

CASE STUDY

Payers and Public Health: A Novel Collaboration to Support Covid-19 Vaccination Uptake

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The New York City (NYC) Department of Health and Mental Hygiene, as a local health department, partnered with health plans to pay for provider-initiated outreach for Covid-19 vaccine counseling for unvaccinated people through a program called the Vaccine Outreach and Counseling Program (VOCP). The collective effort and use of emergency contracting — with a budget of \$35 million in funding from the government of NYC — allowed for an idea-to-execution period of 6 weeks. Seven insurance companies covering more than 90% of the NYC Medicaid market and a significant portion of the NYC Medicare Advantage market (insurance products that have a disproportionately large representation of people of color in NYC) administered the program as an in-kind contribution to the effort. Providers implementing the VOCP reported that they felt counseling efforts were valuable in increasing vaccination uptake, but also described operational challenges. Shortly after launching the VOCP, the federal government reached out to the health department to learn more about the program. Two months later, the U.S. Centers for Medicare & Medicaid Services authorized state Medicaid programs to cover such counseling. New York State's Medicaid program subsequently adopted a reimbursement policy with similar guidance for counseling while addressing some of the operational challenges of the VOCP model.

KEY TAKEAWAYS

- » The VOCP demonstrates how a local health department (LHD) can act quickly and in a synergistic way with state and federal government agencies.
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- » The VOCP also shows that LHDs and payers can rapidly solve problems together, even when the LHD does not regulate the payer.
- » Each individual in managed care is assigned to a health care provider, theoretically making it possible to rapidly contact more than 3 million New York City residents to counsel them with critical public health information. However, this does not happen in practice. The VOCP is a first attempt to enable paid proactive outreach to assigned patients for public health purposes.
- » A supplementary success of the VOCP is in how innovation can catalyze longer-term changes in population health management infrastructure and provider behavior. Notably, the VOCP helped accelerate implementation of payment for Covid-19 vaccine counseling at local, state, and federal levels.
- » In an emergency, speed matters for sound public health. The VOCP was a program for individuals who remained unvaccinated despite multiple efforts to increase access to the vaccine. Every single additional vaccination in this group represented a marginal benefit. A retrospective evaluation using health plans' claims data and matching to the immunization registry is planned to assess program impact in the future.

The Challenge

The Covid-19 vaccination rate in New York City (NYC) plateaued over the 2021 summer, with Black, White, and Latinx New Yorkers having some of the lowest rates — each group below the 53.3% citywide average as of July 1, 2021.¹ By that time, the unvaccinated had been eligible for vaccination for 3–7 months, and it was clear that existing efforts were not sufficient to overcome low vaccine confidence among some groups.

Addressing this challenge would call for provider involvement, given that clinician recommendations are one of the strongest predictors of vaccination,² and unvaccinated people — especially those who identify as Black^{3,4} — want medical advice about the Covid-19 vaccine from their health care providers. But patient outreach is resource intensive, and, at the time of program implementation, providers were not reimbursed for proactive outreach encouraging vaccination. The NYC Department of Health and Mental Hygiene (the Department) is tasked with encouraging vaccination throughout the city but lacks the regulatory power to require that outreach be reimbursed.

The Goal

We developed the Vaccine Outreach and Counseling Program (VOCP) in coordination with a group of the city's Medicaid and Medicare Advantage health plans (Plans) to incentivize providers to proactively reach out to patients to encourage Covid-19 vaccination. We also intended to prove the concept that a local health department (LHD) could work with Plans to fill a gap in care, even without regulatory power.

