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Cover photo illustration by Denver Auditor’s Office staff. Cover photos courtesy of Vivent Health, Harm Reduction Action Center, and Denver Department of Public Health and Environment.
AUDITOR’S LETTER

The objective of our audit of the City and County of Denver’s syringe access and sharps disposal programs was to assess whether the Department of Public Health and Environment provides effective management and oversight to help ensure the programs’ success. I am pleased to present the results of this audit.

The audit revealed gaps in Public Health and Environment’s strategies for data management and program evaluation of both programs, including its documentation of key oversight practices. The audit also found Public Health and Environment should improve its contract monitoring processes to hold providers accountable with contract terms, and it should assess whether laws for the syringe access program are too restrictive or outdated. If unaddressed, these risks could lead to inefficient allocation of city resources and an inability to determine the program’s success at reducing harm and connecting people to other health services.

By implementing recommendations for documented policies, data management, and collaboration with program partners, the Department of Public Health and Environment will be better equipped to measure, monitor, and ensure the success of its syringe access and sharps disposal programs, as well as the people the programs serve.

This performance audit is authorized pursuant to the City and County of Denver Charter, Article V, Part 2, Section 1, “General Powers and Duties of Auditor.” We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We extend our appreciation to the personnel at the Denver Department of Public Health and Environment and the syringe access program providers who assisted and cooperated with us during the audit. For any questions, please feel free to contact me at 720-913-5000.

Denver Auditor’s Office

Timothy M. O’Brien, CPA
Auditor
Objective
The objective of our audit was to assess whether the Denver Department of Public Health and Environment provides effective management and oversight of its syringe access and sharps disposal programs and to assess the extent to which the department measures progress and ensures the programs’ success.

Background
Denver’s Department of Public Health and Environment is dedicated to improving the city’s environmental and public health. The department oversees many services and has six divisions.

The department’s Community and Behavioral Health Division oversees most of the city’s substance and opioid misuse prevention and treatment programs — such as the syringe access and sharps disposal programs — primarily by administering contracts with community providers. The syringe access and sharps disposal programs seek to reduce harm for people who use drugs and to reduce harm for the community at large by providing access to sterile injection equipment and safe disposal options.

Highlights from Audit

The Department of Public Health and Environment Could Better Manage Its Syringe Access and Sharps Disposal Programs, and It Could Better Assess whether the Programs Are Effective in Reducing Harm

The Department of Public Health and Environment should improve strategies for data management and program evaluation — particularly regarding needs assessment, data collection, periodic evaluation, and documentation of evaluation results used to inform its decision-making.

The department could coordinate more effectively with the syringe access providers to assess the success of the program in reducing harm for people who use drugs or inject substances.

The department should also take steps to improve its program management practices to determine the effectiveness of the syringe access and sharps disposal programs. The department should assess these programs to determine the extent to which the people who need these services are actually receiving them.

Denver Auditor Timothy M. O’Brien, CPA
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# TABLE OF CONTENTS

## BACKGROUND

1

## FINDING

8

The Department of Public Health and Environment Could Better Manage Its Syringe Access and Sharps Disposal Programs, and It Could Better Assess whether the Programs Are Effective in Reducing Harm

The Department of Public Health and Environment Should Improve Its Strategies for Data Management and Program Evaluation

The Department of Public Health and Environment Should Ensure Syringe Access Providers Comply with Contract Terms, and It Should Assess the Impact of Existing Program Regulations

9

33

## RECOMMENDATIONS

43

## AGENCY RESPONSE TO AUDIT RECOMMENDATIONS

47

## OBJECTIVE, SCOPE, AND METHODOLOGY

53

## APPENDICES

55

Appendix A – Mapping Analysis

Appendix B – Leading Practices Reference

65
BACKGROUND

The Opioid Epidemic

In 2018, the National Institute on Drug Abuse reported almost 67,400 drug overdose deaths in the U.S. — of which 46,800, or more than 69%, involved opioids.¹ An estimated 128 people died daily that year from overdosing on opioids, including prescription opioids, heroin, and illicitly manufactured fentanyl, a powerful synthetic opioid.²

Since the 1990s, the opioid epidemic has become a global public health crisis. Not only has there been an increase in people misusing opioids and an increase in infants born with opioid withdrawal symptoms, but HIV and other blood-borne illnesses are also on the rise as injection drug use of opioids and other substances increases.

For the U.S. alone, the U.S. Centers for Disease Control and Prevention estimates the economic burden of prescription opioid misuse to be $78.5 billion a year — with costs incurred for health care and treatment, lost workforce capacity, and an increased caseload in the criminal justice system.³ Colorado reported 564 opioid-involved overdose deaths in 2018.⁴

Denver’s efforts to address the opioid crisis began in 2016 when the mayor allocated a position in the Department of Public Health and Environment to explore wrap-around services for the city’s syringe access program, which had been implemented in 2012. This effort evolved into a collaborative group — known as the “collective impact group” — which included over 100 organizations and city agencies coordinating the various community efforts to address the opioid epidemic.

Work groups began meeting in April 2017 to set a vision, assess the city’s needs, and develop strategies and priorities for action. The Department of Public Health and Environment’s Community Health Division — later renamed the Community and Behavioral Health Division — dedicated staff and resources to support this initiative and has since taken the lead on coordinating efforts.

³ Ibid.
Denver’s Department of Public Health and Environment is dedicated to improving the city’s environmental and public health. Public Health and Environment oversees many services, and it has six divisions, which are shown in Figure 1.

In 2018, Denver Human Services’ Office of Behavioral Health Strategies was moved under the health department’s purview, forming the Community and Behavioral Health Division. This division oversees most of the city’s substance and opioid misuse prevention and treatment programs — primarily by administering contracts with community providers and providing some direct services.

In addition to the syringe access and sharps disposal programs, the division also oversees medication-assisted treatment services and other general substance misuse services, such as Denver C.A.R.E.S., which is funded under Denver’s operating agreement with the Denver Health and Hospital Authority.

The division’s estimate for syringe access and kiosk contract awards allocated in 2020 totals just over $912,000 with nine positions in different divisions throughout Public Health and Environment assigned to support these programs, along with the employees’ other assignments. The department estimates the total full-time equivalent personnel associated with oversight of syringe access and kiosk contracts is less than one full-time employee. However, the department has not completed a formal full-time equivalent analysis, and we could not verify the basis of this estimate.

Between 2018 and 2020, Public Health and Environment increased how much funding it allocated toward syringe access program contracts by 61% from $325,021 in 2018 to $522,126 in 2020.
In 2017, as a result of the collective impact group's work, the Department of Public Health and Environment drafted a five-year opioid response strategic plan to guide the city's efforts in addressing the opioid crisis.

The plan includes three goals with associated strategies, activities, programs, and metrics:

1. To prevent substance misuse;
2. To improve treatment access and retention; and
3. To reduce harm.\(^5\)

Except for syringe access, most activities and programs described in the strategic plan are either newly implemented or still in development.

Specifically, the opioid plan includes three programs that support the goals related to treatment access and retention and reducing harm. These are: (1) a pilot program at Denver Health to expand its Emergency Department's program for medication-assisted treatment to 24-hour, seven-days-a-week access, (2) the city's preexisting syringe access program, and (3) its new disposal kiosks for needles and other sharp objects.

In May 2019, the department provided an informal update related to the opioid response strategic plan that included progress on additional activities related to substance misuse programs. These initiatives included: overdose education and naloxone distribution to prevent fatal overdoses, mobile behavioral health and support services to underserved neighborhoods, and an early warning system to identify increases in overdoses and to send prevention messages to warn health care providers and at-risk residents.

In 2019, after developing the opioid response strategic plan, the Department of Public Health and Environment and its partners found they needed to expand their scope to address substance misuse and behavioral health issues more broadly. Rather than updating the strategic plan, though, the department intends to incorporate these goals and associated activities in a citywide planning effort called the “Road to Wellness.” Adopted in 2020, this framework is intended to guide all city efforts in improving behavioral health for the next five years.

Under Denver’s “Road to Wellness,” city agencies and their partners in behavioral health should develop strategies around five goals, paraphrased below:

1. Promoting well-being in communities
2. Improving access to care

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3. Improving the quality of care (e.g., compassionate and coordinated care)

4. Increasing response times and strategies available for response

5. Ensuring the right data is available for understanding and improving behavioral health

As of April 2020, Public Health and Environment officials said they were still working on developing their own strategies to incorporate in the opioid response strategic plan in line with this citywide framework. They said they intend to complete these strategies by Aug. 31, 2020.

Denver’s Syringe Access Program

Syringe access programs — previously referred to as needle exchange programs — are “proven and effective community-based programs that can provide a range of services.” Their primary goal is to provide people who use drugs with sterile syringes while safely collecting and discarding used syringes. Syringe access programs do not include or involve supervised injection sites. Although the city approved supervised injection sites in 2019, the state has not yet authorized them.

Syringe access programs also provide people with ways to access additional services that support their health and well-being, including HIV and hepatitis C diagnoses and treatment, training on how to prevent a drug overdose, basic medical care, housing, and other social services.

These programs are rooted in the principle of harm reduction. According to the Harm Reduction Coalition, a national advocacy and capacity-building organization that provides training and guidance to harm reduction professionals, “harm reduction” is a set of practical strategies that reduce negative consequences of drug use. This includes a spectrum of strategies — from safer use, to managed use, to abstinence. Harm reduction strategies meet drug users “where they’re at” and address conditions of use along with the use itself.

Legal requirements and community perception of drug use continue to present complicated challenges syringe access providers must overcome. Conflicting drug paraphernalia laws at the state and local levels have

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prevented proponents of syringe access from implementing programs. For example, Denver voters first approved a syringe access program in 1997, but the city could not implement the program until the Colorado Legislature amended state law in 2010.

Legal restrictions and stigma remain barriers to accessing services. Leading practices, therefore, advocate for high levels of community engagement with law enforcement, neighborhood associations, local businesses, religious groups, and government representatives.¹⁰

The goal of Denver’s syringe access program is to reduce the harm associated with drug use and injecting substances. Ultimately, this program aims to reduce the spread of blood-borne disease and also to connect people to services, including testing, treatment referral, education, behavioral counseling, and the provision and collection of harm reduction supplies like sterile needles, condoms, overdose reversal medication, and other preventative measures.

According to the CDC, research shows people are five times more likely to access treatment for substance misuse if they participate in a syringe access program. Studies have also shown people who participate in syringe access programs are more likely than others to reduce or stop injecting.¹¹

The city contracts with three providers to offer its syringe access services: the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health.¹²

City ordinance caps the number of programs to three, although Public Health and Environment received a variance to operate a fourth program — its own — at the end of 2019.¹³

The Harm Reduction Action Center and the Denver Colorado AIDS Project each operate at one fixed location as shown in Appendix A. Public Health and Environment has contracted with these two providers since 2012. In August 2019, the department added Vivent Health as a third provider. Vivent Health has a fixed location for supplies and office work but operates as a syringe access only through its mobile unit. Its fixed location is within 1,000 feet of a school. Therefore, under city ordinance, that fixed location cannot operate as an exchange.¹⁴

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¹² To provide syringe access services to Denver residents, the Colorado Nonprofit Development Center does business as the Harm Reduction Action Center, Colorado Health Network Inc. does business as the Denver Colorado AIDS Project, and AIDS Resource Center of Wisconsin Inc. does business as Vivent Health.
¹⁴ Denver Revised Municipal Code § 24-157(c).
As a monitor, the city's main goal is to determine whether the program and its providers are performing according to contract — that is, helping the intended population and meeting the program's intended goals.

In addition to the three contracted providers, the Community and Behavioral Health Division plans to use its new "Wellness Winnebago" — or "Wellness Winnie" — as a mobile syringe access provider and as a component of co-located services for people who use drugs. Although approved in 2020, the Wellness Winnie does not yet operate as a syringe access provider and has instead been offering general wellness and COVID-19 related services.

The Wellness Winnie is a mobile services unit meant to use harm reduction principles to provide people who use drugs with support and other behavioral health services. According to the operating procedures for the Wellness Winnie, the mobile unit intends to focus on neighborhoods with limited access to behavioral health services.\(^\text{15}\)

In addition to the services provided through the city's syringe access program, the Department of Public Health and Environment installed sharps disposal kiosks around the city to collect used syringes and other sharps to further reduce public harm and to remove improperly discarded sharps from the trash waste stream.

