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The New York City Department of Health's Primary Care Information Project creates bold population health connections across the nation's largest city

By Mark Hagland



If you want to know what the future of healthcare in America looks like, a good person to consult would be Jesse Singer, D.O., M.P.H., of the New York City Department of Health and Mental Hygiene (NYCDH). Singer, an assistant commissioner who heads up the Primary Care Information Project in the NYCDH's Division of Health Care Access and Improvement, has been leading an extraordinary population health management initiative, one whose ultimate goals look a lot like what many industry experts believe the healthcare delivery system needs to look more like: that is to say, one in which clinical IT is continuously leveraged to support population health management, care management, and enhanced communications in all directions, including between physicians and public health departments.

And because of his and his colleagues' groundbreaking work, Singer and his fellow leaders in the New York City Department of Health and Mental Hygiene are the first-place winners in this year's Healthcare Informatics Innovator Awards program.

What Singer and his colleagues at the NYCDH are doing emerged organically out of the creation of the Primary Care Information Project (PCIP), which began operation in 2005.



Leaders of the New York City Department of Health Primary Care Information Project. Pictured from left to right: Jesse Singer, D.O., M.P.H.; Michael Buck, Ph.D.; Remle Stubbs-Dame, M.P.H.; Sheila Anane, M.P.H.; Sam Amirfar, M.D.; and John Taverna, M.P.H.

Photo: Alexis Maindrault

“Our mission,” Singer explains, “was to improve health through the use of health information technology. So we’ve been doing go-lives with physicians across New York City,” with 2,900 practices of all sizes (from solo practices to outpatient community health centers) and representing more than 2,900 providers, going live with electronic health records (EHRs) since 2007. “We estimate that we cover about 2.5 million patients in New York, with 400,000 encounters per month,” he adds.

TARGETING RESOURCES FOR OPTIMAL ROI

But helping physicians implement EHRs (and in fact, the NYCDH has been designated as a regional extension center for nearly three years) has been just the first phase in participation in the broader population health management effort. The Primary Care Information Project has established a data reporting and physician alert infrastructure, grounded in an electronic hub platform co-developed with the Westborough, Mass.-based eClinicalWorks) that allows the NYCDH to gather information on the prevalence of both acute disease outbreaks and of levels of chronic disease in different neighborhoods across New York City. Singer says the need was clear to focus on three specific types of data—clinical data from the EHR such as blood pressure control; utilization data, such as rates of e-prescribing; and syndromic surveillance data.

“Because we have very limited funds, we wanted to know what neighborhoods to target for certain things, such as, neighborhoods with high diabetes rates,” Singer says. “We asked ourselves, what can we build without requiring constant re-intervention by a vendor? So we built a vendor-neutral hub, which allows us to securely do three different things. One is to allow us to push electronic messages directly to providers into their inboxes. The second was the ability to query all of our electronic health records in a secure way. And we built this very securely so that it doesn’t identify individual patients, in order to avoid any HIPAA violations; it just counts up the number of people. For example, if we wanted to know the rate of obesity in different areas of New York City, we could do that. And we purposely built the system to avoid getting any PHI.” In fact, the department is pushing out queries on a daily basis to support its ongoing chronic disease surveillance.

The third element, Singer continues, is patient-specific clinical decision support, which he says the department will be focusing on more intently going forward. The potential here is broad: for example, recently, the NYCDH pushed out a message to its connected providers regarding a nationwide medication recall, providing them with a link to more information, and using the Primary Care Connect system to query in order to determine how many of the doctors’ patients were affected. So, Singer explains, if a particular patient was on the recalled medication, the department alerted the doctor to click on an icon, and from there, the doctor could query his or her EHR for more specific information.

The Primary Care Information Project was actually begun by Farzad Mostashari, M.D., now the national coordinator for health IT, when he was at the NYCDH, Singer points out, and was continued by a second NYCDH administrator, before Singer continued and expanded the program. Since the PCIP began tracking public health-related measures through its quality reporting system, the following advances have occurred:

- New York City primary care physicians who have implemented EHRs in their practices and who are participating in the PCIP have seen an average increase of 0.1 percent in primary care visits, and an average 2.4-percent increase in hemoglobin A1C screenings.
- Through PCIP, more than 100 sites have been recognized as patient-centered medical homes (PCMHs), making New York City the largest concentration of physician practices with that designation in the U.S.
- As of October 2011, 410 physician practices had been connected to the PCIP's hub system, with those practices serving more than 1.8 million New Yorkers.