



**Cross-Jurisdictional Sharing
Implementation and
Impact Measurement Program**
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Final Report

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Executive Summary

In 2015 the Center for Sharing Public Health Services developed a model to measure the impact of cross-jurisdictional sharing (CJS) arrangements on service and program effectiveness and efficiency. The Center selected four projects that had recently implemented a cross-jurisdictional sharing arrangement – located in Michigan, Minnesota, North Dakota, and Wisconsin – with the goal of testing the model it had developed. Over a period of 18 months, these four sites conducted activities aimed at measuring the changes in the effectiveness and efficiency of a program or service for which they had recently implemented a sharing agreement. All projects completed their work as planned and were successful (to various degrees) in demonstrating that the impact of CJS projects can be measured using the systematic approach developed by the Center. Some projects also had interesting findings related to their own shared program or service, such as:

- A reduction of about \$300,000 in costs to support administrative staff after consolidating three separate health departments into a single regionalized health department in Minnesota;
- A saving of over \$87,000 when conducting two regional community health assessments in Michigan;
- A projected average savings of \$70 per septic tank inspection performed in a region in North Dakota;
- Increases in breastfeeding initiation (from 79 to 84 percent) and proportion breastfeeding at three months (from 42 to 50 percent) among Women, Infants, and Children (WIC) clients in Minnesota; and
- An increase from 37 percent to 77 percent of WIC clients referred to social services in one county in Wisconsin.

Background

Cross-jurisdictional sharing (CJS) in public health is defined as the deliberate exercise of public authority to enable collaboration across jurisdictional boundaries to deliver public health services. For this definition, collaboration means working across boundaries and in multi-jurisdictional arrangements to solve problems that cannot be solved – or easily solved – by single organizations or jurisdictions.

The Center for Sharing Public Health Services (“the Center”) was established in May 2012 by the Kansas Health Institute with a grant from the Robert Wood Johnson Foundation to explore, inform, track and disseminate learning about shared approaches to delivering public health services with the goal of increasing the ability of public health agencies to improve the health of the communities they serve. Led jointly by Patrick Libbey and Gianfranco Pezzino, the Center strives to develop and share a collective knowledge of what CJS models work and under what circumstances in addition to collecting evidence about how CJS can improve the efficiency and effectiveness of delivering public health services. For more information about the Center visit www.phsharing.org.

Public health officials and policymakers may have differing reasons for pursuing CJS arrangements. Some may be focused on the cost of delivering services and how to maximize the value of the dollars spent (i.e., efficiency). When a return on investment and cost savings (either per unit of service or for the total cost of a program) can be demonstrated for public health interventions using CJS arrangements, this can make a compelling argument that the CJS arrangement has improved efficiency in the shared activities. However, tracking monetary return as the sole criterion to determine the efficiency of a public health program can be shortsighted and at times not even possible. For example, in some cases the total cost of a program may actually increase when a service sharing agreement is implemented if the type of services provided changes, but the cost may still be less than it would have been if the same services were provided by individual jurisdictions without a sharing agreement.

In other cases, participating health departments may be more interested in improving the quality and range of services that are provided (i.e., effectiveness). CJS can contribute to improving effectiveness in a number of ways. Sharing resources may allow for programs not previously available, or access to professional expertise that would otherwise be unattainable. CJS can also

support efforts to provide foundational public health services, or efforts to achieve public health accreditation that might not be achievable by a single department alone.

The change in effectiveness and efficiency that occurs as a result of using a CJS approach represents the impact of CJS.

In 2015, the Center developed a model to measure the impact resulting from CJS as a tool to increase effectiveness and efficiency, building on the public health performance measurements work conducted by colleagues at the Centers for Disease Control and Prevention, the Public Health Accreditation Board and the University of Washington (Public Health Activities and Services Tracking program). The Center model included a list of standardized measures for efficiency and effectiveness of various public health services and programs. For more details about the Center model please see *Appendix A*.

