The State of Louisiana and IBM: Collaborating to eliminate Hepatitis C

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Executive summary/introduction

Louisiana and IBM have created a public/private partnership to build and deliver a solution to eliminate hepatitis C in five years. While this disease is very curable, many people in Louisiana don't know that they have it. Once they're diagnosed with hepatitis C, they often face multiple barriers to accessing treatment. Previously, these obstacles included the price of the drug, transportation to healthcare facilities and the stigma of the disease.

The Louisiana Department of Health and IBM co-created an affordable, community-based solution for anyone with hepatitis C in the state.

How it happened

IBM hosted a Blue Hack, using IBM® Design Thinking methodology, with key stakeholders from the Department of Health, Department of Corrections and academia, as well as the healthcare industry in Louisiana. The participants were government population health leaders, community health workers and healthcare providers. These participants included case workers, nurse practitioners, physician assistants, and primary care doctors, all who would need education and training to support patients with hepatitis C in Louisiana.

This team created an innovative community-based and community-informed solution to eliminate hepatitis C in the state in five years. The group ideated together and conceived of a community engagement platform that could be used for patients with hepatitis C. Community health workers, often former patients, could serve as coaches to mentor and support the recently diagnosed. Fundamental to supporting the community engagement solution and getting access and information to hepatitis C patients in all parts of the state, was eliminating data silos. To eliminate these data silos, a data platform was created to integrate all relevant data sets using IBM's resilient cloud architecture to leverage the state's existing infrastructure and networks.

What was the problem?

Hepatitis C is curable. Many people in the State of Louisiana weren't aware they had the disease, therefore they weren't diagnosed or seeking treatment. The combination of lack of healthcare resources, expense of the medication and an ineffective services delivery system contributed to the high levels of sickness in the state.

What did Louisiana hope to achieve?

The State of Louisiana wanted to achieve more positive health outcomes for a very vulnerable population—people diagnosed with hepatitis C. They want to eliminate hepatitis C in five years. Under the leadership of former Secretary of Health, Dr. Rebekah Gee, the strategy to achieve this goal was through a public/private partnership encompassing the needed medicine, community and ultimately the technology supporting the hepatitis C cure in Louisiana.

What were the challenges?

The medicine to cure hepatitis C was—and still is—very expensive. Somehow the cost had to be brought down. The hepatitis C population was ill informed that it was a curable disease if all necessary treatments are completed. Therefore, any solution had to have education and training as a high priority. There was also a portion of the population that was incarcerated, so ultimately the solution had to encompass the prison population. Lastly, the solution had to leverage the existing state infrastructure and be scalable without limitations on what technologies could be incorporated.

Innovative approaches

IBM and the State of Louisiana formed a public/private partnership to tackle the issue of hepatitis C. The approach used IBM Garage™ methodology and a Blue Hack, IBM Design Thinking session was convened. During this session and subsequent ones, IBM and the State of Louisiana assembled key stakeholders from across the community. Agency leaders, community health workers and healthcare providers participated, as well as IBM subject matter experts who worked together to ideate and brainstorm on what a solution could look like to achieve the state's "hep C-free" goal. How could the state, with the help of IBM, reach the people most vulnerable to contracting hepatitis C, as well as those already with a hepatitis C diagnosis?

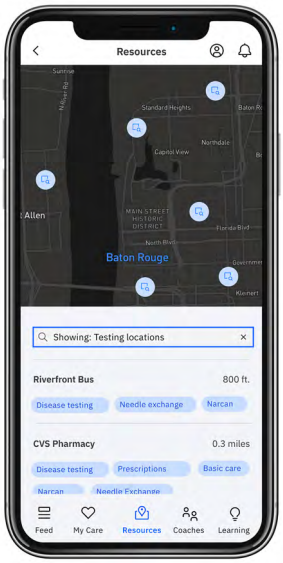
What was the end-state solution?