In May 2019, the city invested $12,000 to install, service, and maintain four sharps disposal kiosks at the following locations:\(^\text{16}\)

- Denver Fire Station 4, 19th Street and Lawrence Street
- Governor’s Park, East 7th Avenue and Logan Street
- Lincoln Park, West 13th Avenue and Osage Street
- McIntosh Park, outside the Wellington E. Webb Municipal Office Building off West Colfax Avenue

The kiosks provide the public with accessible, secure disposal sites to help address the issue of needles and other sharp objects being discarded in public places. "Sharps" include needles, syringes, lancets, and autoinjectors — all of which can be dangerous to the community when not disposed of properly.

The kiosks are maintained and emptied by a contractor with oversight from Public Health and Environment’s Environmental Quality Division. The

\(^\text{15}\) Community and Behavioral Health Division officials said they also hope to use the Wellness Winnie to collect information about residents’ needs.

\(^\text{16}\) The city previously had a kiosk located on the Cherry Creek Trail to pilot the sharps disposal program. This kiosk was removed prior to the installation of the four new kiosks. Public Health and Environment officials noted the importance of accessibility for the new kiosks; the pilot site was difficult to access and service, which led to the kiosk overflowing on several occasions.
contractor also conducts a monthly visual inspection and submits to the department photos and an estimate of how full a kiosk is.

**Exceptions to City Ordinance**

Syringe access programs and harm reduction strategies can be controversial. Historically, some municipalities, including Denver, have imposed limits on the programs’ operations. However, providers can obtain exceptions to Denver’s restrictions by requesting and receiving a variance from the city’s Board of Public Health and Environment. A “variance” is an exception to a law or regulation granted to remove restrictions on certain entities or activities.  

The provider requesting the variance must draft and submit a petition to the board, affirming that the variance honors the spirit of the city ordinance and explaining how the requestor would suffer undue hardship if the request was not granted.

The requestor then pleads their case in a public hearing before the health board, with time available for questions from the board and any members of the public in attendance. While the Board of Public Health and Environment’s meetings are subject to the city’s public notice requirements, the city is not required to get public input when proposing changes to the syringe access program.

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FINDING

The Department of Public Health and Environment Could Better Manage Its Syringe Access and Sharps Disposal Programs, and It Could Better Assess whether the Programs Are Effective in Reducing Harm

We found the Department of Public Health and Environment could improve existing strategies for data management and program evaluation — particularly regarding needs assessment, data collection, periodic evaluation, and documentation of evaluation results used to inform its decision-making. Additionally, we found the department does not effectively coordinate with its syringe access providers to assess the success of the program in reducing harm for people who use drugs or inject substances.

As a result, we conclude the department should take steps to improve its program management practices to determine the effectiveness of both its syringe access program and its sharps disposal program. The department should prioritize data management and evaluation for these programs to determine the extent to which the people who need these services are actually receiving them.

The Department of Public Health and Environment primarily contracts with service providers to support these programs, and it takes a decentralized approach to contract management. For example, four different divisions within Public Health and Environment support and monitor different aspects of the syringe access and sharps disposal programs. The Community and Behavioral Health Division has primary responsibility for contract monitoring of the syringe access program and for overall program monitoring for both the syringe access program and the kiosks. Meanwhile, the Administration Division’s contract administration team manages the financial administration of the contracts, the Public Health Investigations Division conducts regulatory visits assessing compliance with city ordinance and program rules and regulations, and the Environmental Quality Division oversees the contractor responsible for emptying the sharps disposal kiosks.18

The department said this division of duties has been necessary because of limited staffing to support these programs. However, key program oversight practices within the various divisions are not well coordinated or documented. We found this decentralization — combined with the ineffective coordination between divisions and lack of documentation for key processes — to be overarching factors for the issues we identified. Further, these factors caused delays in Public Health and Environment’s ability to provide

us with access to the right personnel, information, and documentation to assess the quality of the department's oversight of the syringe access and sharps disposal programs during this audit. Once critical oversight activities are documented, the department should perform a staffing analysis to determine the appropriate staffing levels for the scope of the programs.

Collecting the right data and evaluating program performance are fundamental to ensuring public resources are used effectively, that programs work as intended, and ultimately, that people receive the quality services they need. We identified four key areas of the department’s data management and program evaluation activities that should be revised to better align with leading practices for managing the syringe access and sharps disposal programs.

These include:

- An unstructured approach to conducting a comprehensive needs assessment to regularly estimate the amount and location of people using the services;
- Inconsistent collection of comparable and relevant program data elements for analyzing performance measures;
- Informal and undocumented program evaluations to assess the programs’ performance, which made it difficult for us to assess how results were incorporated in decision-making; and
- Missed opportunities to coordinate with stakeholders to improve program evaluation, design, and performance.

We reviewed resources regarding syringe exchanges and the implementation of public health programs as recommended by the U.S. Centers for Disease Control and Prevention and the Harm Reduction Coalition, a nationwide network supporting people affected by drug use across the United States. This included research, medical studies, and program implementation guides from local and federal health agencies, the United Nations’ Office of Drugs and Crime, the United Nations’ Office on AIDS, and the World Health Organization. Reference Appendix B of this report for a full listing of publications included in our review.

These documents provide recommendations and guidance on how syringe access program providers and government oversight entities should manage data throughout a program life cycle, such as by:
1. Using data and evaluation techniques in program planning and needs assessment to determine program design and location;

2. Conducting routine process monitoring and reporting related to program participation, operations, and key performance indicators;

3. Periodically evaluating a program's progress toward achieving its intended goals, the quality of program implementation, and the program's impact on participants' behavior; and

4. Incorporating evaluation results for program improvement and planning — including the involvement of stakeholders.

These leading sources also address how often these activities should occur and who should be responsible, in addition to providing tips and tools for program providers and government oversight entities.

The four areas for improvement we identified correspond to each of these program life-cycle areas, and they each impact the department’s ability to leverage program information. For example, with more robust data management and program evaluation practices, Public Health and Environment would be better positioned to ensure effective allocation of resources, determine program progress toward achieving its goals, and leverage program data to make changes or advocate for resources such as additional providers or staff. As a result, the department would be better able to provide access to services for the people who need and want them, in line with what leading practices suggest.

The Department of Public Health and Environment Has Not Regularly Conducted a Formal and Comprehensive Needs Assessment

According to leading practices in syringe access program management: To effectively plan interventions and allocate resources, program planners need to first know the nature and magnitude of a problem.

Information to describe the problem should be collected as part of a comprehensive “needs assessment” that includes behavioral risk factors, contributing factors, and estimates of the people affected. Public health departments should update population and location estimates periodically based on how dynamic the population is in an area; the World Health Organization recommends this be done at least every two years.  

In addition, these sources discuss location as a critical contributing factor to identifying need. Programs should be located where participants are. However, because of the associated stigmas and controversy we discussed

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in the Background on page 5, programs must be aware of and mitigate community issues that may affect the program and undermine its chances for community support. To assess need and determine appropriate site locations and outreach routes, program managers should seek out information on where their potential participants purchase drugs and are likely to use them. The sites considered should be in close proximity to either activity to increase the chances an individual will also obtain sterile injection supplies and safe-use supplies when purchasing or planning to use substances.

Although the Community and Behavioral Health Division has participated in efforts to assess population size and location and has sought out third-party data sources and maps, it would benefit from a comprehensive, documented approach that leverages both existing and new sources of available data in a systematic fashion.

As part of the collective impact group discussed previously on page 3, the division participated in a needs assessment process in 2017 that brought together community and city partners to address the city’s opioid response. Additionally, the division relies on third-party data on disease rates and drug-related fatalities and hospitalizations, as well as information from providers and other partners to understand community needs.

With the exception of the collective impact group’s 2018 report, these efforts are largely informal and not well documented.

**Limited Data on Syringe Access Needs** – For the city’s opioid response strategic plan, Public Health and Environment commissioned a needs assessment on opioid use in Denver. The study included semi-structured interviews with focus groups as well as a survey of treatment providers, and

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20 Reference lines E, F, and H of Table 4 in Appendix B for source information.

it was aimed at better understanding the lived experiences of people who use opioids. However, this effort focused on a specific subpopulation of individuals who use opioids and stopped short of estimating the citywide population of people who use drugs and where they were in the city.

Although division staff reported that they reviewed population estimates and mapping from other third-party sources as a part of this exercise, the methodology and results were not documented in sufficient detail for us to assess. Furthermore, the results of this review were not included in the published needs assessment document, and they were not clearly linked to specific program decisions. For example, one of the work groups of the collective impact group included a presentation involving maps in a group meeting, but the presentation did not provide detail about search parameters or criteria to explain what records were included and excluded.

Additionally, although Public Health and Environment personnel have access to data on diseases rates, overdose fatalities and some hospitalizations, they have not developed any formal or regularly completed report using mapped data or other potentially relevant data for the population of people who use drugs or inject substances. Although overdoses are relevant for understanding this population, the Harm Reduction Coalition suggests other potential indicators of behavior should also be considered in assessing need.²²

According to division personnel, they review third-party and other data sets and seek out information from providers and community partners. However, division officials acknowledged these are sometimes based on outdated data and information due to availability. Furthermore, the division does not incorporate these activities in a formal, comprehensive, and documented exercise that is conducted on a regular basis — which is a recommended practice by CDC program evaluation guidelines.²³

**Incomplete Data and Information to Support Sharps Disposal Needs** – The Community and Behavioral Health Division partners with the Environmental Quality Division to support the sharps disposal kiosks. Community and Behavioral Health staff completed a mapping analysis in early 2019 to assist in placing the four sharps disposal kiosks by using 2018 information from the Environmental Quality Division and the Department of Parks and Recreation. But the reporting methodology for the underlying data produced misleading results.

Public Health and Environment was not always sure whether syringes were collected from multiple parks and disposed of in a central location. Because of the potentially misleading results, the department relied on information from park rangers and program providers to place the kiosks, and we found

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no evidence of Public Health and Environment following up with the parks department to discuss what changes could be made to obtain more accurate data for future efforts.

However, Public Health and Environment later told us a staff member who left the department had made some efforts to follow up with the parks department about developing an application for on-site reporting, but Public Health and Environment did not provide us with the current status of these efforts.

Further, the data collected by Public Health and Environment does not include sharps reported on private property or disposed of through regular trash collection. As a result, the data provides only a limited view of the city’s needs for safe disposal methods. Residents can also call the city’s information line, Denver 311, to report sharps and other concerns. Community and Behavioral Health staff said that, although they have access to 311 reports, the reports have historically contained very few records. For example, department staff told us that a 311 monthly report returned only a single relevant call. However, we were able to identify many more relevant reports by using a different search methodology for the mapping example discussed below. Our analysis found 661 reports related to needles and sharps in 311 data from 2016 through 2019.

We also attempted to research and compare other government-run sharps disposal programs and regulations, as well as their general successes and challenges. Although the outbreak of COVID-19 cut this audit work short, we did note some programs that partner with medical providers and pharmacies for both syringe access and sharps disposal. Denver does not have similar partnerships, although department officials said there is a pending initiative that would facilitate these partnerships.

In our discussions with Community and Behavioral Health personnel, we found that in addition to being potential partners for syringe access and disposal, pharmacies, medical providers, and even veterinarians may have useful information in understanding the need for sharps disposal services in a community. The Community and Behavioral Health Division should seek feedback from its existing partners — like the Environmental Quality Division, the Parks and Recreation Department, and Denver 311 — as well as identify new partners to ensure it understands what data may be available to more fully assess the city’s need for sharps disposal kiosks.

**Mapping Example using City Sources** — We identified additional city sources and data that could provide specific information about program needs in Denver on a more frequent basis to enhance Public Health and Environment’s assessment efforts.

