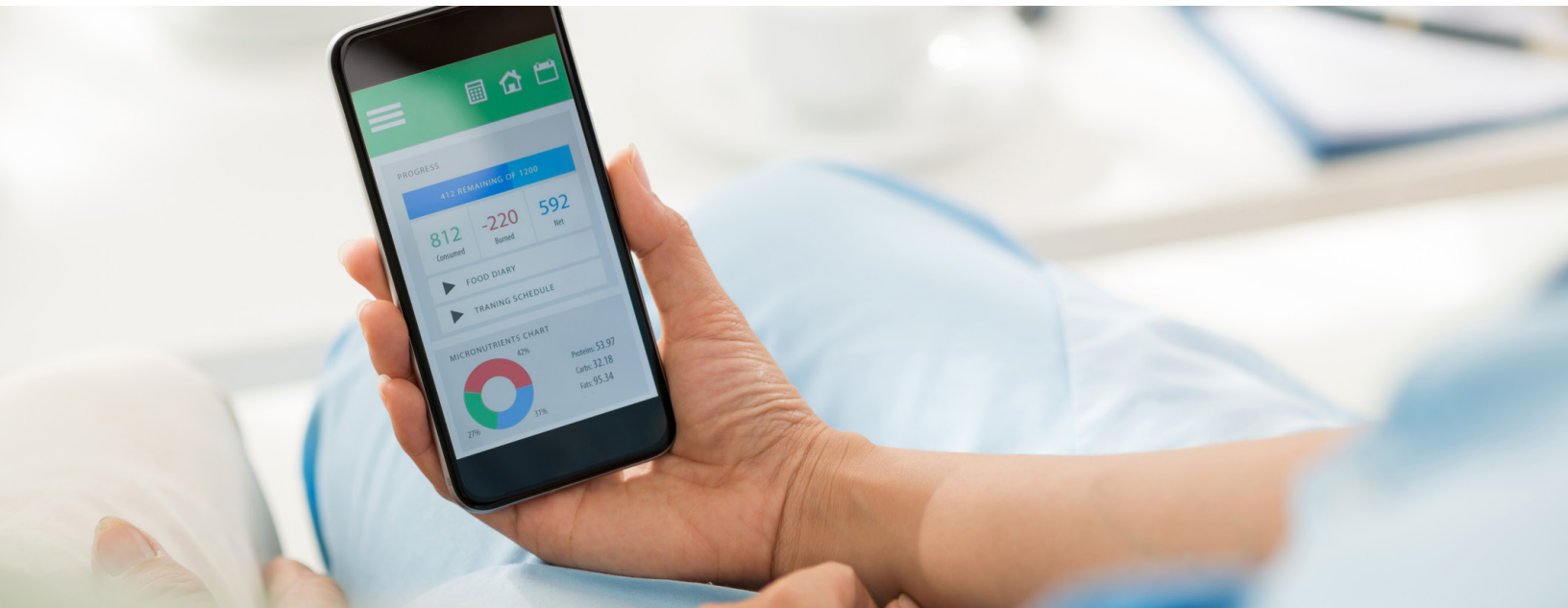


# Aligning Health and Human Services to Build Healthier Communities

By StateScoop Staff



*With cloud computing and public-private partnerships, state and local health agencies are transforming the way they deliver services to citizens by breaking down silos and increasing efficiency.*

Health and human services (HHS) agencies are at a crossroads—the challenges of modernizing legacy technology are colliding with policy uncertainty and increased citizen demands for digital services, while budget and cost-control measures remain a priority for state and local governments.

Among the most promising of potential solutions to those challenges is one technology: cloud computing. With the cloud, government agencies and their private-sector or nonprofit partners can build and launch new tools to bring together disparate health and human services systems and, ultimately, serve citizens more effectively and build healthier communities.

Using the cloud, agencies and partners focus on three windows of opportunity: leading the digital transformation of government; building bridges between interdependent agencies and programs; and leaning on analytics to drive migration to the cloud and bring value to enterprises and citizens alike.

## Digital transformation

Governments and health care providers often face a similar reality—they're saddled with legacy technology that is typically difficult to use, expensive to maintain and challenging to make interoperable.

The systems in use by health and human services agencies, sometimes decades old, will eventually need to be modernized.

That's the case in California, where the child welfare information system is more than 20 years old, and now the state is charting a path forward.

Rather than draft a request for proposal for a yearslong project on a monolithic replacement, the state has formed a new digital services unit to both take control of the existing system and to manage an incremental implementation of changes over the next few years.

The new system, once completed, will run on the Amazon Web Services cloud.

The unit, dubbed California's Child Welfare Digital Service (CWDS), is a collaboration of state and local government agencies. Dan Hon—a former content director for nonprofit civic tech group Code for America—is consulting the state on the effort.

The digital-focused effort, Hon said, would not be possible though without an executive-level mentality toward digital transformation.

“I think we have direction from the top, and it makes it easier for programs and for technology delivery to focus and move away from strict functionality requirements,” Hon said. “The shift in thinking is vital and required for increased success on both program delivery and the technology that is required to implement programs.”



Because it didn't seek a full re-bid and rebuild, California has broken the effort up into several smaller, more focused modules that are delivered by a vendor and implemented through CWDS. The digital services modules will include intake, certification, case management, resource management, court processing, eligibility and financial management.