At the end of 2015, the Center released a Call for Proposals that focused on developing and testing its model to measure the impact of CJS arrangements. This resulted in the selection and funding of four projects (which we will refer to as the impact measurement projects). These projects (located in Michigan, Minnesota, North Dakota and Wisconsin) all had in common a recent implementation of a CJS agreement, and they agreed to measure the impact of their agreement using a model developed by the Center. Each project selected two or more measures (at least one each for efficiency and effectiveness impact) that appeared to be suitable for their sharing agreement. The model required that the same measures be applied to the shared service or program before and after the implementation of the sharing agreement. The Center believed that if its impact measurement model could be successfully tested through these four projects it could be used in other settings by public health practitioners interested in measuring the success of their sharing agreements.

This report summarizes the findings from the four impact measurement projects. For additional information on CJS and the Center please see the list of resources in *Appendix B*.

General Themes

While each project was unique in its implementation and results, there were some themes and challenges that recurred across more than one project.

All four projects quickly realized that developing and implementing a systematic impact measurement plan required a substantial investment of time and key staff. At the same time, there was a high level of interest among policymakers, partners, and health department staff about measuring changes in effectiveness and efficiency related to the use of sharing agreements. This interest motivated the project teams to pursue their measurement plans, despite the demand that this imposed on their time.

All projects were able to show a degree of improvement for the shared programs or services. While this was not the main goal for the Center-sponsored projects, it was rewarding for the staff to see that effectiveness and efficiency were both improved as a result of their efforts.

Some common challenges also emerged. The baseline measurement had to be based on data collected before the implementation of the sharing agreement, and that was particularly problematic. A large part of the time spent by project staff to measure the impact of their sharing agreement was devoted to identifying and interpreting appropriate baseline data. In some cases, the sharing agreement included sharing a service or program that was not previously available (so no baseline could exist). In these cases, project and Center staff estimated the values of the chosen measures in the hypothetical case that each health department provided the service or program outside of a sharing agreement. In other cases, records that could provide information for the baseline measurement either did not exist, or contained limited, low-quality information, at times different from jurisdiction to jurisdiction. In these cases, project and Center staff worked together to identify suitable data.

Another challenge was that in several cases project staff identified benefits stemming from the sharing agreement that could not be captured through the standardized measures developed by the Center. For example, the Michigan project staff reported that, as a result of conducting joint community health assessments, their credibility and relevance with partners outside of the public health field had increased; however, this was not something that could be captured in any of the available quantitative measures. To address this limitation, project and Center staff developed additional qualitative measures that, while not always quantifiable, added important elements to the overall understanding of the impact of the sharing agreements.

Description of Individual Projects and Activities

MI – Northern Michigan Public Health Alliance

This project focused on measuring gains in effectiveness and efficiency of conducting a common community health assessment (CHA) across jurisdictions. The project team compared cost and quality measures from a region of counties conducting a CHA versus those same jurisdictions conducting individual CHAs within single jurisdictions or smaller collaborations.

The project team collected data for three measures:

Measure 1 - Saved Cost

This measure was aimed at calculating the difference in cost between regional CHAs and individual CHAs performed independently by each public health agency. The project team concluded that they saved both personnel time and other expenses by conducting the CHAs regionally. For one of the regional CHAs (Tip of the Mitt), the saving was estimated at 690 staff hours (equal to \$17,277). For another regional CHA (Grand Traverse Region), the savings was estimated at 2045 hours (or \$56,085). Further savings (269 hours, or \$13,927) were achieved through economies of scale from organizational meetings with common regional hospital partners; training, including time, registration fees, and travel expenses; centralized secondary data collection; and design and development of surveys.

Measures 2 and 3 - Enhanced Quality

These measures were aimed at assessing the quality of the joint CHA using a pre-defined set of quality indicators. The project team used surveys and focus groups with health officers and other community partners and key informants.

The majority of respondents strongly favored the regional CHA, with the overwhelming majority agreeing that the regional CHA was of higher quality than an individual one. The overall quality of the regional CHA was rated highly, and most respondents agreed that it addressed the issues expected in a quality CHA. Only one respondent suggested they could definitely produce their own local CHA of equal quality and another said they possibly could. Partners in general felt that the regional CHA facilitated completion and dissemination of the assessment. Resources for technical assistance appeared to be more available regionally than locally. Only a little more than

a third of the partners said that they definitely or probably could complete the same CHA for their local community.