According to leading practices, program managers and health departments

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24 Other information cited included site-specific factors like whether the location was owned by the city, the ease of public and contractor access, and proximity to playgrounds and sporting fields. The current kiosk locations are named as terms in a city settlement. According to the settlement, the department must provide written justification to remove kiosks from the named locations.
should leverage multiple methods and data sources to conduct mapping and location analyses. These methods may include engaging researchers, relying on police or public health data, conducting censuses, sampling and multiplier methods, as well as surveys. Even limited versions of mapping exercises may provide valuable information on important risk behaviors and demographic information. These include any factor that could affect or inform the needs of an individual — such as their substance use, sexual activity, and housing and employment status.

Because sources for data on people who use drugs or inject substances can be hard to identify and may be subject to reporting bias, combining multiple methods and sources in a comprehensive exercise allows results to be validated or qualified and may provide a fuller understanding of the population than any one source or method.

As discussed previously, according to leading practices, without a full understanding of needs and behaviors, Public Health and Environment cannot ensure it allocates resources effectively or that its interventions are appropriate to individuals’ needs.

Although there is some overlap in the purposes for the syringe access and sharps disposal kiosk programs, the populations served by each are different.

For example, the number and types of people using the kiosks is broader and not necessarily associated with drug misuse. These individuals may have prescribed medications for themselves or their pets that require injections or finger pricks. Syringe access programs typically provide services to individuals who use or inject drugs or other substances — although many provide other supportive services that may be related to but extend beyond drug use. For example, testing for sexually transmitted diseases, education on safe sex, and connections to public food and housing assistance programs are also available through some sites.

The needs and behaviors of each program’s target population should be considered when identifying potential data and other information that could be used for mapping where potential need is.

Based on the Auditor’s Office’s access to and familiarity with other city data sources, we developed an example mapping analysis using city sources. The intent of the analysis is to assist Public Health and Environment officials in understanding potential sources to develop their own methodology to guide outreach and other program operations. Reference Appendix A for our full methodology, including limitations and results.

We analyzed city-maintained datasets with relevant information, including

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25 Reference lines A, C, and F of Table 4 in Appendix B for source information.

the Denver 311 information database, the 911 call database, and the city’s crime database. However, each of these datasets comes with inherent limitations regarding reporting bias and cultural norms in the areas where reported activity occurs. Some geographic areas may be over- or under-represented based on the likelihood of residents in an area to report certain activities or the likelihood of law enforcement to patrol an area. Despite the potential for reporting bias, these datasets — when combined with other sources of information and methods discussed below — may still provide guidance for outreach as well as validate or qualify conclusions drawn from other data sets.

We identified about 17,700 relevant reports from 2016 through 2019 using a combination of specific queries for certain keywords and a manual review of records as necessary to remove false positives. We then identified four relevant indicators based on our review of leading practices and these reports. These indicators include reports of drug use, drug sales, overdoses, and needles or other drug paraphernalia presenting a public hazard.

Of note: Our results cannot be used for analysis to represent actual drug-related or overdose activity in the city. Rather, they represent only reports of these activities. As such, they can be used as a starting point for additional outreach. Leading practices for needs assessment and population mapping say data analysis should be complemented by other methods such as stakeholder interviews, focus groups, and observations. Using available data and other sources of information as a starting point, however, allows managers with limited means and resources to deploy those resources more strategically and efficiently.

Figure 2 on the following page maps all 17,700 reports related to the four indicators we found the city received for 2016 through 2019, along with where the city’s syringe access locations and sharps disposal kiosks are. Although many of the services are in the highest areas of reported activity near downtown, the map also reveals areas of potential unmet need. For example, the Central Park neighborhood and some western neighborhoods in Denver show moderate levels of reported activity with no syringe access locations or sharps disposal kiosks nearby. Additionally, the one syringe access program east of downtown is not in the East Colfax neighborhood that has high reported activity.

According to division personnel, these results generally align with their

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27 Denver’s 311 service is an information hotline that connects individuals to relevant city agencies, services, and other public information.

planned routes for the Wellness Winnie. As noted, the Wellness Winnie is not yet operating as a mobile exchange; however, the underlying evidence provided to us by the division does show general plans to visit some of these locations. Locations not on the route for the Wellness Winnie could be shared with providers to help them with their own outreach and mobile unit activities or with options for a coordinated response to maximize coverage.

A mapping analysis like this one should also allow managers to assess how

Source: Auditor's Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

Note: Relevant reports are represented only once in this map. Reference Appendix A for a copy of this map, additional detail on methodology, and other maps and analysis.
appropriately different types of resources are allocated. Looking at specific indicators compared to the types of interventions available nearby may also identify areas of unmet need. While the location of a fixed syringe access site can be largely dictated by the support of the surrounding community, other methods can be more flexible. These can include home delivery, mobile units, and peer networks that allow for specially trained participants to exchange needles within their social circles.29

For example, as shown in Figure 2, the city’s syringe access sites and sharps disposal kiosks are generally located in or near the areas of highest reported activity when comparing all indicators of need to all program resources. But Figure 3 on the following page shows that only the kiosks are in or near two of the three areas with higher numbers of reported overdoses — specifically the Five Points neighborhood and the Central Business District. Based on the nature of the behavior and potential program interventions for overdoses, these areas would be more appropriate for outreach on overdose prevention than sharps disposal kiosks. Safe-use practices as well as distribution of overdose reversal kits — either through a mobile unit or another fixed program site — could be alternatives.

By reviewing this data regularly in addition to the department’s existing sources of information, Public Health and Environment may be able to use existing resources more efficiently and responsively to changing needs and to coordinate better outreach, mobile unit routes, and coverage, as well as advocate for more and different types of resources supported by identified needs.

In developing their own methodology and partnerships with city agencies, Public Health and Environment officials should review available and new sources of data and determine what search criteria are most applicable, including the number of years to analyze. For ease of presentation, our maps include all four years we reviewed. However, a year-over-year analysis would also allow the department to assess how needs change by location.

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Top 10 neighborhoods ranked:
Jan. 1, 2016 through Dec. 31, 2019
1. Five Points, 98
2. Central Business District, 82
3. Capitol Hill, 81
4. North Capitol Hill, 50
5. Union Station, 43
6. Civic Center, 39
7. Lincoln Park, 39
8. City Park West, 34
9. West Colfax, 28
10. Cheesman Park, 27
11. East Colfax, 27

Source: Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

Note: Reference Appendix A for a copy of this map, additional detail on methodology, and other maps and analysis.
The Department of Public Health and Environment Should Improve the Consistency and Relevancy of Program Data to Allow for Meaningful Performance Measures and Analysis

According to the Joint United Nations Programme on AIDS, all syringe access programs — no matter how small — should include process monitoring.\textsuperscript{30} “Process monitoring” is “the routine gathering of information on key aspects of a project or [program] to check on how project activities are progressing.”\textsuperscript{31}

Because syringe access programs are a proven, effective public health strategy, the goal of monitoring local syringe access programs should be to assess whether they operate according to their design, whether they reach specific target populations, and whether they achieve anticipated goals.\textsuperscript{32} Therefore, health departments should ensure providers monitor their operations.

Monitoring provides the foundation for program quality improvement. Program quality improvement relies on the systematic collection of process information and periodic evaluation to determine whether and how well the program meets its goals. Additionally, monitoring is important to hold service providers accountable and assess their level of compliance with contract requirements.

“Monitoring” itself includes routine collection and analysis of key data. The data collected should not interfere with individuals’ access to the service, but — at a minimum — program providers should collect data elements such as the number of outreach events, the products distributed, the stakeholders participating in activities, the staff trained, information contacts, media events, the services provided, project sites, the program participants contacted, the participants receiving services, and the participants referred to services. These indicators should be reported by available demographics where relevant and useful, and they should be regularly reviewed by program management and health departments.

Additionally, monitoring strategies should be standard across multiple


\textsuperscript{31} Ibid.

programs to allow for comparisons of data and comparisons of the programs’ performance across the community.\textsuperscript{33}

**Syringe Access Program Data Collection and Analysis** – Because the Community and Behavioral Health Division made changes to reporting requirements and did not consistently enforce them before 2019, the division has limited comparable, year-over-year data to analyze the syringe access program.\textsuperscript{34} Additionally, we found evidence of ongoing confusion related to how providers understand and collect information on key data elements that may affect the comparability of reported data.

In 2019, the division changed its reporting requirements for the three program providers. According to division personnel, the reporting change was intended to clarify deadlines, streamline the data requested, and produce more consistent data. Specifically, both the division and its providers acknowledged issues with accurately defining and reporting referrals. The change also affected the definition of a key data element: the number of participants. Although the division intended to improve data consistency with this change, the rationale for changing the requirements and the resulting effects on data definitions for referrals and participants place limitations on the comparability of the metrics prior to 2019 as well as limiting how these metrics may be presented to reflect historical trends to assess the syringe access program’s performance over time.

Additionally, personnel in the Community and Behavioral Health Division did not ensure the city's contracted providers regularly complied with contractual reporting requirements from 2017 through 2019. For example, providers did not always submit required reports, and in some cases, they submitted incomplete reports. Incomplete reports included missing data elements, like the number of exchanges, and in some cases, sections of narrative — such as describing providers' challenges and barriers — were blank or only partially filled out. Although the division requested some missing reports and data elements from providers when we found these were missing, division personnel could not provide to us all contractually required reports or missing narrative information upon further follow-up. We discuss this in greater detail beginning on page 36.

The data elements in the 2019 revisions for quarterly reports generally align with the data elements recommended by leading practices on participation, referrals, types of outreach, etc., we discussed previously. However, based on information provided by both the division and some providers, there may still be some inconsistency in methods to collect and report some metrics, like syringe collection and referrals. According to Community and Behavioral Health officials, some of the data collected have a standard definition, but providers may be confused about how to report them.

\textsuperscript{33} Reference lines A, B, D, and E of Table 4 in Appendix B for source information.

\textsuperscript{34} We use the term “comparable” to reflect data that is commonly understood, recorded, and reported across all three providers in similar enough ways as to reasonably represent the intended information applicable to the reporting objective.
We conducted interviews and walk-throughs with each provider, and the providers said the division has not clarified or assisted providers in understanding how to consistently collect and report these metrics.

While the division did meet with the Colorado Department of Public Health and Environment to better align reporting requirements for the 2019 template, the division has not provided additional guidance to its providers to ensure consistently reported information. The division asks providers to give a description of their data collection methods in their application to provide services, but providers give varying levels of detail and do not include all metrics in these descriptions, such as the number of syringes collected. Used syringes can be calculated by varying methods. And while each provider reports syringe collection, the division does not document an explanation for how these estimates are calculated. Additionally, division personnel did not provide evidence that they review and analyze provider descriptions to ensure they result in comparable data for citywide summary. We found that providers use different methods to calculate used syringes, including self-reports from participants and estimates based on the size of collection containers.

Public health investigators said that during routine inspections, they review daily logs for documenting the number of syringe exchanges, the number of referrals, and other measures on the quarterly report to assess for consistency and accuracy; these are based on observations and interviews with staff at the time of inspection. However, we were not provided documentation of this process, and the audit team was unable to observe inspections in real time because the agency told us only after we drafted the audit report that this process was included in inspections.

Furthermore, the described process offers limited assurance that the data being reported each quarter adhere to data reliability requirements such as completeness and accuracy. While the Public Health Investigations Division’s

ASSESSING DATA RELIABILITY

According to leading practices in government management, steps to assess the reliability of reported data should include combinations of:

- Conducting interviews – Asking knowledgeable officials about how their data and systems are used
- Data testing – Designing logic and completeness tests for specific fields in summary reports and data records, including verifying totals in reports to supporting data records
- Tracing to and from source documents – Comparing summary reports and data records to supporting documentation, such as logs or intake forms
- Reviewing data documentation – Identifying information systems controls in user manuals, data dictionaries, policies, and procedures relevant to how the data are created, maintained, and processed into reports
efforts do provide some assurance that underlying documents exist to support the reported data, its process is not comprehensive and does not go beyond spot-checking point-in-time documentation.

Community and Behavioral Health officials told us they have plans to summarize data from all their providers in a consolidated annual or quarterly report, but the division has yet to do this.

In addition, although the division requires providers to include an estimate of targets for each performance metric in the quarterly reports, it has not established corresponding goals or performance metric targets by which to evaluate all providers’ efforts. To ensure data is comparable, accurate, and appropriate to aggregate across providers, Public Health and Environment should ensure the data collected is consistently defined and collected by both contracted providers and the division staff who support the program.