The Execution

Early Engagement

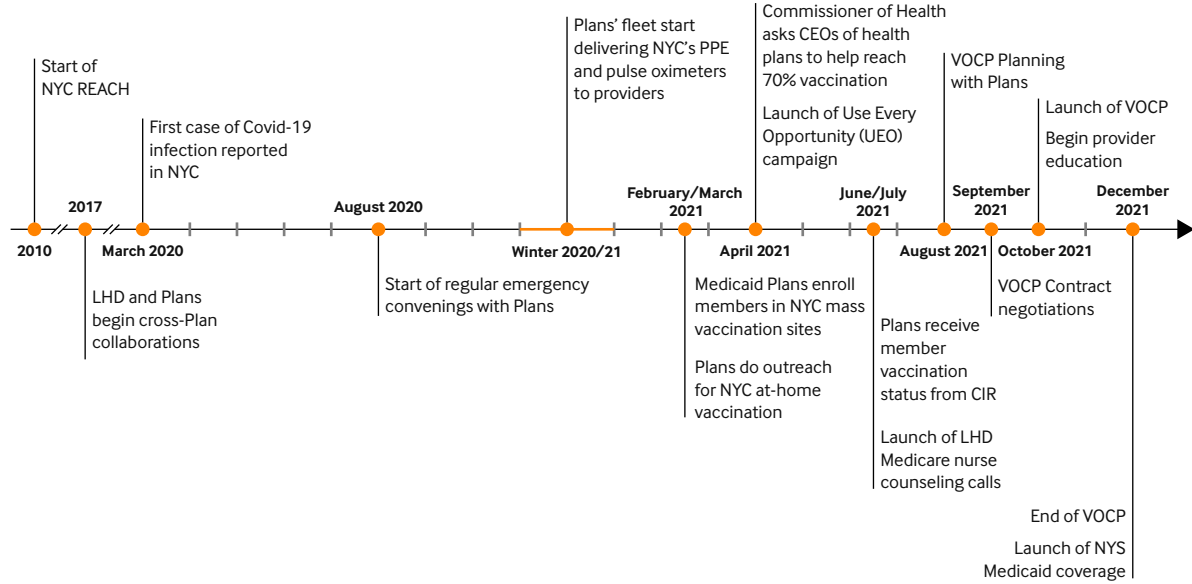
The VOCP grew out of the Department’s ongoing engagement with providers and Plans, as described in Figure 1.

Since 2010, the Department has supported provider care transformation through the [NYC Regional Electronic Adoption Center for Health \(REACH\)](#), an Office of the National Coordinator for Health Information Technology–designated Regional Extension Center.⁵ In 2017, the Department began further strengthening Plan relationships, particularly soliciting Plan feedback and support on Department initiatives. In spring 2021, the Department’s Use Every Opportunity Campaign⁶ (UEO), in partnership with the [Greater New York Hospital Association](#), provided tools⁷ (Figure 2), media⁸ (Figure 3, Figure 4), and convenings to equip providers with information and guidance for providing vaccine counseling at every clinical encounter. During the UEO, providers reiterated the necessity of reimbursement if they were to conduct more outreach.

FIGURE 1

Vaccine Outreach and Counseling Program (VOCP) Timeline

This figure offers a timeline of milestones from the start of the VOCP in August 2021 through its conclusion in December 2021. Importantly, we show earlier initiatives, dating to 2010, that helped set the stage for the program through the development of tools and relationships.



CIR = Citywide Immunization Registry, LHD = local health department, NYC = New York City, NYS = New York State, Plan = health plan, PPE = personal protective equipment, REACH = Regional Electronic Adoption Center for Health. Source: NYC Department of Health and Mental Hygiene




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FIGURE 2

Visual Abstract: Building Confidence in Covid-19 Vaccines

This visual tool was used to emphasize to clinicians the key role they can play in helping patients better understand the safety and efficacy of the Covid-19 vaccines.

Build Confidence in Covid-19 Vaccines

| Communicate to Build Trust | Become a Vaccine Champion | Engage With and Inform Patients |
|---|---|--|
| <p>Share clear and accurate information. Explain how Covid-19 vaccines:</p> <ul style="list-style-type: none">• Offer protection against serious disease, hospitalization, and death from Covid-19.• Were thoroughly researched, tested, and authorized.• Are monitored for safety and side effects.  | <p>Provider recommendation is the greatest predictor of a patient getting vaccinated:</p> <ul style="list-style-type: none">• Thirty-five percent of polled New Yorkers said hearing from a doctor or pharmacist would make them feel comfortable getting vaccinated.* <p>Empower health care personnel to recommend vaccination:</p> <ul style="list-style-type: none">• Provide staff with information and a forum for questions and answers.• Invite staff to share their reasons for getting vaccinated.  <p><small>*New York City Health Department Health Opinion Poll (December 9-21, 2020).</small></p> | <p>Ask open-ended questions and respond with facts and empathy:</p> <ul style="list-style-type: none">• How can I help you learn more about the vaccines?• What vaccine side effects have you heard about?• What activities do you enjoy that might be safer once you are vaccinated?  |

Sources:
1. Building Confidence in Covid-19 Vaccines: [nyc.gov/assets/doh/downloads/pdf/covid/providers/covid-19-providers-vaccine-building-confidence.pdf](https://www.nyc.gov/assets/doh/downloads/pdf/covid/providers/covid-19-providers-vaccine-building-confidence.pdf).
2. Covid-19 Vaccine Information for Providers: www1.nyc.gov/site/doh/covid/covid-19-providers-vaccines.page.