Another noticeable finding of this project was that, although difficult to measure, the joint work of multiple public health jurisdictions increased their visibility, relevance and weight, and allowed them to become more engaged in joint activities with health care organizations and other partners.

MN - Horizon Public Health

In 2015, three previously independent health departments in West Central Minnesota consolidated into one new health department called Horizon Public Health. This five-county regional public health organization serves approximately 67,000 people.

The impact measurement plan included comparing before- and after-consolidation administrative costs, program reach, and staff capacity, as well as outcomes in two programs targeting high-risk populations before and after integration.

Horizon Public Health demonstrated both cost efficiency and quality effectiveness as a result of their full integration. Total administrative costs were reduced by about \$300,000 (\$200,000 from administrative overhead for the health department's programs and \$100,000 from a reduction of administrative FTEs in the newly created agency). Marked increases in breastfeeding initiation (from 79 to 84 percent) and proportion breastfeeding at three months (from 42 to 50 percent) were observed post-implementation among WIC clients, with only a slight decrease at six months.

ND – North Dakota Department of Health

North Dakota has four regional networks that share environmental health activities related to on-site septic systems (OSS). The networks planned to develop uniform ordinances and share inspection and enforcement activities among public health units within each network. The impact measurement project was aimed at estimating the number of new residential units that should have been inspected (based on the local ordinances in effect) and the number of inspections actually conducted, as well as the number of permits approved for newly installed systems after each network became functional. The project also tried to determine the cost and the number of existing OSS inspections in each of the participating local public health units

before and after the implementation of the network ordinance/fee schedule. The project team also planned to assess the level of satisfaction of the OSS installers after a new, standardized licensure process was introduced. Due to difficulty in data availability, these plans had to be revised and some measures could not be calculated.

The project team estimated that the cost per inspection of septic systems using a network was \$70 less than the cost each local public health unit would have faced independently, due to economies of scale. The new, standardized licensure process introduced as a result of the creation of the networks was favored by most inspectors, despite possible increases in inspector and customer costs.

WI – Washington-Ozaukee Health Department

The health departments in Washington and Ozaukee Counties in Wisconsin merged in 2016 into one health department that serves 220,000 residents. Their impact measurement plan included measuring changes in productive clinic time and in quality for areas such as access to data, staff support, and customer and staff satisfaction.

Sharing services allowed for staff to specialize in one program area. Staff also found that a higher degree of specialization resulted in a reduction of the time spent on the investigation of each communicable disease case. Sharing services also provided easier access to information from multiple jurisdictions and reduced the time to investigate cases shared between the two counties; in the case of hepatitis C, the reduction was about 50 percent. Waiting time for appointments for immunizations were reduced in Washington County from seven to four days, due to shared EHR / electronic scheduling that facilitated scheduling appointments. Overall staff satisfaction improved post-merger from 3.6 to 4.0 (out of a possible maximum of 5).

Through the merger, staff were able to examine, optimize and standardize policies and procedures from the two counties. As a result, staff were able to increase referrals of WIC clients for other medical and social services. In Ozaukee county about 77 percent of women received a referral, versus less than 37 percent before the merger. Referrals were almost never done in Washington County before the merger; after the merger, almost 15 percent of WIC clients in Washington County received a referral.

Appendix A: Measuring the Impact of Cross-Jurisdictional Sharing in Public Health

Introduction

To better understand the impact of cross-jurisdictional sharing (CJS) among public health agencies, CJS teams need to identify suitable measures and measurement processes. This document provides instructions to develop and implement an impact measurement plan. The document contains only efficiency and effectiveness impact measures and measurement processes that have been developed and are supported by the Center for Sharing Public Health Services (“the Center”) and are applicable to select public health program, service and function areas.