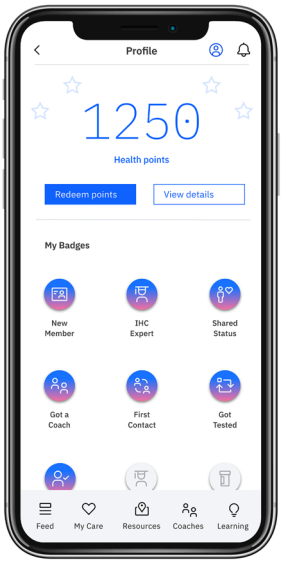
Community engagement and the idea of a cloud native community platform came out of the Blue Hack, IBM Design Thinking workshop. IBM delivered deep technological experience and expertise, leveraged the Red Hat® Open Shift® platform to build a cloud native app, established data interoperability through a data integration hub and surrounded it all with data security.

The result is a solution using IBM InfoSphere Master Data Management and the IBM Community Health Platform. The state's existing IBM InfoSphere® Master Data Management, connects databases from what was previously siloed information and provides a single, trusted view of data across the enterprise. Delivering flexibility and choice as required by the client, IBM Infosphere Master Data Management can be installed on premises or in the IBM Cloud™, which creates a security-rich environment for storing and accessing the data.

The IBM Community Health Platform consists of two mobile apps, a content management system and an insights dashboard. IBM Community Health, the first of the two apps, delivers personalized information to patients to help locate care and get test results, support from coaches, education and rewards. IBM Community Health for Coaches, the second app, provides community health workers with a tool to better serve their clients. These companion apps are designed to work together in support of the members: the patients or individuals at risk of hepatitis C, and coaches, the community health workers trained to support members on their journey to a cure.

In addition, a program incentive to attract and retain coaches is part of the solution where they are able to earn rewards for helping members reach key milestones.





How did they achieve the solution with the help of IBM?

IBM Garage methodology, based upon our expertise in design thinking, provided innovative ways to approach problem-solving in state and local government. The IBM Garage technique is a comprehensive approach to transformation that brings together key stakeholders, including business and IT leaders, designers and developers to co-create and scale new ideas quickly that can dramatically impact outcomes.

IBM Global Business Services® data integration capabilities and services, and, IBM InfoSphere Master Data Management eliminated the data silos and brought together data from multiple state systems. This created a single, trusted, 360-degree view of the data record for each person that can be updated in real time.

IBM's extensive knowledge of cloud technologies, open source and government solutions, along with the Red Hat Open Shift platform, provided the right combination to deliver a scalable, first-of-a-kind, but replicable, solution for this most vulnerable of populations in Louisiana. This solution is built on open source software, which gives Louisiana and government as a whole unrivaled flexibility. That flexibility comes from an ability to customize, allowing agencies and departments to choose and connect to the technologies that best suits their need, without vendor or cloud lock-in.

IBM has helped thousands of organizations successfully leverage cloud capabilities in a security-rich environment. Government organizations, especially, are faced with seemingly never-ending budget pressure, legacy systems and workforce challenges. By leveraging this cloud solution on Red Hat Open Shift, Louisiana can move at its own pace and make decisions about how various clouds and technologies can best fit its particular needs—today and in the longer term. It's scalable and designed to be easily expandable for use with other cohorts.

Moving forward

Louisiana is expanding its technology and healthcare capabilities with the IBM Community Health Platform. The state can use this solution to help improve population health outcomes for other diseases, and the possibilities extend to global health issues, such as substance abuse disorders, HIV or mental health illnesses. This solution, and the process to get there using public/private partnerships and Blue Hack, IBM Design Thinking methodologies, is a blueprint for other states to consider when addressing healthcare and social services challenges. It can be a national model for treatment of diseases going forward and a catalyst for positive results using open, scalable and security-rich, state-of-the-art technologies to deliver better outcomes.

Conclusion

Through the collaboration and co-creation between the State of Louisiana Department of Health and IBM, the outlook for a hepatitis C cure is much brighter. With affordable medicine, a community-based approach and IBM's expertise in cloud technologies and data integration, the IBM Community Health Platform is providing a more complete view of a patient's care lifecycle. Most importantly, it's helping make a "hep C-free Louisiana" a reality.

The most vulnerable populations face challenges that aren't solved by one-size-fits-all technology solutions. They require scalable solutions as nuanced and diverse as the people who seek them. Putting citizens and communities at the center of service delivery and partnering with IBM, the State of Louisiana used IBM expertise in design thinking and the technology required to build a solution that enables better care for its residents, better population health and the moonshot of eliminating hepatitis C in five years.

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