9.21

Source: NYC Department of Health and Mental Hygiene
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Design of the VOCP

We began designing the VOCP in August 2021, as a natural progression of our collaboration with Plans and providers, and on the basis of preliminary results of the Department’s in-house effort to have its nurses engage in outreach and counseling for unvaccinated Medicare enrollees. Notably, between June and August 2021, health department nurses counseled 8,000 long-eligible but unvaccinated individuals and were able to make appointments for at-home vaccination for approximately 17% of those counseled.

FIGURE 3

Use Every Opportunity Campaign: A Message to My Fellow Clinicians and Healers

This advertisement, which appeared in *The New York Times* in April 2021, was designed to generate awareness of the importance of and need for care providers to offer vaccine counseling at every clinical encounter.

ADVERTISEMENT

NYC
Health

A Message To My Fellow Clinicians and Healers

April 27, 2021

Dear Fellow Clinicians and Healers,

Thank you for all you have done and sacrificed throughout the Covid-19 pandemic. You have been caring for and comforting the sick, bringing this city back from the brink.


I need to ask for your help once again.

Vaccination is the single most important intervention we have against this virus right now. Your patients trust you, need your guidance, and want to hear from you. You are critical to building confidence in the authorized vaccines, particularly among communities of color that have been most impacted by Covid-19.

Please speak with your patients, your loved ones, and your community about the safe and effective Covid-19 vaccines. Answer their questions, starting with empathy, followed by the facts. **Your strong recommendation** is a critical factor in whether your patients will be vaccinated against Covid-19. Together we can save lives and prevent further suffering.

To find out more, including tools to have these conversations, visit nyc.gov/vaccinetalks.

Sincerely,



Dave A. Chokshi, MD, MSc
Commissioner
New York City Department of
Health and Mental Hygiene

PAID FOR BY NYC DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Source: NYC Department of Health and Mental Hygiene
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FIGURE 4

Use Every Opportunity Campaign: Social Media Messages from Doctors to Doctors

This figure shows a sampling of screen shots of social media messages directed by physicians to their peers, emphasizing the need to offer vaccine counseling; messages typically included links to supporting resources and videos.

Commissioner Dave A. Chokshi, MD @NYCHealthCommr

Tips for clinicians and healers when talking to patients about #COVID19 vaccines:

- ✓ Listen first
- ✓ Support informed decisions with science
- ✓ Respond to misinformation
- ✓ Honor concerns about discrimination and distrust

More: nyc.gov/vaccinetalks

Visit on nyc.gov

Dave A. Chokshi, MD, MSc
Commissioner
NYC Department of Health and Mental Hygiene

I'm Dr. Dave Chokshi, the City's doctor, with a message for you, my fellow clinicians and healers.

6.9K views 0:04 / 1:19

Message to Clinicians from Commissioner Dave A. Chokshi, MD, MSc

9:00 AM · May 14, 2021 · Twitter Media Studio

Oni Blackstock MD MHS @oni_blackstock

Fellow clinicians and healers:

We know that your strong recommendation is a critical factor in whether your patients will be vaccinated against COVID-19.

Tools from @nycHealthy to have this conversation: nyc.gov/vaccinetalks

A Message to Clinicians and Healers:
Speak with your patients and community about the safe and effective COVID-19 vaccines.

10:45 AM · May 3, 2021 · Twitter Web App

Dr. Tom Frieden @DrTomFrieden

Doctors and other health professionals have a major role to play in getting people vaccinated. Please talk with your patients and community about the remarkable safety and effectiveness of Covid vaccines. nyc.gov/vaccinetalks

A Message to Clinicians and Healers:
Speak with your patients and community about the safe and effective COVID-19 vaccines.