Guidance to Develop an Impact Measurement Plan

This document contains a matrix (*Table 1*, page A-9) that combines two components, each necessary for an impact measurement plan:

1. A list of program, service and function areas with important public health relevance for which the Center has identified adequate impact measurement processes.
2. Efficiency and effectiveness measures that can be applicable to each program, service and function area.

To demonstrate the impact of a CJS arrangement, you will need to conduct measurement activities at “baseline” (i.e., before the start of the CJS arrangement) and “follow-up” (i.e., sometime after the CJS arrangement has been implemented).

There are three basic steps to develop and implement an impact measurement plan:

1. Identify a program, service or function area for which you wish to demonstrate the impact of a sharing arrangement.
2. Choose efficiency and effectiveness impact measures.
3. Conduct baseline and follow-up measurement activities.

Identify a Program, Service or Function Area

The first step is to identify from the matrix in Table 1 (page A-1) the program, service or function that best represents the focus of the CJS agreement for which you wish to demonstrate the impact. Areas are grouped into nine domains:

- a. Administration and management
- b. Chronic disease prevention
- c. Communicable disease control
- d. Community health assessment and improvement
- e. Emergency preparedness
- f. Environmental health protection
- g. Epidemiologic services
- h. Policies and planning
- i. Workforce development

Each area has a definition that describes a program, service or function. The definitions are important to assure standardization in the description and implementation of the shared program, service or function. If the activities included in your CJS agreement depart substantially from the definitions in Table 1, the applicability of this impact measurement matrix may be compromised. The Center is aware that these areas cover only a fraction of what many health departments do. If you want to apply the efficiency and effectiveness impact measures to areas not included in Table 1, you should be aware that the applicability and validity of the measures in those areas may vary.

Choose Efficiency and Effectiveness Impact Measures

After choosing the area that best represents the focus of your CJS agreement, you will choose impact measures appropriate for that area. Impact measures are used to describe the impact of the CJS agreement on the efficiency and effectiveness of the selected program, service or function area. In this context, the Center defines efficiency and effectiveness as follows:

- **Efficiency:** Getting the most out of the amount of resources needed to produce a given output or outcome. Efficiency can be achieved in different ways. Some CJS agreements

may result in a decrease in the cost of a service (for example, by allowing the use of fewer FTEs to deliver the same service in multiple jurisdictions), while others may result in a stable or even higher budget but produce better or larger outputs (for example, when a service is expanded or a new service is introduced through a CJS agreement).

- **Effectiveness:** The ability of a public health program, service or function to achieve its desired results (i.e., its goals and objectives). The concept of effectiveness can be applied to long-term outcomes (e.g., better health status in a population), short-term outcomes (e.g., adoption of healthier behaviors, or diffusion of knowledge about health prevention and promotion) or improvements in capacity and processes needed to achieve the desired outcomes.

The measures developed by the Center (based on previous work from the Public Health Accreditation Board, the Centers for Disease Control and Prevention’s National Public Health Improvement Initiative, and others) are as follows:

1. Efficiency Measures:

- a. **Saved Time** – Time to complete a specific process / deliver a specific service.
- b. **Reduced Number of Steps** – Number of steps required to complete a specific process or deliver a specific service.
- c. **Increased Revenues** – Revenues generated by changing the implementation of a billable process or service.
- d. **Cost** – Cost to complete a specific process, deliver a specific service, implement a specific program or maintain a specific function.

2. Effectiveness Measures:

- a. **Increased Customer Satisfaction** – Percentage of customers and/or staff who report being satisfied or extremely satisfied with a specific service or process.
- b. **Increased Reach to Target Population** – Percentage of a target population that has been offered, received or completed a specific public health service or program. The target population may include the general public or a segment of the population identified as having a high risk or need.

- c. Dissemination of Information – Percentage of target individuals or public health partner organizations reached through health education materials and messages, risk communication efforts and other vehicles for information. The target population may include the general public or a segment of the population identified as having a high risk or need.
- d. Quality Enhancement – Description of issues or improvement opportunity and its resolution for a specific service, program, function or data/health information system (qualitative or quantitative).
- e. Increased Preventive Behaviors – Percentage of preventive or health-promoting behavior or early indicators of preventive behaviors in a target population. The target population may include the general public or a segment of the population identified as having a high risk or need.