Although some metrics on participation are summarized in the department’s budget process, the division did not submit evidence to us to support that any consolidated analysis for other metrics occurs that compares intended results to what was actually achieved. When developing its summary reports, the division should also consider and set citywide goals, baselines, and time-bound targets by which to assess the progress for the syringe access program as a whole.

Leading practices for both government and public health management recommend that management define goals and objectives in specific, measurable terms. This involves clearly defining what is to be achieved, who is to achieve it, how it will be achieved, and the time frames for achievement. Measurable objectives are also stated in a quantitative or qualitative form that permits reasonably consistent

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**CDC’S RECOMMENDED SMART GOALS**

According to the CDC, SMART objectives are:

- **Specific**: Concrete, detailed, and well defined so that one knows where they are going and what to expect when they arrive
- **Measurable**: Numbers and quantities that provide means of measurement and comparison
- **Achievable**: Feasible and easy to put into action
- **Realistic**: Considers constraints such as resources, personnel, cost, and time frames
- **Time-bound**: A time frame helps to set boundaries around the objective
Relevant Data Estimating Coverage – In addition to these consistency issues with standard data collection and reporting, Public Health and Environment also does not collect all the relevant data to understand program coverage — a key performance indicator recommended by leading practices.

The World Health Organization defines “coverage” as “the percentage of the estimated total of injecting drug users in a geographic area in regular contact (at least once a month) with a [syringe access program].” Coverage is important to ensuring program effectiveness and allows government oversight entities and managers to identify gaps in programing and to allocate resources more strategically. Specifically, coverage allows managers to understand the ratio of served and unserved segments of the total population in need of services.

Two types of data are required to calculate coverage: the total population in need of services and the program’s current reach. However, Community and Behavioral Health officials said that population estimates are difficult to obtain and are often outdated. Although they submitted a request to the Colorado Department of Public Health and Environment in December 2019, they have not received an updated estimate. In addition, they did not provide us with any historical estimates of coverage.

Additionally, although the division reports that personnel in the Denver Department of Public Health and Environment have aggregated program participation for all three providers as part of the budget process, the division does not collect information about the programs’ geographic reach — such as participants’ housing status or zip code. Some providers do maintain this information and could provide a tally of participation by zip code or housing status.

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Program providers said they do not know how Community and Behavioral Health uses their data. Because providers serve individuals who use drugs and some individuals experiencing homelessness, they expressed reluctance to provide the division with more information to avoid the division using that information for policing and clearing homeless camps.

**Gaps in Sharps Disposal Performance Measures** – During our audit fieldwork, Community and Behavioral Health Division personnel told us performance metrics and data collection methods had not been fully developed.

As noted previously, the division partners with the Environmental Quality Division to support the kiosks. While Community and Behavioral Health staff are responsible for decision-making and management of the kiosks, Environmental Quality personnel coordinated the installation of the kiosks and support the contract for maintenance, removal of contents, and reporting. The Environmental Quality Division also supports other sharps disposal and collection efforts for city operations like street maintenance and public works.

The Environmental Quality Division staff use a series of estimates with varying levels of accuracy to report on sharps collection. They base one measure on information from Parks and Recreation personnel regarding...
where and how many discarded sharps were picked up by park rangers.

They use another measure for the Community and Behavioral Health Division's sharps kiosks. Using monthly photos of the kiosks' contents, Environmental Quality estimates the percentage of debris versus sharps in each kiosk. This estimated percentage is then multiplied by the total weight collected and divided by an average weight per sharp to determine the number of sharps collected per kiosk.

Environmental Quality uses a third measure for its network of medical waste disposal bins used by other city operations such as public works and street maintenance teams. This third measure is similar to the kiosk measurement but relies on a standard estimate of other debris because no photographs are taken during the collection period.

Given the public health risk involved in obtaining accurate counts of sharps and the lack of other methods available in leading practices, the audit team acknowledges estimates are a reasonable approach based on information from peer public health agencies and providers who mentioned similar challenges in their work. However, the Environmental Quality Division should ensure decision-makers understand the limitations of each method and their reported results. Using a mixture of methodologies to report out one estimated total may be misleading for decision-makers if not clarified and explained.

Based on the gaps we identified and recommendations in leading practice discussed previously, the Community and Behavioral Health Division should work with syringe access providers, peer divisions in Public Health and Environment, and other city partners to develop collection and reporting methods that yield standard, comparable data for the performance metrics identified for syringe access and sharps disposal programs.

In addition, Public Health and Environment needs to determine what its vision of success would be and develop associated metrics for both programs based on purpose. For example, the intended impact of the sharps disposal program is to prevent needlestick injury and exposure to blood-borne infections. Although the city's opioid response strategic plan lists performance goals for the sharps disposal program as fewer needles disposed of incorrectly leading to fewer reports of needles in public spaces, the Department of Public Health and Environment did not provide a completed work plan that details the metric's baselines, performance targets, and time frames by which to evaluate program progress.

By ensuring the collection of complete, accurate, and comparable data, the Department of Public Health and Environment will have the necessary inputs to accurately evaluate the performance of its syringe access and sharps disposal programs and assess their effectiveness and success.
The Department of Public Health and Environment Should Conduct and Document Process and Outcome Evaluations to Inform Program Decisions

The CDC describes program evaluation as essential for public health organizations and offers a framework for developing and completing such evaluations. Incorporating the results of program evaluation in management decision-making is a primary purpose of evaluation activities. Evaluations should drive change and serve as the basis for ongoing quality improvement. Reports and findings should be easily understood, accessible, and transparently used in management decision-making. In addition, program staff should be trained on the purpose and activities of evaluation — such as data collection and quarterly reporting — to ensure they buy in. All programs, including syringe access and disposal programs, should include both process evaluation and outcome or impact evaluation.

Ideally, “process evaluation” identifies the constraints that hinder a project from achieving its objectives, and it can help identify solutions that can be implemented. An outcome or impact evaluation determines whether, and by how much, program activities achieve their intended effects on a target population and community and result in changed behavior.

Although a valuable tool, the outcome or impact evaluation may not be feasible for all programs based on size, reach, cost, and the program’s stage of development. However, these evaluations can range from narrow, limited reviews of a single program activity — for example, outreach — to more comprehensive evaluations that include both process and outcome evaluations.

DEFINING PROCESS EVALUATION

Leading practices define “process evaluation” as the periodic assessment of the quality of program implementation and what progress a program has achieved in relation to planned activities and overall objectives.

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complex, comprehensive reviews of the entire operation.

Both types of analysis should involve evaluation methods that vary depending on program resources and may include observations, facility audits, and interviews with program participants, program staff, service partners, and people who use drugs but opt not to participate. The methods selected should be appropriate to trends identified in monitoring data. For example, if a program manager from the city or from the syringe providers observes a decline in the number of reported referrals in process monitoring data, the manager may decide to evaluate the referral process. This evaluation may include methods like observing the process, taking an inventory of available referral services, and interviewing referral services or program participants.

Evaluation activities also should consider a mixture of qualitative and quantitative data, as well as existing and new data sources. For example, process monitoring data from multiple years and sites should be combined with complementary data from other sources either directly or indirectly related to the population of people who use drugs or inject substances. This is another reason why it is critical for programs to collect and report standard, comparable data during routine monitoring.

Community and Behavioral Health personnel said they rely on individual providers to conduct the program evaluation activities described in their applications to provide services. However, Community and Behavioral Health staff do not collect or review documentation to ensure evaluations occur, and they do not assess the quality of these evaluations.

Division staff also told us they have conducted informal process evaluations and rely on the Public Health Investigations Division's process for this function. Neither of these activities are documented.

In addition, there is a key distinction between compliance reviews and performance-based reviews, like process evaluations. Process evaluations focus on how efficient and effective a process is, in addition to whether the process aligns with a set of regulations. Because documentation for the compliance inspections does not address any aspect of these reported activities, we could not assess the extent to which the department's division of duties between the Public Health Investigations Division and the Community and Behavioral Health Division provides process evaluation.

Additionally, the Community and Behavioral Health Division does not conduct outcome evaluations. Division officials said they do not have staff available for program evaluation and would need to contract out for this service. Additionally, Public Health and Environment needs to take steps to address the quality and comparability of the program data it collects. Otherwise, conclusions drawn from unreliable data are likely to be inaccurate.

We found the Community and Behavioral Health Division has not conducted formal documented outcome evaluations.

43 Reference lines A, B, C, D, F, and H of Table 4 in Appendix B for source information.
Because the department does not ensure its staff documents and conducts these key program oversight activities, we could not determine the extent to which staff and providers evaluate program activities. Nor could we verify the extent to which managers incorporate the results of these informal evaluation activities into their decisions about the program.

The Department of Public Health and Environment Missed Opportunities to Coordinate with Stakeholders to Improve Program and Evaluation Activities

Throughout our review of Denver’s syringe access and sharps disposal programs, we identified instances when coordination with stakeholders either did not occur or occurred ineffectively.

Stakeholders are critical to the evaluation process and should be heavily involved in determining what to evaluate and how and, in some cases, in carrying out evaluation activities. Ensuring evaluation results are used and sharing lessons learned are key steps in the CDC’s public health evaluation framework. These lessons learned may also apply to feedback or technical assistance given to stakeholders to change how the evaluations are designed and implemented.44

Public Health and Environment should improve how it involves its partners and stakeholders — in terms of both seeking feedback and providing feedback on improvements to data collection and potential evaluation topics and strategies.

For the sharps kiosk mapping analysis discussed previously, Community and Behavioral Health personnel said no discussion occurred about improving the quality of data collected by the Parks and Recreation Department. However, we learned later that a discussion had occurred but that the departure of a key staff member in Community and Behavioral Health left the status of these efforts unclear. We found both the Community and Behavioral Health and Environmental Quality divisions were confused about which of them planned to update the mapping analysis. Similarly, the Community and Behavioral Health Division has dismissed other sources of data, like the 311 call database, without exploring the possibility of changes to reporting methodology.

As discussed, the department’s Public Health Investigations Division also plays an oversight role by enforcing the city’s rules and regulations through biannual inspections of the syringe access providers. Although Public Health and Environment says division officials discuss significant findings as necessary in meetings among upper-management, public health investigators do not directly share the reports or results of their inspections of the syringe access providers with the Community and Behavioral Health Division staff responsible for program and contract monitoring. A communication protocol to routinely share these results directly with

relevant staff would ensure everyone is informed of compliance and enforcement issues, and it would allow Community and Behavioral Health staff to exercise more consistent oversight.

Additionally, some syringe access providers told us the Community and Behavioral Health Division has not provided sufficient technical assistance or guidance on how to report required data — such as the number of referrals and syringe estimates — despite communication efforts reported by division personnel. The division also does not inform providers of what it does with the data collected, and it does not provide citywide summaries on basic statistics such as the number of program participants served. Providers said this would be helpful for them to know to better understand how their operations fit into the citywide effort.

A lack of communication and coordination with providers could contribute to the providers’ distrust of the health department regarding data and whether program data is shared with police to guide law enforcement activities. Informing stakeholders about the results of evaluations and how data is used in program decisions, as discussed in leading practices, is a key component of creating buy in and developing effective relationships.45

By improving its coordination with stakeholders, Public Health and Environment could take advantage of opportunities to collect meaningful data and feedback that would inform decisions and enhance the designs of its evaluations. Further, if Public Health and Environment communicated to providers how their information is being used as called for in leading practices, the department could create buy-in for program and evaluation activities.

Management Priorities, Undocumented Processes, and Decentralized Program Management Contribute to the Department of Public Health and Environment’s Data and Evaluation Challenges

The Department of Public Health and Environment redeployed most of its workforce to respond to COVID-19 beginning in March 2020; this was toward the end of our audit fieldwork, which concluded in early April 2020. Although we acknowledge the impact COVID-19 has had on the department, we found that preexisting issues with management priorities, undocumented processes, and organizational structure present challenges to the department's ability to effectively manage data and evaluation activities.