One of these vendors is CaseCommons—a nonprofit that emerged from the Annie E. Casey Foundation. The group was selected to develop the new intake system. Intake is the part of the process where professionals across the state receive and investigate reported allegations of child abuse, neglect and exploitation. The platform, dubbed CaseBook, will be modeled in part on the nonprofit's work in [Indiana](#) and will be hosted on Amazon Web Services along with the rest of the child welfare information system.

Through that effort, CaseCommons will build an open source platform on CaseBook with user experience in mind, according to Jacqueline Gombach, the group's national director of sales. The bid CaseCommons won from the state required the platform to be open source, so the code on the platform could be easily shared and modified in the future.

### Building bridges

At the state level, agencies are looking to cloud computing for several different reasons. A common thread, however, is interoperability—ensuring that different health care programs, and their supporting systems with varying data formats can work together.

Currently, end users—in this case, case managers and social workers—are often stuck with legacy systems that may be difficult to use. With advances in the cloud and the adoption of quick, agile development cycles, companies like Subvertical are able to build solutions on top of a cloud infrastructure to ease that burden.

Based in California, Subvertical LLC powers the Vertical Change software platform that provides tools for data collection and reporting, specifically in the social service and public health sectors.

"[Legacy systems] are almost universally disliked by the people who have to use them because they don't help them do their work on a daily basis," Jonathan Humfrey, one of Subvertical's founders, told StateScoop. "What we really focus on is giving those providers a tool they can use all the time, every day, that helps them do their work."

VerticalChange is built on top of Amazon Web Services. It pulls data and information from the legacy systems that case managers already have and merges it into an electronic health record system that emphasizes user interface. The platform is encrypted with SSL and compliant with the Health Insurance Portability and Accountability Act, or HIPAA, which provides security requirements for electronic health information.

"We don't want to say you have to replace that [legacy] system," Humfrey said. "Our goal is almost to light up this network so we're a hub."

Being that hub, Humfrey said, enables providers to pull the data out of other systems and take action with it to provide better care and social services to the citizen.

Santa Barbara County, California, uses the VerticalChange platform. The county leverages the platform to collect, manage and share critical data for its Early Childhood



Education initiative, which involves more than 20 nonprofit and government partners. With VerticalChange, Santa Barbara introduced import/export functionality to its early childhood education platform. The platform also now integrates across even more system types and includes an API that pulls in data from an assessment tool for mental health services.

While staff frustrations and poor patient experiences are often the motivation for moving away from legacy health information and management systems, there are other benefits. Government agencies and care providers ultimately can save money, too.

At Indianapolis' Eskenazi Hospital, a health care customer-relationship management (CRM) system provider, HC1, has implemented a cloud-based tool that could save the hospital hundreds of millions of dollars while helping the state provide residents better access to critical health care and social service programs. The hospital says it provides outpatient services to nearly 1 million patients annually.

Beginning in 2015, HC1 began working with Eskenazi to help the hospital manage resources more effectively through more proactive customer engagement, rather than the reactive engagement model the hospital system had previously been using. The company brought together disparate data silos from the hospital's records—like financial information, care information and health profile information—into its CRM.

Access to this data in a central hub enables hospital staff to help some of the area's most vulnerable citizens gain access to critical social services that can help them save money and receive better care.

Eskenazi is partnering with HC1 to proactively get patients access to, and enrollment in, state health services that will help reduce the burden of healthcare costs on patients, as well as on the hospital.

Using financial and health data, HC1 has been able to identify patients across the Eskenazi system who could qualify for low-cost insurance or other benefits from the state and federal government, and prompt those patients with notifications through the CRM to get signed up or to check eligibility.

### Analyzing data for the future

Using their CRM, built on Amazon Web Services, HC1 analyzed that financial and health data from patients to help the hospital determine the best way to communicate with patients proactively.

In the past, Eskenazi's staff would have to call patients and remind them of upcoming appointments or surgeries, which diverted staff members' time from delivering care to patients. Now, with HC1's solution, patients are proactively notified across three different mediums—phone, text and email—about upcoming procedures or appointments.

With that notification tool implemented initially on a subset of Eskenazi's patients, HC1 helped the hospital reduce the "no-show" rate of overall patients to the hospital by nearly 9 percent. With the average cost of a missed appointment around \$3,000, the reduction in that rate resulted in millions of dollars in savings, HC1 said.

But HC1 isn't stopping there with analytics-driven cost-savings for hospitals. The company introduced its new ProviderView platform earlier this year, which "integrates, connects and enhances billions of claims, prescription and live clinical data to display a complete picture of provider behaviors," according to an announcement from the company.

Health care organizations can tap into the analytics platform to reveal actionable insights that open new opportunities to serve the needs of their patient populations.

### Multiple advantages

Built on the Amazon Web Services cloud, HC1, CaseCommons, Vertical Change and the California Child Welfare Digital Services are all aiming to reduce the financial burden and optimize delivery of health and human services for state and local governments, as well as partner institutions that provide care.

As demonstrated by the work underway in government agencies and hospitals across the country that use these tools, the availability and interoperability of data in the cloud, along with the analysis of that data can lead to improved health outcomes and tailored services for the individual. Such improved outcomes and services at scale can lead to healthier communities across the globe.

Each of these AWS partners and customers told StateScoop that these cloud-based services, rooted in big data analytics, end up paying for themselves with the cost savings from reduced capital expenditures, as well as with the efficiencies realized by uniting disparate systems, ultimately transforming the way HHS agencies and health care delivery organizations collaborate.

Find out more about how cloud is driving transformation across health and human services [here](#).

*This article was produced by Scoop News Group for, and sponsored by, Amazon Web Services and Intel, and distributed via StateScoop.com.*