For a detailed description of each efficiency and effectiveness measure, see Table 2 in Appendix B at the end of this document.

Since not all proposed efficiency and effectiveness measures may be suitable for each program, service and function area, the Center has developed recommended matches between areas and impact measures (see Table 1, page A-1). The efficiency measure “Cost” and the effectiveness measure “Quality Enhancement” are available for use with all areas, since they are potentially suitable to measure the impact of CJS arrangements in a broad variety of settings. The Center recommends choosing at least one efficiency and one effectiveness measure for each CJS impact measurement plan.

The Center is aware that the list of efficiency and effectiveness impact measures included in this document is limited. These are the measures that we have reviewed and studied, and we feel confident they can produce good results. You can identify other impact measures that may better meet your needs, but you should use caution, since the validity of new measures that have not been tested may vary.

Conduct Baseline and Follow-up Measurement Activities

To demonstrate the impact of a CJS agreement, you will need a baseline and one or more follow-up measurements.

Ideally, the baseline measurement should be performed no earlier than six months before the date of implementation of the CJS agreement and no later than three months after implementation. A baseline measurement can be conducted retrospectively if it is based on pre-existing records, as long as the records reflect the status of the measure within the appropriate timeframe (i.e., between six months before and three months after the implementation of the CJS agreement).

Follow-up measurements should meet the following criteria:

- Data collection should start no earlier than six months after the date of implementation of the CJS agreement.
- There should be an interval of at least six months between the baseline and the first follow-up measurement.
- At least one follow-up measurement is needed. Multiple follow-up measurements may be desirable, depending on the nature of the sharing arrangement.

The purpose of this recommended timeline is to assure that:

- a. The measurements before and after the implementation of a CJS agreement are conducted close to the implementation date, to minimize the effects of other external factors that also could result in a change of the values being measured; and
- b. Sufficient time is allowed for the CJS agreement to produce measurable results.

Other Considerations

Qualitative Changes

While the Center encourages whenever possible the use of quantifiable measures like those included in this document, our experience shows that in many cases CJS can impact a public health program, service or function in ways that are difficult to capture using quantitative methods alone. Examples might include changes in worksite culture, professional relationships,

trust, external credibility, expertise, etc. While difficult to measure, these changes are nevertheless very important. In addition to the measures described in this document, the Center encourages, when helpful and feasible, the use of qualitative evaluation methods (such as case studies, interviews, focus groups, etc.) to document the full gamut of the impact of CJS.

Baseline Information

Obtaining baseline information is often complicated. Follow-up data are collected prospectively and you can plan for the data collection ahead of time, but the same is usually not true for baseline data. The Center recommends that you study carefully the availability and validity of your baseline data before you finalize an impact measurement plan. Ideally, you should plan to collect the baseline information after you have decided to share a program, service or function, but before your sharing agreement is implemented. A baseline measurement can be conducted retrospectively, for example, if you can rely on pre-existing records (such as staff time sheets, budget reports, inspection logs, etc.), as long as the records reflect the status of the measure within the appropriate timeframe (i.e., between six months before and three months after the implementation of the CJS agreement). In the absence of good, credible baseline data you will not be able to demonstrate an impact of your sharing arrangement.

Special Considerations for Program, Service or Function Expansion

In some cases, one of the objectives of a CJS agreement may be to expand a program, service or function, or even introduce a new one through sharing activities. By definition, to demonstrate an impact you need to compare a baseline and a follow-up measurement, but in these cases the baseline information is not available or may be incomplete. One approach to circumvent this limitation is to develop an estimation of what the impact measure baseline value would be, had the new or expanded program, service or function elements been delivered by the single jurisdictions involved in the CJS agreement. This creates a sort of fictional baseline that, while imperfect, can be used to assess the difference in efficiency and effectiveness related to using a sharing approach.