You and Commissioner Dave A. Chokshi, MD

8:10 PM · Apr 29, 2021 · Twitter Web App

Mitch Katz, MD @DrKatzNYCHH

Attention fellow clinicians and healers: Watch this video message from my former @NYCHealthSystem colleague and current @NYCHealthCommr Dr. Dave Chokshi about the importance of recommending the #COVID19vaccine to your patients: @nycHealthy: nyc.gov/vaccinetalks

A Message to My Fellow Clinicians and Healers

341 views 0:02 / 1:19

8:43 AM · May 3, 2021 · Twitter Web App

Source: NYC Department of Health and Mental Hygiene and partner doctors
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“ *The VOCP required counseling to meet certain standards of quality — such as including details about vaccine effectiveness and safety, and assisting the patient to identify a vaccination site — but did not tie reimbursement to whether the patient ultimately was vaccinated.*”

The VOCP, funded out of a \$35 million emergency appropriation authorized by the NYC mayor, paid providers to proactively reach out to their long-eligible but still unvaccinated NYC-resident patients and to counsel them about the safety and efficacy of Covid-19 vaccination. Practically, the VOCP worked as follows:

1. Plans provided the Department with a list of their NYC-resident members who were not known by the Plan to be vaccinated.
2. The Department, using its Citywide Immunization Registry (CIR), returned to each Plan a list of its members who were, in fact, unvaccinated (and Plans committed to build an automated HL7 interface to the CIR by the conclusion of the program).
3. Plans provided the contracted providers with a list of unvaccinated patients attributed to the provider (“List”).
4. Providers reached out to the patients on the provider’s List and submitted a claim to the Plan for each patient counseled.
5. Plans paid each valid claim at a rate of \$25 or \$50 per call, depending on whether a provider participated in the call.
6. The Department reimbursed each Plan for the Plan’s total VOCP claims paid.

The VOCP required counseling to meet certain standards of quality — such as including details about vaccine effectiveness and safety and assisting the patient to identify a vaccination site — but did *not* tie reimbursement to whether the patient ultimately was vaccinated. To ensure the VOCP did not go over budget, providers could only be reimbursed for counseling those patients on their List.

Process of Implementation

The VOCP advanced from initial conception to implementation between August and October 2021. Initial discussions proceeded along two simultaneous tracks — *inside* and *outside*. The outside track, between the Department and Plans, established which program designs the Plans could feasibly agree to. The inside track, within the Department, involved Legal, Finance, the

Mayor's Office, and other key officials. Proceeding down both of these tracks at once proved critical. This allowed us to identify and resolve key challenges in real time as design progressed.

The Program implemented bilateral contracts between the Department and each participating Plan. By leveraging the Plans' existing Provider contracts, Department funds could flow to providers via the Plans without establishing direct contractual/payment relationships between the Department and providers. Critically, Plans agreed to cover their overhead in kind. Thus, the entire budget was allocated to provider reimbursement.

The first Plans signed on to the VOCP and the program was publicly announced on September 9, 2021.⁹ As Plans joined the program, each needed to promulgate VOCP billing rules, educate providers on the existence of the VOCP, and circulate Lists to providers. The Department assisted with this educational effort, leveraging our existing programs, such as NYC REACH, the Covid-19 Vaccination Program with federally qualified health centers (FQHCs), and Public Health Detailing, a primary care provider outreach initiative modeled on pharmaceutical detailing.¹⁰

On the basis of a convenience sample of providers in the NYC REACH program, providers implementing the program were pleased that outreach and counseling efforts would be reimbursed and found value in counseling patients. At the same time, providers expressed frustrations with operational challenges, including obtaining the List of unvaccinated patients and following each Plan's different billing guidance.

In September 2021, the federal government reached out to our team to learn more about the structure of the VOCP. Two months later, the U.S. Centers for Medicare & Medicaid Services authorized Medicaid plans to reimburse vaccine counseling services. In December 2021, New York State (NYS) announced that Medicaid would begin to cover vaccine counseling as a reimbursable service.¹¹ The program's mission accomplished, it wound down at the end of 2021.

Hurdles

The VOCP started its roll out after only 6 weeks of planning and contract negotiations. The Department had never convened Plans in this way or contracted with Plans to supplement gaps in Medicaid/Medicare benefit design. Hurdles were plentiful and educational.