We found Public Health and Environment has not prioritized data management and evaluation for the syringe access and sharps disposal programs. For example, Public Health and Environment officials said the department struggles with data management and evaluation in general.

across the department's programs. In addition, the Community and 
Behavioral Health Division has not had the resources to dedicate to these 
activities, such as dedicated staff or funding for third-party evaluation 
contracts.

Department officials estimate they have dedicated less than one full-time 
equivalent employee across the nine or so positions that support the 
two programs — which may not be sufficient to conduct all the required 
oversight activities. We could not verify this estimate, as it was based on an 
informal process.

But considering the number of people we interviewed for information 
about the programs, the difficulty the department had in identifying all 
relevant personnel and information at the beginning of the audit, and the 
department's estimate, the syringe access and sharps disposal programs 
would benefit from a staffing analysis that includes a review of all required 
and recommended activities, an assessment of allocated resources, and a 
determination of whether the programs are sufficiently staffed according to 
the current scope of the programs.

Staff in these positions are relatively new as well, and the department has 
not documented critical oversight processes. The division recently created 
alyst positions and absorbed the Office of Behavioral Health Strategies in 
a 2018 merger from Denver Human Services. As a result, the division's data 
alysts and contract managers are relatively new to their positions and 
have limited historical context for the programs they manage and support. 
Documented processes, including policies and procedures, can increase 
consistency throughout an organization and help reduce disruptions caused 
by turnover in personnel. However, as previously discussed, many of the 
oversight activities division personnel described are not documented. 
According to leading practices in managing government agencies, 
documentation is necessary for the effective design, implementation, and 
evaluation of management’s oversight and accountability framework.

The Department of Public Health and Environment’s decentralized 
approach to contract oversight further complicates program management 
by involving multiple divisions, each responsible for managing some 
aspect of a program. Although the Community and Behavioral Health 
Division is primarily responsible, its partnering with other divisions — 
coupled with having staff new to their positions without the benefit of 
documented processes — increases the likelihood of miscommunication and 
misunderstanding of responsibilities.

Throughout our review, we identified several miscommunications and 
misunderstandings among Public Health and Environment personnel tasked 
with support of these contracts.

- Personnel with the Community and Behavioral Health Division and the Environmental Quality Division each said the other planned to update the kiosk mapping analysis we discussed on pages 14-18.

- Community and Behavioral Health staff identified a member of the contracts administration team as a point of contact for historical reference on a discrepancy we noted in contract terms. However, when we followed up with that individual, they had no knowledge of the issue.

- Community and Behavioral Health personnel had a limited and sometimes misinformed understanding of what was included in Public Health Investigations’ review of providers.

- Two personnel within Community and Behavioral Health who should have both been knowledgeable provided us with contradictory information regarding the nature of variances sought to support the Wellness Winnie.

- The department identified additional personnel and information relevant to the programs after we completed our audit work. In some cases, this new information contradicted information provided by staff earlier or provided significant details critical to our assessment of program oversight. Although we incorporated some new information that could be verified, the lack of documentation, misidentified personnel, and initial conflicting descriptions prevented us from being able to fully assess some areas, as we have noted throughout this report.

These challenges amplify the need for documented processes, clearly articulated management priorities, dedicated resources that align with those priorities, and defined expectations for communication and accountability.

### RECOMMENDATION 1.1

**Review and Document Critical Program Activities** – The Department of Public Health and Environment should review all critical syringe access and sharps disposal program oversight activities and ensure these processes are documented, communicated, and accessible to all staff involved in oversight, so the department can improve consistency of oversight activities, protect against the effects of staff turnover, and allow for more effective coordination of oversight activities.

**Agency Response: Agree, Implementation Date – Dec. 31, 2020**
RECOMMENDATION 1.2

Determine Sufficiency of Allocated Resources – Once processes are documented in accordance with Recommendation 1.1, the Department of Public Health and Environment should conduct a formal staffing review and analysis to determine whether the current scope of the syringe access and sharps disposal programs are sufficiently staffed. The department should consider making changes either to scope or staffing levels as appropriate.

Agency Response: Agree, Implementation Date – Dec. 31, 2020

RECOMMENDATION 1.3

Develop and Conduct a Needs Assessment – The Department of Public Health and Environment should leverage existing data and identify new data to inform a formal needs assessment that estimates the amount and location of Denver residents who need syringe access and sharps disposal services. This assessment should be updated periodically or every two years, in accordance with available resources and leading practices.

Agency Response: Agree, Implementation Date – Dec. 31, 2020

RECOMMENDATION 1.4

Collect and Report Standardized, Comparable, and Meaningful Program Data – The Department of Public Health and Environment should ensure it collects standardized, comparable, and meaningful (i.e., relevant, reliable, and complete) data regarding program operations. This should include holding program providers accountable for reporting comparable data by providing technical assistance to program providers and partners on data definitions and collection methods, as well as identifying other data necessary to develop key performance indicators for the syringe access and sharps disposal programs.

Agency Response: Agree, Implementation Date – Dec. 31, 2020
RECOMMENDATION 1.5

**Evaluate Program Performance and Incorporate Results in Decision-Making** – The Department of Public Health and Environment should evaluate program processes and determine outcomes to assess program performance, identify barriers, and develop solutions. In accordance with leading practices, this evaluation should be conducted periodically on a defined timeline, involve stakeholders in design and reporting, and serve as the foundation for ongoing quality improvement and management decision-making. The department should document those decisions to further inform program progress.

*Agency Response: Agree, Implementation Date – Dec. 31, 2020*

RECOMMENDATION 1.6

**Develop Communication Protocols** – The Department of Public Health and Environment should develop formal communication protocols with internal and external partners to inform and improve program evaluation and program performance. This should include involving providers, division personnel within Public Health and Environment, and other city partners — such as Denver 311, the 911 Emergency Communications Center, and the Parks and Recreation Department — in identifying and revising data collection, reporting, and program evaluation processes as relevant to program needs.

*Agency Response: Agree, Implementation Date – Dec. 31, 2020*

The Department of Public Health and Environment can improve contractual oversight to ensure processes related to the syringe access program are documented, monitored, and consistently applied. Specifically, we found the department is not consistently coordinating with the three syringe access program providers to ensure the program is successful. We found no policies specifying which division of Public Health and Environment is responsible for verifying whether registered neighborhood organizations are notified when a provider moves, and Public Health and Environment does not maintain a standard communication schedule with the three providers.

Additionally, the department does not regularly assess the relevancy of program regulations that affect the providers and the number of people the program can serve.

The Department of Public Health and Environment should strengthen oversight practices of its contracts with syringe access program providers.

The syringe access program is regulated by city ordinance, program-
specific rules, and contracts with individual providers. Although the provider contracts and the program rules establish certain requirements for oversight, we identified several areas where enhanced monitoring by Public Health and Environment and better communication with providers could enhance the program's overall success.

Any time an organization contracts with another party, appropriate monitoring of the contractor’s work is of the utmost importance. The city’s Executive Order No. 8 outlines the city's policy requiring agencies to monitor contracts and to establish and implement policies and procedures for this monitoring. While Public Health and Environment established some policies through provider contracts and program rules, we found the department needs better oversight practices and targeted supplemental policies.

We evaluated the procedures the Department of Public Health and Environment has for monitoring the three contractors for the syringe access program: the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health. Despite biannual compliance inspections, we found the department’s processes are not sufficient to assess or ensure the program's success. Specifically, the department’s practices are not thorough enough to guide contract monitoring through implemented, documented policies or to establish standard, documented communication and collaboration with providers about program challenges and successes.

City ordinance allows for the syringe access program and authorizes the Department of Public Health and Environment to oversee the program's contractors. Each of the three providers must operate in accordance with both their contract and the city’s program-specific rules. For example, each contract requires the provider to notify registered neighborhood organizations when a provider moves to a new location. Each contract also requires the providers to document this notification and report it to Public Health and Environment. However, none of the contracts specify when this information should be reported or to whom in Public Health and Environment it should be reported.

We found Public Health and Environment is

SYRINGE ACCESS PROGRAM PROVIDERS
The city contracts with three providers to offer its syringe access services:
- The Harm Reduction Action Center
- The Denver Colorado AIDS Project
- Vivent Health

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49 Registered neighborhood organizations are formed by residents and property owners of a neighborhood. The groups meet regularly, and the city keeps their organizational and contact information on file.
not always verifying or enforcing these requirements. For instance, the Harm Reduction Action Center needed to move in 2019. After finding a new location and receiving approval to relocate, the center moved in February 2020 to its new location at East 8th Avenue and Lincoln Street. Center staff began community engagement once they signed their new lease. This included contacting the registered neighborhood organizations in the area, as required by their agreement with the city.

They also took the initiative to contact local businesses, the Denver Police Department, area schools, and nearby residential buildings. However, the provider did not inform the department, and no one from Public Health and Environment requested or obtained verification that the center contacted the neighborhood organizations as required.

Leading practices say neighborhood groups can have a significant impact on new and existing syringe access program sites and that a supportive community environment is essential. For example: When the Harm Reduction Action Center was in the process of relocating in 2020, a local apartment complex sent a demand letter to the center to try and prevent them from moving. The letter, sent by the complex’s attorney, argued that the new center’s location should be zoned as a medical facility and that it should be prohibited from operating in that location.

Leading practices say it is essential that the contract monitor — in this case, Public Health and Environment — proactively provides support and holds providers accountable for engaging with the community. Guidelines for state and local health departments recommend program staff talk to more than just neighborhood groups. They should also be:

“(1) Building relationships with community leaders, officials, opinion leaders, law enforcement, public health officials, religious leaders and groups, and businesses most affected by [a syringe access] site location; (2) educating the community about drug use, [syringe access programs], and safe syringe disposal; (3) framing messages about [syringe access programs] to emphasize the community benefits, including reduced HIV and [hepatitis C] infection rates, proper syringe disposal and cost-effectiveness; (4) understanding and addressing the concerns of resistant stakeholders in the community; (5) recruiting staff and volunteers who represent the community where the site is located; and (6) involving [injection drug users] in the [syringe access] planning process so their voices and concerns are heard.”


51 Ibid., 10.
In addition to the community notification requirements established in the contracts, the program rules require each provider to have a general community outreach plan. We did not verify the quality of the provider outreach plans. The Public Health Investigations Division verifies the plans’ existence during a biannual inspection process, but the city does nothing else with them. Outside of the initial contracting approval and selection process, Community and Behavioral Health does not review the plans or provide guidance on best practices or ensure they effectively address community concerns. Furthermore, no policies exist to guide the providers as to when or how often ongoing community engagement should occur.

The Department of Public Health and Environment Is Not Ensuring Syringe Access Program Providers Complete Accurate Reports in a Timely Manner

In addition to Public Health and Environment improving its contract monitoring, the department has not consistently ensured that syringe access program providers complete mandatory quarterly reports accurately and in a timely manner.

Each of the contracts requires the provider to submit certain data to the Department of Public Health and Environment in a quarterly report. While the contracts do not contain information about what data to provide and when the reports should be submitted, the rules for the syringe access program do specify these details. The rules say the reports must be submitted within 30 days of the calendar quarter ending, but the rules do not specify whom the reports should be sent to or what action Public Health and Environment should take when a report is incomplete or late. According to U.S. Government Accountability Office standards, documented policies and procedures are a necessary component of an organization’s ability to effectively function.\(^{52}\)

Despite this, Public Health and Environment has not developed or documented policies for monitoring the syringe access program outside of inspection procedures. Although the providers are required to submit their quarterly reports within a certain time frame, there is no policy that outlines Public Health and Environment’s process when reports are submitted late. We found providers did not submit reports on time, and Public Health and Environment staff did not review the content provided — which we found to be incomplete in some reports.

As a result, Public Health and Environment has not always abided by the requirements outlined in the contract to monitor the day-to-day operations of each provider. In addition, Public Health and Environment has no documented procedures for how to ensure providers submit required deliverables on time.

Without establishing and implementing documented contract monitoring policies that reflect leading practices, the Department of Public Health and Environment cannot ensure department staff are monitoring the requirements of each provider. This lack of monitoring could prevent the department from being informed of program challenges, and it could prevent the department from measuring the success of the syringe access program.

