’s Medicaid and CCS service history for each patient. Further developed, an HCIP might be linked to a communications system that would notify Medi-Cal providers electronically of certain events—for example, an emergency department (ED) visit or hospitalization (relying on an information feed similar to that in North Carolina’s system).

A Medi-Cal based HCIP might be extended to also include private claims data, especially for individuals enrolled in private health plans through Covered California—many of whom might churn between Medi-Cal and Covered California plans as their incomes change. If financed by Medi-Cal (similar to Medicaid funding for the development and operation of such systems in North Carolina and New York State), federal matching funds might cover a large share of the cost of development and operation in California.

Finally, such a system might ultimately be linked to EMRs. Federal funds available for EMR development might be used to plan the linkage with primary care EMR systems that could greatly enhance physician use and the clinical value of an HCIP.

This vision of an HCIP suggests a number of potential next steps, summarized below:

Engage Medi-Cal. For example:

- Develop a detailed understanding of barriers to Medi-Cal building and hosting a physician portal that initially would integrate and expand support of key administrative functions, and develop a process for addressing and resolving such barriers. Key administrative functions would include, at minimum, confirmation of Medi-Cal and CCS eligibility, SAR submission and status verification, and claims submission and payment status.
- Identify leadership within Medi-Cal who can champion the HCIP idea, take the lead in exploring further the models developed in North Carolina and New York State, and identify the modifications that would be necessary or desirable to adapt these models to California.

Engage providers. For example:

- Convene one or more focus groups of CCS and Medi-Cal providers to explore the utility and value of an HCIP that would include patient utilization and provider information extracted from CCS and Medi-Cal claims for patients, and potentially also private insurance claims. These focus groups might consider issues such as the challenges to integrating HCIP use into their current practice, the timeliness of useful information, and any concerns related to privacy and data confidentiality.
- Develop a pilot HCIP for a selected set of providers to test issues related to the integration of an HCIP in physician practices and options for enhancing the use and value of an HCIP.

Engage Covered California, and the insurers that offer plans in Covered California. For example:

- Discuss with Covered California its authority under current statute to require reporting of claims data and its capacity to exercise such authority.
- Convene one or more discussions about the practical opportunity to include private claims data in an HCIP. The Pacific Business Group on Health, which houses a nascent effort to build an APCD in California, might offer insights about the near-term prospects for obtaining clean data.

Engage leaders of California's EMR initiatives. For example:

- Identify opportunities to plan an HCIP architecture that would make the HCIP complementary to, if not fully integrated with, emerging EMR systems. Recognizing that an HCIP can be developed and implemented much earlier than a full EMR system, this inquiry should anticipate the two systems ultimately working together.
- Develop a consulting relationship with an expert who can provide information on the technical requirements (such as programming, server, and interoperability requirements) needed to develop and support an HCIP system, and the specific costs for developing and maintaining system components.