Design and Contracting

The VOCP's substantive contractual terms were only 9 pages long but were appended to more than 100 pages of mandatory City boilerplate and appendices. The Plans were an array of local, national, nonprofit, and for-profit organizations. Finding mutually agreeable legal terms was a challenge, but the VOCP had committed health plan executive champions and agreement was possible. For instance, all parties wanted to keep the Department insulated from the Plans' contractual/payment relationships with providers. We structured the program's Department-Plan contracts as *service contracts* for Plans to establish vaccine outreach as a payable service and then process claims for that service. This was critical because it allowed Plans to maintain

oversight over provider contracts and services, including the authority to audit counseling sessions.

“ *The Department had never convened Plans in this way or contracted with Plans to supplement gaps in Medicaid/Medicare benefit design. Hurdles were plentiful and educational.* ”

The VOCP could not reimburse the Plans for services already covered by the Plans (e.g., counseling as part of vaccination administration or during routine health visits). This was avoided by careful contractual drafting.

Budgeting sufficient funding with no benchmarks to predict uptake was difficult. Each Plan’s contract specified a maximum reimbursement.

Providers expressed concern about limited bandwidth, and thus, the VOCP allowed counseling to be conducted by nonlicensed personnel (e.g., medical assistants) as long as the billing provider approved of the counseling script.

The VOCP did not cover counseling for uninsured individuals, because these are not assigned to a specific health plan or provider.

Operational

Operationalizing distribution of Lists to providers was a challenge and started at different times depending on the Plan. Further, providers generally deliver services to patients who seek it. The VOCP required a provider to *proactively* reach out to patients, but *only* those patients on a Plan-provided list. Providers were sometimes unclear which patients were designated for the reimbursable counseling. FQHCs reported particular operational difficulties with managing patient lists. Additionally, independent physician associations and health systems sometimes mediated between the Plan and individual providers. In some cases, this delayed distribution of Lists to providers. In other cases, these organizations conducted centralized outreach rather than distributing Lists to providers.

The use of billing codes and processes across Plans was not standardized. To quickly implement the program, Plans opted to use different billing codes and processes that aligned with their existing procedures. Some Plans only disseminated Lists to high-volume providers and opted to keep the codes confidential.

To address such challenges, the Department used various methods to keep providers informed, including holding webinars, sending emails, posting information on webpages, and offering individual support. Plans also proactively sent guidance on obtaining Lists and billing. Additionally, the Department surveyed a subset of providers to monitor the implementation and reported challenges to the Plans to directly address issues.

Monitoring

Providers submit claims to the insurance company up to 6 months after service is rendered, and the VOCP was active for 2 to 3 months per Plan, ending on December 31, 2021. We will not know how much counseling was conducted until claims for counseling are received and paid by the Plans, and, in some cases, we expect the counseling to go unbilled, so monitoring was anecdotal, through one-on-one outreach to providers.

The program had to be launched rapidly and had a short duration. We prioritized speed over evaluation in implementing the program because we had evidence that the intervention would help increase vaccination uptake, particularly among individuals with low vaccine confidence. At that point in time, despite multiple efforts to increase access to the vaccine and to encourage vaccinations, a large portion of the population remained unvaccinated. Therefore, we operated on the premise that any vaccination resulting from counseling provided through the VOCP was a win.

“

We prioritized speed over evaluation in implementing the program because we had evidence that the intervention would help increase vaccination uptake, particularly among individuals with low vaccine confidence.”

The Team

Our team was based in the Department’s Bureau of Equitable Health Systems, which manages health care payer and provider relations and technical assistance; the bureau sits within the Center for Health Equity and Community Wellness, itself dedicated to advancing health equity across the city. Implementing the VOCP required coordination across the Department and with multiple city agencies and close partnership with the Plans. In April 2021, the NYC Health Commissioner convened the CEOs of major Plans around the shared goal of fully vaccinating 70% of New Yorkers and invited their participation in the precursor to the VOCP. The Department often convened providers and community-based organizations but convening payers in this way represented a novel collaboration. The participating Plans included Amida Care, Centene, EmblemHealth, Empire Blue Cross/Blue Shield HealthPlus, Healthfirst, MetroPlus Health Plan, and UnitedHealthcare Community Plan.