The Department of Public Health and Environment’s Monitoring Efforts Are Impacted by a Lack of Program-Specific Communication with the Syringe Access Providers

As noted, the Department of Public Health and Environment’s Community and Behavioral Health Division monitors the three syringe access program contracts. Analysts within the division are responsible for receiving the providers’ quarterly reports, processing provider invoices for payment, assisting with contract amendments and negotiations, and providing technical assistance.

We analyzed the contracts, rules and regulations, and existing policies and procedures, and we visited each of the three syringe access program providers to conduct interviews and walk-throughs of their facilities and to gain an understanding of the Department of Public Health and Environment’s monitoring efforts. During the visits, providers expressed concern over their communication and collaboration with the city.

For example, the three program providers said that while they talk with each other regularly on an as-needed basis, they do not regularly meet with Public Health and Environment or know whether the department is monitoring them beyond the inspections process. Although the department and the providers communicate through emails, state-hosted meetings, and other events, there is no regularly scheduled program-specific communication to address program needs and goals.

Leading practices note that collaboration between a health department and its providers is key to the success of any syringe access program.53

We further corroborated and assessed these communications by obtaining email documentation from the department to the providers, which evidenced limited communication about invoices, reported numbers, and missing reports. None of the information we reviewed contained feedback.

from the department to the providers about program expectations, goals, or the substance and content of the reported information.

Further, the providers said they are hesitant to have open communication with Public Health and Environment. One provider said regular check-ins with the city would not be helpful without a clarification of regulatory and fiscal roles. As the city has minimal interaction with the providers outside the inspections, some providers said they viewed the city in a mainly regulatory capacity.

Aside from emphasizing collaboration, leading practices also say open lines of communication, a clear understanding of expectations, and a willingness to listen and learn from one another would help establish better collaboration. Leading practices also say feedback and follow-up are necessary to ensure appropriate program evaluation.

Feedback promotes an environment of trust by keeping providers informed as to their individual progress and the overall status of the program. Information sharing and feedback can occur through standard check-ins with providers. Although compliance-related feedback is received from the biannual inspections, further collaboration between the department and the providers remains an important aspect of monitoring and assessing whether the providers are fulfilling their contractual obligations. Additional collaboration also allows an opportunity for the department to identify the successes of the program and offer results for improvement to providers.

By not having an effective, documented plan surrounding department roles and reciprocal communication, the Department of Public Health and Environment is potentially missing an opportunity to obtain the information necessary to appropriately monitor program success.

**Additional Communication for Future Mobile Services** – We also found the department could better establish a standard, documented line of communication for its mobile services unit, so that syringe access program resources are more efficiently coordinated and delivered to those in need.

Public Health and Environment plans to use its newly created mobile unit as a fourth syringe access provider, in addition to using it to provide other behavioral health services. Although the mobile unit has been approved by the Board of Public Health and Environment to provide syringe exchange services, the mobile unit is not yet operational as a provider. Because of the COVID-19 outbreak, the Wellness Winnie has been focused on addressing public health needs related to the pandemic.

As mentioned, leading practices say collaboration between the health department and its providers is key. We found the department collaborated internally and with its providers before launching the Wellness Winnie; they discussed key program features like policies, intake forms, and client

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54 Ibid.
exemption cards. However, the syringe access providers said they are unsure what the Wellness Winnie’s operating procedures will include or whether they will align with current operating procedures.

If the division and the providers do not have a clear understanding of how future resources will be allocated among program providers, they may implement processes inconsistently, such as those related to syringe collection and community engagement. In addition, if guidelines related to program services remain unclear, the program may not operate or use resources efficiently. For example, although department officials said they post the Wellness Winnie’s intended locations online, providers may not proactively check the schedule and they could then offer mobile services in the same location that the city plans to — resulting in a missed opportunity to effectively collaborate and serve more people in need.

Finally, by focusing on open communication and by better aligning current and potential providers in the syringe access program, the Department of Public Health and Environment could better monitor the success of its syringe access and sharps disposal programs, as well as ensure better compliance through appropriate resource allocation while reducing providers’ mistrust.

The City Ordinance Authorizing the Syringe Access Program Is Outdated and Too Restrictive

While the contracts with the city’s three syringe access providers are updated annually and the program rules were updated in 2019, the governing ordinance has not changed since it was enacted in 2007.

The ordinance requires such syringe access programs and treatment referral programs to conform with state law. It also places certain limitations on Denver’s syringe access program, but the city’s Board of Public Health and Environment can grant variances to these limitations. The restrictions include that:

- No more than three programs can be registered in the City and County of Denver.
- Program sites must be at least 1,000 feet from any licensed day care center or any elementary or secondary school.

As stated in the Background, a “variance” is an exception to a law or regulation granted to remove restrictions on certain entities or activities. The provider requesting the variance must draft and submit a petition to the board, affirming that the variance honors the spirit of the city ordinance and

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explaining how the requestor would suffer undue hardship if the request was not granted.

In 2019, both the Community and Behavioral Health Division and the Harm Reduction Action Center requested variances. A hearing for both variances was held in December 2019 — with the Community and Behavioral Health Division asking for an exception on the limit of allowed providers and with the Harm Reduction Action Center wanting an exception on where programs can locate. The public health board granted both variances.

We interviewed officials from the department and each provider to better understand how this ordinance impacts them. Some providers expressed concern about the age of the ordinance and the limitations it places. They said they were not provided a solid reason for the restrictions. In addition, Vivent Health cannot operate from its fixed location because it is within 1,000 feet of a school. The provider can still operate a mobile unit, because the location restriction does not apply to mobile outreach workers.

We also interviewed individuals in the Community and Behavioral Health Division about the ordinance. As program monitors, they also expressed concern with the restrictions the ordinance places on the program and its providers. Community and Behavioral Health were not clear why the ordinance had restrictions.

Our research found program restrictions are not common. The National Alliance of State and Territorial AIDS Directors notes most states do not have laws governing syringe access programs. The group also advocates for program managers and public health departments to examine and review current laws before establishing a program. While restrictions in law are uncommon, leading practices do recommend syringe access program providers be sensitive about where they locate, while having strategic and open community relations once a site is identified.

We also researched syringe access programs in five cities and states — including one Canadian city — to compare them with Denver’s syringe access program.

Unlike Denver’s program, each of the five other programs we reviewed does not restrict the number of providers that can operate within their jurisdictions. Each also has no legal restrictions about where providers can operate. However, we found the state of New York’s program has policies and procedures addressing locations near to where children may be present. Some staff from each of the entities that replied to us also said they talk

59 The Harm Reduction Action Center initially requested a variance to both the number of providers and the location restriction. The center subsequently revoked its request for a variance on the number of providers.
61 Ibid.
62 Ibid., 11-12.
with residents and community groups about potential site locations; however, we were unable to gather responses from each program because of the COVID-19 outbreak.

Placing restrictions in Denver ordinance on where providers can operate and how many providers there can be requires providers and potential providers to direct already limited resources toward the variance process. A burden is also placed on the city, because the variance must be submitted and reviewed by the Board of Public Health and Environment.

Without standard, documented program review and monitoring processes, the city is unable to adequately monitor and assess the syringe access program and ensure providers comply with contract requirements. Because of these gaps, the program and city use limited resources in other areas and are unable to ensure the success of the syringe access program. Further, because most program providers — as well as the city — have been forced to go through the variance request process, it would be more efficient to review and amend the rules from the beginning.

Department of Public Health and Environment officials should ensure they identify the appropriate stakeholders to gather the necessary information and feedback to assess and initiate what changes to the syringe access ordinance are needed. Changing this ordinance would reduce the time spent by involved parties seeking variances.

**RECOMMENDATION 1.7**

**Develop and Document Policies and Procedures** – The Department of Public Health and Environment should develop and document policies and procedures and implement those to ensure it appropriately monitors contract compliance. These policies should clarify and formalize roles within Public Health and Environment related to the syringe access program providers.

**Agency Response: Agree, Implementation Date** – Dec. 31, 2020

**BENCHMARKING RESEARCH**

We researched syringe access programs in:
- Boulder, Colorado
- San Francisco
- The state of New York
- Seattle
- Vancouver, British Columbia
RECOMMENDATION 1.8

Review City Ordinance – The Department of Public Health and Environment should identify the appropriate stakeholders to gather the necessary information and feedback to determine whether the existing syringe access ordinance is appropriate. If the department determines the ordinance is not, the department should document those suggested changes and work through the appropriate channels to advocate for changing the ordinance.

Agency Response: Agree, Implementation Date – Dec. 31, 2020
RECOMMENDATIONS

The agency narratives below are reprinted verbatim from the agency’s response letter, shown in the next section of this report.

1.1 **Review and Document Critical Program Activities** – The Department of Public Health and Environment should review all critical syringe access and sharps disposal program oversight activities and ensure these processes are documented, communicated, and accessible to all staff involved in oversight, so the department can improve consistency of oversight activities, protect against the effects of staff turnover, and allow for more effective coordination of oversight activities.

*Agency Response: Agree, Implementation Date – Dec. 31, 2020*

*Agency Narrative: The Department will review all critical syringe access and sharps disposal oversight activities and will develop policies and procedures to guide such activities.*

1.2 **Determine Sufficiency of Allocated Resources** – Once processes are documented in accordance with Recommendation 1.1, the Department of Public Health and Environment should conduct a formal staffing review and analysis to determine whether the current scope of the syringe access and sharps disposal programs are sufficiently staffed. The department should consider making changes either to scope or staffing levels as appropriate.

*Agency Response: Agree, Implementation Date – Dec. 31, 2020*

*Agency Narrative: The Department will conduct a staffing review and analysis related to syringe access and sharps disposal programs. The completion of a staffing review and analysis, as outlined in the Syringe Access and Sharps Disposal Program, DDPHE, August 2020 Report (the Audit Report), may be hindered by deployment of Department staff in response to the COVID-19 pandemic.*

1.3 **Develop and Conduct a Needs Assessment** – The Department of Public Health and Environment should leverage existing data and identify new data to inform a formal needs assessment that estimates the amount and location of Denver residents who need syringe access and sharps disposal services. This assessment should be updated periodically or every two years, in accordance with available resources and leading practices.

*Agency Response: Agree, Implementation Date – Dec. 31, 2020*

*Agency Narrative: While the Department understands the need for formal assessment of the needs of people who use substances, particularly those who inject substances, existing resources do not allow for the expansive analysis envisioned in the Audit Report. Staff have used reputable local and state data sources and methodologies published in peer-reviewed journals to produce comparable information.*
To address this recommendation, the Department will develop an evaluation plan, which will include a formal needs assessment description, justification and scope of work. The execution of the evaluation plan will be dependent on the availability of funds to conduct associated activities.

Please note, the frequency of a formal needs assessment, outlined in the Audit Report, is not consistent with best practices, which are to conduct a formal comprehensive needs assessment every three to five years. This schedule is based on the significant financial investment required to conduct such an assessment and “survey fatigue” experienced by members of the target audience.

It is important to point out that needs assessment findings on the location and placement of syringe access programs and sharps kiosks, may be very difficult to implement due to stigma towards people who use substances, such as, property owners being unwilling to rent space to syringe access programs, lack of available or suitable CCD property for kiosk placement, or strong objections of neighbors to the placement of these services in their neighborhood. The Department is moving forward with mobile integrated behavioral health care and support services which will include syringe distribution and sharps collection to mitigate need in Denver neighborhoods and lessen impact on any one neighborhood.

1.4 Collect and Report Standardized, Comparable, and Meaningful Program Data – The Department of Public Health and Environment should ensure it collects standardized, comparable, and meaningful (i.e., relevant, reliable, and complete) data regarding program operations. This should include holding program providers accountable for reporting comparable data by providing technical assistance to program providers and partners on data definitions and collection methods, as well as identifying other data necessary to develop key performance indicators for the syringe access and sharps disposal programs.

Agency Response: Agree, Implementation Date – Dec. 31, 2020

Agency Narrative: While the Department disagrees with the Audit Report’s characterization of DDPHE’s process monitoring practices, it will nonetheless develop an evaluation plan to describe, consolidate and routinize practices to collect and report standardized, comparable and meaningful program data related to syringe access programs and sharps kiosks. The Department will explore revisions to contractual language to strengthen reporting requirements and outline consequences for failure to submit required data. As stated in the Narrative for Recommendation 1.3, the execution of the evaluation plan will be dependent on the availability of funds to conduct associated activities.