Example – You decide to conduct a community health assessment in conjunction with two other jurisdictions. You want to calculate if a shared assessment is more efficient by measuring whether the cost of a joint assessment is lower than the cost of conducting three individual assessments. One of the three jurisdictions has done an assessment a few years ago, while the

other two have not. Therefore, you do not have access to “real” baseline cost information. In this case, you can calculate to the best of your ability what the cost would have been if you had developed three individual assessments similar to the one that was done jointly, and use that as your “baseline” value.

Additional Resources

Center for Sharing Public Health Services. <http://www.phsharing.org>

Public Health Accreditation Board (PHAB). Standards and Measures, Version 1.5. Available online at http://www.phaboard.org/wp-content/uploads/PHABSM_WEB_LR1.pdf

University of Washington School of Nursing The MPROVE Study—Multi-network Practice and Outcome Variation Examination: Developing Service Delivery Measures for Studies of Practice Variation. Available online at <http://phastdata.org/mprove>

McLees, A., Nawaz, S., Thomas, C., & Young, A. (2015). Defining and Assessing Quality Improvement Outcomes: A Framework for Public Health. *American Journal of Public Health*, 105, S167–S173.

Centers for Disease Control and Prevention. Cross-Jurisdictional Sharing of Public Health Services. Available online at <http://www.cdc.gov/stltpublichealth/cjs/index.html>

Table 1. Program-Service-Function Areas and Recommended Impact Measures		Recommended Efficiency Measures				Recommended Effectiveness Measures					
Area	Definition	Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors	
ADMINISTRATION AND MANAGEMENT											
Maintain a functional human resources (HR) system	<p>An HR system is in place with the following characteristics:</p> <p>A) An HR manual exists with the following components: (1) Personnel recruitment, selection and appointment; (2) Equal opportunity employment; (3) Salary structure; (4) Hours of work; (5) Benefits package; (6) Performance evaluation process and individualized development plans; and (7) Problem solving and complaint handling, including sexual harassment.</p> <p>B) HR policies and procedures are implemented, as demonstrated by: (1) Documentation of the recruitment of qualified individuals that reflect the population served; (2) Documentation of retention activities conducted (e.g., employee satisfaction surveys, work environment needs assessments, reward and recognition programs, etc.); (3) Description of process to verify staff qualifications.</p>		Y		Y				Y		
Use information systems that support the health department mission and workforce by providing infrastructure for data collection/analysis, program management and communication	<p>A functional IT system is in place, as demonstrated by: (1) Inventory of hardware, with specifications of which programs, functions or departments are served by each item; (2) Inventory of software, with specifications of which programs, functions or departments are served by each item; (3) Two examples from different program areas of how technology supports functions in the agency.</p>								Y		

Table 1. Program-Service-Function Areas and Recommended Impact Measures

Area	Definition	Recommended Efficiency Measures				Recommended Effectiveness Measures					
		Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors	
ADMINISTRATION AND MANAGEMENT (continued)											
Maintain an organizational structure that supports the health department mission and workforce	Organizational chart showing leadership, upper management positions and the organization of programs.				Y				Y		
Establish effective financial management systems	An effective financial management system, as demonstrated by all of the following elements: (1) Written agreements with entities providing processes, programs, services or interventions on behalf of the health department (if any exist);(2) Agency-wide and program-specific financial reports (at a minimum quarterly); (3) At least one grant application in the previous 12 months; (4) Billing system with the ability to send charges to both clients and the main insurance carriers in the jurisdictions.	Y		Y	Y	Y			Y		
CHRONIC DISEASE PREVENTION											
Smoking restriction	Number of reported cases of clean indoor air policy violations in the community;										
policy compliance and enforcement	Number of compliance inspections/investigations conducted; and number of citations/fines issued for violations.	Y		Y	Y			Y			
Agency involvement in tobacco prevention, control and cessation	Participation in a tobacco control initiative with all of the following components: Educational materials; Educational media; Cultural/linguistic specific materials; Cultural/linguistic specific programs; Educational/training programs; Community development (i.e., coalitions); Policy development; Tobacco cessation programs; Adult tobacco use surveillance (e.g., BRFSS); Youth tobacco use surveillance (e.g., YRBS).				Y			Y		Y	Y