The involvement of legal, finance, audit, and medical officers both within the Department and at the Plans was essential to the VOCP’s success. Outside of a public health emergency, this kind of expedient and effective cross-sectoral work is often painstakingly slow. A contributing factor to the expediency to deploy the program was that executives at the Plans shared with the health department an urgency to do everything possible to reach high vaccination rates at a time when the remaining unvaccinated had very low vaccine confidence; other factors that helped expedite the effort were that this project was targeted, incentivized an action with good evidence to change vaccination behavior, was short-term, and was resourced appropriately.

Metrics

Preliminary outcomes include:

The VOCP was widely adopted. Plans representing more than 90% of the NYC Medicaid market and a substantial portion of the Medicare Advantage market participated in the initiative. More than 960,000 patients were identified for counseling through a match of insurance files with the CIR. A convenience sample of providers with large Medicaid panels found that 13% of the 30 sampled independent practices and 21% of the 47 FQHCs were implementing the program. Preliminary data as of May 24, 2022 (with 1,573 claims in), from two of the seven Plans, show that 80% of counseling was performed by a clinician. (Counseling by NYS-licensed physicians, nurse practitioners, physician assistants, certified nurse midwives, clinical nurse specialists, registered nurses, licensed practical nurses, and pharmacists could be billed as clinician counseling.)

The VOCP established a model that has the potential to be replicated on a larger scale. The State quickly established Covid-19 vaccination counseling as a Medicaid benefit, aligned with VOCP parameters and rates. Preliminary evidence from a telephone survey (convenience sample) suggests that independent practices that participated in the VOCP are more likely to participate in the State Medicaid benefit when compared with nonparticipating practices. Providers estimated that they succeeded in reaching approximately one-fourth of the patients to whom they reached out.

The most-cited barriers to VOCP implementation were its limitation to only counsel patients on Plan-provided Lists and its use of multiple plan-specific billing processes. Despite barriers, providers reported that they felt their participation in the VOCP was beneficial to increasing vaccination rates. Further, the State was able to eliminate these barriers in its implementation through Medicaid.

“ Overall, the proportion of New Yorkers with at least one dose of Covid-19 vaccine increased from 71% to 82% during the time frame of the program.”

Plans built an automated (HL7) connection to the CIR, which enables better long-term population health management for multiple immunizations. The Department had been endeavoring for years to get Plans to build the interfaces to link to our CIR, which subsequently happened in a matter of months as part of the VOCP. Plans now have access to real-time vaccination information that can be used for future efforts.

Overall, the proportion of New Yorkers with at least one dose of Covid-19 vaccine increased from 71% to 82% during the time frame of the program (October 1–December 31, 2021). This improvement in vaccination rates cannot be directly attributed to the VOCP given several other contemporaneous factors (including vaccine requirements, incentive programs, eligibility for vaccination of the 5-year-old-plus population, and the spread of omicron), but given the strong evidence associated with the impact of provider recommendation,² it may have contributed to the increase, particularly for patients with lower confidence in the Covid-19 vaccines.

As mentioned, the outreach and vaccination outcomes of the VOCP will be evaluated; however, there are several limitations in our ability to draw conclusions on its specific impact on these outcomes, because the evaluation relies exclusively on claims data. We are interested as well in the VOCP's impact on policy and the creation of post pandemic infrastructure. Key measures of success will include:

- Percentage of
 - eligible patients assigned to a List
 - providers with assignment who conducted counseling
 - patients counseled
 - counseled patients who got vaccinated
- Racial and ethnic breakdown of patients in the above
- Proportion of the Medicaid and Medicare Advantage insurance market that participated in the initiative
- Policy changes associated with VOCP implementation
- Provider intention to use new Medicaid Counseling
- Infrastructure improvements that enable faster and higher penetration of the patient population through Plans and assigned primary care providers for public health purposes

Where to Start

A joint LHD-Payer-Provider program such as the VOCP can only be established in an environment of strong relationships and processes and with a commitment to bridge public health and health care.¹² To prepare, we recommend an LHD start by:

- Recognizing that Plans provide a pathway to disseminate patient-level information to providers faster than an LHD could
- Establishing ongoing relationships with Plans and providers
- Developing a flexible process for emergency contracting
- Organizing Plans and providers around a shared need
- Dedicating seed funding large enough to address that need

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Disclosures: Dave A. Chokshi is a member of the NEJM Catalyst Innovations in Care Delivery editorial board. At the time of the VOCP effort and the submission of this paper, Dr. Chokshi was serving as Commissioner of Health, NYC Department of Health and Mental Hygiene, Long Island City, NY, and Dr. Pham-Singer was serving as Executive Director of Healthcare System Innovation and Support, NYC Department of Health and Mental Hygiene, Long Island City, NY. Ana Isabel Gallego, Hang Pham-Singer, Zachary Withers, Sami Jarrah, and Michelle E. Morse have nothing to disclose.