1.5 Evaluate Program Performance and Incorporate Results in Decision-Making – The Department of Public Health and Environment should evaluate program processes and determine outcomes to assess program performance, identify barriers, and develop solutions. In accordance with leading practices, this evaluation should be conducted periodically on a defined timeline, involve stakeholders in design and reporting, and serve as the foundation for ongoing quality improvement and management decision-making. The department should document those decisions to further inform program progress.

Agency Response: Agree, Implementation Date – Dec. 31, 2020
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1.6 Develop Communication Protocols – The Department of Public Health and Environment should develop formal communication protocols with internal and external partners to inform and improve program evaluation and program performance. This should include involving providers, division personnel within Public Health and Environment, and other city partners — such as Denver 311, the 911 Emergency Communications Center, and the Parks and Recreation Department — in identifying and revising data collection, reporting, and program evaluation processes as relevant to program needs.

Agency Response: Agree, Implementation Date – Dec. 31, 2020

Agency Narrative: Communication between staff and syringe access program contractors occurs on a routine basis, as documented in information provided to the Office of the Auditor. However, the Department will develop a formal communication protocol to enhance existing communication methods and document written and verbal communications with internal and external stakeholders pertaining to syringe access program contracts and sharps kiosks.

1.7 Develop and Document Policies and Procedures – The Department of Public Health and Environment should develop and document policies and procedures and implement those to ensure it appropriately monitors contract compliance. These policies should clarify and formalize roles within Public Health and Environment related to the syringe access program providers.

Agency Response: Agree, Implementation Date – Dec. 31, 2020

Agency Narrative: The Department will develop programmatic contract monitoring policies and procedures to codify and enhance existing practices related to syringe access program contracts. The policies and procedures will reference and align with related policies and procedures and Executive Order Number 8. The programmatic contract monitoring policies and procedures will be reviewed by the City Attorney’s Office prior to use.

1.8 Review City Ordinance – The Department of Public Health and Environment should identify the appropriate stakeholders to gather the necessary information and feedback to determine whether the existing syringe access ordinance is appropriate. If the department determines the ordinance is not, the department should document those suggested changes and work through the appropriate channels to advocate for changing the ordinance.

Agency Response: Agree, Implementation Date – Dec. 31, 2020
Agency Narrative: The Department was pursuing ordinance changes prior to the COVID-19 pandemic and will continue to do so in accordance with pre-defined timelines.
July 31, 2020

Auditor Timothy M. O’Brien, CPA
Office of the Auditor
City and County of Denver
201 West Colfax Avenue, Dept. 705
Denver, Colorado 80202

Dear Mr. O’Brien,

The Office of the Auditor has conducted a performance audit of Syringe Access and Sharps Disposal Programs.

This memorandum provides a written response for each reportable condition noted in the Auditor’s Report final draft that was sent to us on July 24, 2020. This response complies with Section 20-276 (c) of the Denver Revised Municipal Code (D.R.M.C.).

AUDIT FINDING 1
The Department of Public Health and Environment Could Better Manage Its Syringe Access and Sharps Disposal Programs, and It Could Better Assess whether the Programs Are Effective in Reducing Harm

RECOMMENDATION 1.1
Review and Document Critical Program Activities – The Department of Public Health and Environment should review all critical syringe access and sharps disposal program oversight activities and ensure these processes are documented, communicated, and accessible to all staff involved in oversight, so the department can improve consistency of oversight activities, protect against the effects of staff turnover, and allow for more effective coordination of oversight activities.

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Narrative for Recommendation 1.1
The Department will review all critical syringe access and sharps disposal oversight activities and will develop policies and procedures to guide such activities.
RECOMMENDATION 1.2
Determine Sufficiency of Allocated Resources – Once processes are documented in accordance with Recommendation 1.1, the Department of Public Health and Environment should conduct a formal staffing review and analysis to determine whether the current scope of the syringe access and sharps disposal programs are sufficiently staffed. The department should consider making changes either to scope or staffing levels as appropriate.

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Narrative for Recommendation 1.2
The Department will conduct a staffing review and analysis related to syringe access and sharps disposal programs. The completion of a staffing review and analysis, as outlined in the Syringe Access and Sharps Disposal Program, DDPHE, August 2020 Report (the Audit Report), may be hindered by deployment of Department staff in response to the COVID-19 pandemic.

RECOMMENDATION 1.3
Develop and Conduct a Needs Assessment – The Department of Public Health and Environment should leverage existing data and identify new data to inform a formal needs assessment that estimates the amount and location of Denver residents who need syringe access and sharps disposal services. This assessment should be updated periodically or biannually, in accordance with available resources and leading practices.

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**Narrative for Recommendation 1.4**
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Evaluate Program Performance and Incorporate Results in Decision-Making – The Department of Public Health and Environment should evaluate program processes and determine outcomes to assess program performance, identify barriers, and develop solutions. In accordance with leading practices, this evaluation should be conducted periodically on a defined timeline, involve stakeholders in design and reporting, and serve as the foundation for ongoing quality improvement and management decision-making. The department should document those decisions to further inform program progress.

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**RECOMMENDATION 1.8**

Review City Ordinance – The Department of Public Health and Environment should identify the appropriate stakeholders to gather the necessary information and feedback to determine whether the existing syringe access ordinance is appropriate. If the department determines the ordinance is not, the department should document those suggested changes and work through the appropriate channels to advocate for changing the ordinance.

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**Narrative for Recommendation 1.8**

The Department was pursuing ordinance changes prior to the COVID-19 pandemic and will continue to do so in accordance with pre-defined timelines.
Please contact Lisa Straight at 720.865.5549 with questions.

Sincerely,

Robert M. McDonald,
Executive Director
Public Health Administrator
Department of Public Health & Environment
City and County of Denver

cc: Valerie Walling, CPA, Deputy Auditor
Katja E. V. Freeman, MA, MELP, Audit Director
Jared Miller, CISA, CFE, Audit Supervisor
Robert M. McDonald, Executive Director
Lisa Straight, Community and Behavioral Health Division Director
Danica Lee, Public Health Inspections Division Director
Jeff Holliday, Office of Behavioral Health Manager
Jean Finn, Substance Misuse Program Manager
OBJECTIVE

The objective of our audit was to assess whether the Department of Public Health and Environment provides effective management and oversight of its syringe access and sharps disposal programs and to assess the extent to which the department measures progress and ensures the programs’ success.

SCOPE

The audit assessed the effectiveness of the Department of Public Health and Environment’s management and oversight of the city’s syringe access program and sharps disposal program. The audit also assessed the department’s coordination efforts with syringe access program providers and the department’s efforts involving regulatory decisions.

The audit period covered a time frame from Jan. 1, 2017, through Dec. 31, 2019. However, certain audit procedures — such as those related to our data mapping and analysis — collected data outside this time period.

METHODOLOGY

We applied several methodologies during the audit process to gather and analyze pertinent information related to our audit objectives. The methodologies included but were not limited to:

• Interviewing the following individuals:
  ○ Executives and staff members in the various divisions of the Department of Public Health and Environment
  ○ Staff members of syringe access program providers from the following cities and U.S. states:
    ▪ Boulder, Colorado
    ▪ San Francisco
    ▪ The state of New York
    ▪ Seattle
    ▪ Vancouver, British Columbia
  ○ Personnel at the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health — the three contracted syringe access providers for the City and County of Denver

• Reviewing the following criteria:
  ○ The Denver Charter, city ordinance, and city Fiscal Accountability Rules
  ○ The Department of Public Health and Environment’s strategic plan
  ○ City and County of Denver contracts with the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health
○ Syringe access program rules and regulations

○ Leading practices for establishing syringe access program policies and procedures for open communication and collaboration. Reference Appendix B for further detail.

○ Leading practices related to the following areas of the syringe access program: planning and needs assessments to determine program design and location, process monitoring and reporting related to program participation and operations, evaluation and quality of program processes focused on achieving specified goals, conducting periodic outcome and impact assessments, and incorporating evaluation results for program improvement and planning. Reference Appendix B for further detail.

○ Research to identify common practices in syringe access programs in Boulder, Colorado; San Francisco; the state of New York; Seattle; and Vancouver, British Columbia

○ Policies and procedures of the City and County of Denver’s Wellness Winnebago and of the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health

• Analyzing the following:

○ Leading practices and program guidance and regulations for syringe access programs in Boulder, Colorado; San Francisco; the state of New York; Seattle; and Vancouver, British Columbia — specifically regarding program locations and limits on providers — in comparison to Denver’s ordinance

○ Reports from syringe access program providers related to rules and regulations for Denver’s syringe access program and best practices surrounding data collection

○ Leading practices surrounding neighborhood communication requirements in syringe access providers’ contracts and in internal and external policies and procedures. Reference Appendix B for further detail.

○ Denver’s syringe access program inspection form and the Public Health Investigations Division’s biannual inspection reports

• Observing select daily operations of the Harm Reduction Action Center, the Denver Colorado AIDS Project, and Vivent Health
APPENDICES

Appendix A – Mapping Analysis

Rationale for Indicators and City Sources

According to the Joint United Nations Programme on HIV/AIDS, comprehensive needs assessments are critical for identifying the scale and scope of program response. Leading practices recommend population estimates periodically based on how dynamic the population is and at least every two years, with program coverage assessed annually or biannually.63

In addition to population size estimates, leading practices discuss behaviors that syringe access program providers should understand about the populations they hope to serve. To assess need and determine appropriate site locations and outreach routes, program managers should seek out information on where their potential participants purchase drugs and are likely to use them. Sites considered should be convenient to either activity to increase the chances an individual will also obtain sterile injection supplies and safe-use supplies when purchasing or planning to use substances.64

Based on this rationale, the audit team looked to identify sources of data that might indicate areas of drug sales or use in Denver. Additionally, because overdose is such a large risk for individuals who inject drugs, the audit team sought data sources that may indicate potential overdoses.65 Although the Department of Public Health and Environment has access to some relevant data, it has not developed a formal report or regularly issued output using mapped overdose data or other data potentially relevant to the target populations for syringe access and sharps disposal services.

With this in mind, we identified city-maintained datasets with relevant information including the Denver 311, 911 call, and crime databases. Each of these datasets comes with inherent limitations regarding reporting bias and cultural norms in the areas where activity occurs. Some geographic areas may be over- or under-represented based on the likelihood of residents in that area reporting such activity or based on the likelihood law enforcement patrols those areas. Despite the potential for reporting bias, these datasets — when combined with other sources and methods discussed below — may inform outreach.

Further, the accuracy and completeness of records in each source vary depending on whether and how another party verifies and uses the information. For example, the public may record 311 calls directly in the system using applications and email with little verification. Meanwhile, 911 operators use more formal verification


protocols for 911 calls to ensure a timely and appropriate response. Crime reports represent data reported to the National Incident-Based Reporting System, which is used by law enforcement agencies in the United States for collecting and reporting crime data.66 This data includes all offenses within an incident and is continuously updated with new records as well as changes to existing records. The older a reported offense date is, the more likely the information in the record is to be correct.

From the datasets, we identified 17,722 relevant reports from 2016 through 2019 using a combination of specific queries for keywords and a manual review of records as necessary to remove false positives. Additionally, we excluded records with incomplete location information or locations outside Denver. One hundred twenty-five records were excluded from the Denver 311 analysis, and 162 records were excluded from the 911 analysis. Table 1 provides the number of reports identified in each dataset for each of the years reviewed.

<table>
<thead>
<tr>
<th>Source</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denver 311</td>
<td>124</td>
<td>157</td>
<td>181</td>
<td>199</td>
<td>661</td>
</tr>
<tr>
<td>911</td>
<td>1,237</td>
<td>1,187</td>
<td>1,463</td>
<td>1,082</td>
<td>4,969</td>
</tr>
<tr>
<td>Crime</td>
<td>2,613</td>
<td>2,864</td>
<td>3,441</td>
<td>3,174</td>
<td>12,092</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,974</td>
<td>4,208</td>
<td>5,085</td>
<td>4,455</td>
<td>17,722</td>
</tr>
</tbody>
</table>

**TABLE 1.** Reports by Source and Year for Potential Population Analysis

**Source:** Auditor’s Office analysis Denver 311 reports, 911 call reports, and city crime reports.

**Note:** Records reflect only relevant reports meeting keyword criteria with valid Denver location information.

These results cannot be used to represent actual drug-related or overdose activity in the city. Rather, they represent only reports of this activity, and as such, they can be used as a starting point for additional outreach.