References

1. New York City Department of Health and Mental Hygiene. COVID-19: Data: Vaccination Trends. City of New York. Updated January 24, 2022. Accessed May 19, 2022. <https://www1.nyc.gov/site/doh/covid/covid-19-data-vaccines.page>.
2. Nguyen KH, Yankey D, Lu P-J, et al. Report of health care provider recommendation for COVID-19 vaccination among adults, by recipient COVID-19 vaccination status and attitudes - United States, April-September 2021. MMWR Morb Mortal Wkly Rep 2021;70:1723-30 https://www.cdc.gov/mmwr/volumes/70/wr/mm7050a1.htm?s_cid=mm7050a1_w <https://doi.org/10.15585/mmwr.mm7050a1>.

3. COVID Collaborative. Coronavirus Vaccine Hesitancy in Black and Latinx Communities. Langer Research Associates. November 23, 2020. Accessed January 24, 2022. <https://www.covidcollaborative.us/resources/coronavirus-vaccine-hesitancy-in-black-and-latinx-communities>.
4. Hamel L, Kirzinger A, Muñana C, Brodie M. KFF COVID-19 Vaccine Monitor: December 2020. December 15, 2020. Accessed January 24, 2022. <https://www.kff.org/coronavirus-covid-19/report/kff-covid-19-vaccine-monitor-december-2020/>.
5. Agency for Healthcare Research and Quality. NYC REACH: Extending Assistance with Electronic Health Record Implementation to Facilitate Clinical Quality Improvement. National Learning Consortium. January 2014. Accessed January 24, 2022. <https://ushik.ahrq.gov/mdr/portals/mu/meaningful-use-resources/case-studies/case-study-nyc-reach?system=mu>.
6. New York City Department of Health and Mental Hygiene. COVID-19: Providers. Vaccine Information for Providers. City of New York. Updated January 10, 2022. Accessed January 24, 2022. <https://www1.nyc.gov/site/doh/covid/covid-19-providers-vaccines.page>.
7. New York City Department of Health and Mental Hygiene. Building Confidence in COVID-19 Vaccines. Updated June 21, 2021. Accessed February 8, 2022. <https://www1.nyc.gov/assets/doh/downloads/pdf/covid/providers/visual-abstract-build-confidence-in-covid-19-vaccines.pdf>.
8. NYC Department of Health and Mental Hygiene. A Message to My Fellow Clinicians and Healers [Advertisement]. The New York Times. April 27, 2021. Accessed April 27, 2021.
9. Health Department announces new \$35 million program for providers to speak with patients about COVID-19 vaccines. City of New York. Updated September 9, 2021. Accessed January 31, 2022. <https://www1.nyc.gov/site/doh/about/press/pr2021/health-dept-announces-35-million-program.page>.
10. Larson K, Levy J, Rome MG, Matte TD, Silver LD, Frieden TR. Public health detailing: a strategy to improve the delivery of clinical preventive services in New York City. *Public Health Rep* 2006;121: 228-34 <https://journals.sagepub.com/doi/10.1177/003335490612100302> <https://doi.org/10.1177/003335490612100302>.
11. NYC Department of Health and Mental Hygiene. Dear Provider Letter on NYC and NYS Medicaid reimbursement for vaccine counseling. Updated December 22, 2021. Accessed February 7, 2022. <https://www1.nyc.gov/assets/doh/downloads/pdf/covid/providers/letter-medicare-vaccine-counseling.pdf>.
12. NYC Department of Health and Mental Hygiene. Inaugural Chief Medical Officer (CMO) Strategic Plan 2022-23. December 2021. Accessed January 31, 2022. <https://www1.nyc.gov/assets/doh/downloads/pdf/public/chief-medical-officer-strategic-plan.pdf>.