Leading practices for needs assessment and population mapping recommend program managers use a variety of tools to understand populations and needs. Data analysis should be complemented by other methods such as stakeholder interviews, focus groups, and observations.67 Using available data and other sources of information as a starting point, however, allows managers with limited means and resources to deploy them more strategically and efficiently

**Indicator Methodology and Results**

We identified four relevant indicators in our review of these nearly 18,000 reports. These include reports of drug use, drug sales, overdoses, and needles or other paraphernalia presenting a public hazard. For specific substances included, we limited our results to records with variants of substance names for “opioids,” “heroin,” “coca,” “crack,” “amphetamine,” “methamphetamine,” “methadone,” “buprenorphine,” “benzodiazepines,”

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66 Local, state, and federal agencies generate data for the National Incident-Based Reporting System from their records management systems.

“barbiturates,” “insulin,” “hormones,” and “steroids.” Leading practices reference these substances as likely to be injected by people who use drugs and other substances or likely to be targeted by programs providing outreach on safer use.68

In addition to these specific substances, Table 2 lists the other keywords we used to define each indicator.

### TABLE 2. Additional Keywords for Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Use</td>
<td>“narcotics,” “overdose,” and “fainting/unconscious” in 911 records and “using,” “use,” “getting high,” “shooting up,” “OD,” “overdose,” and “possess” in the description field</td>
</tr>
<tr>
<td>Drug Sales</td>
<td>“narcotics” in 911 records and “sales,” “selling,” or “dealing” in the description field</td>
</tr>
<tr>
<td>Overdoses</td>
<td>“overdose” and “fainting/unconscious” in 911 records and “OD” and “overdose” in the description field</td>
</tr>
<tr>
<td>Needles</td>
<td>“needle,” “syringe,” and “sharps,” and exclusion words “pine,” “court,” “sharpies,” “sharpen,” and “pothole” in the description field</td>
</tr>
</tbody>
</table>

Source: Auditor’s Office analysis.

Note: These keywords are not presented in context of syntax and other logic used to define fields.

As shown in Table 3, across the city, indicators for drug use, drug sales, overdoses, and needles increased from 2016 to 2019. Drug use and drug sales each showed a decline from 2018 to 2019, but across the four-year period, they increased by 10% and 12%, respectively. Reports of overdose and needles increased by 24% and 26% respectively.

### TABLE 3. Reports by Indicator and Year for Potential Population Analysis

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>TOTAL</th>
<th>Percent Change from 2016 to 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Use</td>
<td>3,127</td>
<td>3,362</td>
<td>4,003</td>
<td>3,443</td>
<td>13,935</td>
<td>10.1%</td>
</tr>
<tr>
<td>Drug Sales</td>
<td>689</td>
<td>638</td>
<td>825</td>
<td>771</td>
<td>2,923</td>
<td>11.9%</td>
</tr>
<tr>
<td>Overdoses</td>
<td>282</td>
<td>365</td>
<td>339</td>
<td>350</td>
<td>1,336</td>
<td>24.1%</td>
</tr>
<tr>
<td>Needles</td>
<td>207</td>
<td>250</td>
<td>253</td>
<td>261</td>
<td>971</td>
<td>26.1%</td>
</tr>
</tbody>
</table>

Source: Auditor’s Office analysis Denver 311 reports, 911 call reports, and city crime reports.

Note: Records indicate reports of activity as opposed to actual activity. As a result, these statistics may be affected by reporting bias and cultural norms in the areas where the activity occurred.

Results by Neighborhood

We used an open-source program called Python to translate report location information into approximate latitude and longitude coordinates for mapping in a geographic information system against a map for Denver neighborhoods. Locations are approximate based on data entry; some records provided street addresses, while others referred only to intersections.

We present our results through six maps — figures 4-9 across the next several pages — which show where these reports were located throughout the City and County of Denver. Each indicator is mapped separately (figures 6-9), as well as together in a single map (figures 4 and 5).

The four discrete maps are not mutually exclusive, as a single report may represent more than one indicator type. For example, “overdose” cases are also included in “use” cases. However, the summary maps found in figures 4 and 5 reflect each relevant report only once. We have also included in the maps the locations of sharps disposal kiosks and the two fixed-site syringe access program locations.

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69 Python is an open-source-interpreted, object-oriented programing language compatible with a number of operating systems. A geographic information system is a mapping tool used to display and analyze spatial data.
Figure 4 maps all 17,700 reports the city received for 2016 through 2019, along with where the city’s syringe access locations and sharps disposal kiosks are. Although many of the services are in the highest areas of reported activity near downtown, the map also reveals areas of potential unmet need. For example, the Central Park neighborhood and some western neighborhoods in Denver show moderate levels of reported activity with no syringe access locations or sharps disposal kiosks nearby. Additionally, the one syringe access program east of downtown is not in the East Colfax neighborhood that has high reported activity.

**FIGURE 4.** Total Reports for Drug Use, Sales, Overdose, and Needles in the City and County of Denver, 2016-2019

**Top 10 neighborhoods ranked by most reports:**

*Jan. 1, 2016 through Dec. 31, 2019*

1. Five Points, 1,705
2. Capitol Hill, 1,475
3. Civic Center, 933
4. Central Business District, 924
5. East Colfax, 821
6. Lincoln Park, 740
7. North Capitol Hill, 710
8. Central Park, 526
9. West Colfax, 532
10. Westwood, 461

**Source:** Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

**Note:** Relevant reports are represented only once in this map.
We added the population of these neighborhoods to calculate reports per capita using census data, and we found other neighborhoods may have unmet needs. For example, note the addition of Globeville and Overland to the top 10 neighborhoods in Figure 5 instead of Central Park and East Colfax. Per capita is useful for identifying how widespread reported drug activity, overdose, or needles are within the neighborhood by adjusting the results for total number of residents. This may be useful when prioritizing limited resources for areas with the greatest need.

**FIGURE 5.** Total Reports per Capita for Drug Use, Sales, Overdoses, and Needles in the City and County of Denver, 2016-2019

**Top 10 neighborhoods ranked by reports per 1,000 residents:**

Jan. 1, 2016 through Dec. 31, 2019

1. Civic Center, 476
2. Central Business District, 225
3. Auraria, 206
4. Lincoln Park, 119
5. North Capitol Hill, 118
6. Sun Valley, 115
7. Five Points, 105
8. Capitol Hill, 93
9. Globeville, 84
10. Overland, 77

*Source: Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.*

*Note: Relevant reports are represented only once in this map per 1,000 residents.*
A mapping analysis also allows managers to assess how appropriately different types of resources are allocated. Looking at specific indicators compared to the types of interventions available nearby may also identify areas of unmet need. Figure 6 below and Figure 7 on the following page map reports of drug use and sales, respectively. While the location of a fixed syringe access site can be largely dictated by the support of the surrounding community, other methods can be more flexible. These can include home delivery, mobile units, and peer networks that allow for specially trained participants to exchange needles within their social circles.\(^7\)

**FIGURE 6.** Drug Use Reports in the City and County of Denver, 2016-2019

Top 10 neighborhoods ranked:

*Jan. 1, 2016 through Dec. 31, 2019*

1. Five Points, 1,192  
2. Capitol Hill, 931  
3. Civic Center, 771  
4. Central Business District, 755  
5. East Colfax, 642  
6. Lincoln Park, 568  
7. North Capitol Hill, 448  
8. Central Park, 432  
9. West Colfax, 425  
10. Westwood, 340

Source: Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

Note: This map includes both drug use reports and overdose reports.

FIGURE 7. Drug Sale Reports in the City and County of Denver, 2016-2019

Top 10 neighborhoods ranked:
Jan. 1, 2016 through Dec. 31, 2019

1. Capitol Hill, 421
2. Five Points, 400
3. North Capitol Hill, 200
4. East Colfax, 151
5. Lincoln Park, 108
6. Civic Center, 101
7. Westwood, 92
8. Central Park, 76
9. Globeville, 75
10. Cole, 74

Source: Auditor's Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

Given the factors cited previously regarding site location, both of these indicators may be helpful in determining where fixed sites and mobile outreach may be effective.
Figure 8 maps reported overdoses. It also shows that only the kiosks are in or near two of the three areas with higher numbers of reported overdoses — specifically the Five Points neighborhood and the Central Business District.

**FIGURE 8.** Overdose Reports in the City and County of Denver, 2016-2019

**Top 10 neighborhoods ranked:**
Jan. 1, 2016 through Dec. 31, 2019
1. Five Points, 98
2. Central Business District, 82
3. Capitol Hill, 81
4. North Capitol Hill, 50
5. Union Station, 43
6. Civic Center, 39
7. Lincoln Park, 39
8. City Park West, 34
9. West Colfax, 28
10. Cheesman Park, 27
11. East Colfax, 27

Source: Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.

Based on the nature of the behavior and potential program interventions for overdoses, outreach on overdose prevention and safe-use practices and the distribution of overdose reversal kits — either through a mobile unit or another fixed program site — may be more appropriate as a program response than sharps disposal kiosks.

By reviewing this data regularly in addition to the department’s existing sources of information, the Department of Public Health and Environment may be able to use existing resources more efficiently and
responsively to changing needs and it may coordinate better outreach, mobile unit routes, and coverage, as well as advocate for more and different types of resources supported by identified needs.

In addition to the drug use and sales indicators, reports of needles in public spaces may be useful for understanding where additional sharps disposal kiosks may be effective. Figure 9 maps needle reports and identifies similar trends as figures 6 and 7. There are neighborhoods bordering the center of downtown that have moderate activity reported and no kiosks nearby.

**FIGURE 9.** Reports of Needles and Sharps in the City and County of Denver, 2016-2019

**Top 10 neighborhoods ranked:**

*Jan. 1, 2016 through Dec. 31, 2019*

1. Capitol Hill, 42
2. Central Business District, 31
3. Lincoln Park, 25
4. Union Station, 24
5. Civic Center, 22
6. Five Points, 15
7. North Capitol Hill, 12
8. Speer, 10
9. Baker, 9
10. Villa Park, 9

Source: Auditor’s Office analysis using Denver 311 reports, 911 call reports, and city crime reports.
Appendix B – Leading Practices Reference

The audit team searched for documents related to syringe access and other similar programs aimed at preventing the spread of blood-borne diseases via shared injection supplies.

We identified recommendations from the U.S. Centers for Disease Control and Prevention and the Harm Reduction Coalition, a nationwide network supporting individuals impacted by drug use and harm reduction programs across the U.S. These organizations reference documents from domestic and international sources — including local and federal government health departments, the United Nations’ Office of Drugs and Crime, the United Nations’ Office on AIDS, and the World Health Organization.

Table 4 provides a list of each publication we used as a reference, as well as the topics in the report that these publications each support.

TABLE 4. Source of Leading Practices by Topic Supported

<table>
<thead>
<tr>
<th>Topic</th>
<th>Publication</th>
</tr>
</thead>
</table>

Source: Auditor’s Office analysis.

Note: This table continues on the following page. These publications cover more than the topics listed. Many address the full range of program planning, implementation, and evaluation. This table is intended to clarify which documents the audit team relied most heavily on to support criteria used for each section of the data management and program evaluation section of the report beginning on page 9.
### TABLE 4, CONTINUED

<table>
<thead>
<tr>
<th>Topic</th>
<th>Publication</th>
</tr>
</thead>
</table>

**Source:** Auditor’s Office analysis.

**Note:** This table is continued from the previous page.
Office of the Auditor

The Auditor of the City and County of Denver is independently elected by the citizens of Denver. He is responsible for examining and evaluating the operations of City agencies and contractors for the purpose of ensuring the proper and efficient use of City resources. He also provides other audit services and information to City Council, the Mayor, and the public to improve all aspects of Denver’s government.

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