Area		Recommended Efficiency Measures				Recommended Effectiveness Measures				
		Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors
CHRONIC DISEASE PREVENTION (continued)										
Agency involvement in prevention and control of a chronic condition of public health relevance	Participation in a chronic disease control initiative with all of the following components: Educational materials; Educational media; Cultural/linguistic specific materials; Cultural/linguistic specific programs; Educational/training programs; Community development (i.e., coalitions); Policy development; Surveillance data (e.g., BRFSS or YRBS).			Y			Y	Y	Y	Y
Agency involvement in physical activity promotion	Health department involvement in an initiative to increase access to free or low-cost recreational opportunities for physical activity (like working to develop policies to increase access to public facilities for physical activity, increasing worksites that have policies that enhance physical activity).				Y		Y	Y	Y	Y
Agency involvement in increasing access to healthy foods	Health department involvement in an initiative to increase access to healthy foods in the community. Examples include, but are not limited to, working with partners to develop a community garden or farmers market or to attract and open a new grocery store in an area identified as a food desert.				Y				Y	

Table 1. Program-Service-Function Areas and Recommended Impact Measures

Area		Recommended Efficiency Measures				Recommended Effectiveness Measures					
		Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors	
CHRONIC DISEASE PREVENTION (continued)											
Combined physical activity intervention availability	<p>Participation in a community-wide physical activity intervention with at least five of the following seven components: (1) Community-wide health education campaigns (e.g., large-scale, highly visible messages directed to large audiences through media such as television, radio and newspapers typically combined with other approaches including support or self-help groups, community events or risk factor screenings), (2) Community-wide stair use campaigns (e.g., motivational signs placed by elevators/escalators to encourage people to use nearby stairs for health/weight loss), (3) School-based PE programs (e.g., programs to increase amount of time students spend in PE classes which enhance the length or activity level of students and health education), (4) Social support interventions in the community (e.g., focus on changing physical activity behavior through creating, strengthening and maintaining social networks that provide supportive relationships for behavior change), (5) Individually adapted health behavior change programs (e.g., teaching goal setting/self-monitoring of progress, structured problem solving and relapse prevention), (6) Initiatives to create or enhance access to places for physical activity combined with informational outreach activities (e.g., built environment: walking trails, biking trails, exercise facilities within worksites/coalitions/agencies), (7) Community-level urban design initiatives (e.g., developments to increase the percent of residents living within walking distance of shopping, work and school; improved connectivity of streets and sidewalks; preserve or create green space and improve aesthetic qualities of the environment).</p>				Y						

Table 1. Program-Service-Function Areas and Recommended Impact Measures		Recommended Efficiency Measures				Recommended Effectiveness Measures			
Area	Definition	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	To Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors
		Saved Time							
COMMUNICABLE DISEASE CONTROL									
Childhood immunization completeness	Proportion of children vaccinated with complete series as required by state law upon entry into kindergarten (can be limited to proportion of children in a specific high-needs population, such as the children of undocumented, migrant farmworkers).			Y		Y		Y	Y
Childhood immunizations administered by agency	Number of immunizations administered by the health department to children age 0–5 years, and children age 6–18 years, during six months (can be limited to proportion of children in a specific high-needs population, such as the children of undocumented, migrant farmworkers).	Y	Y	Y	Y	Y		Y	
Foodborne enteric investigation volume	Proportion of reported foodborne/enteric disease cases that the health department investigates within the timeframe prescribed by the agency protocols.			Y		Y		Y	
Foodborne enteric investigation completion time	Average time from receipt of reported case of enteric disease to completion of case investigation.	Y		Y	Y			Y	
STI contact tracing	Number of STI contacts traced by the health department for each reported case of gonorrhea, chlamydia, syphilis and HIV.			Y		Y		Y	
TB active contact screening	Number of unduplicated clients that were provided active TB contact screening services by the health department for each reported case of active TB.			Y		Y		Y	
TB therapy	Percentage of TB cases that were placed on directly observed therapy following current state or national protocols.			Y		Y		Y	
TB contacts who completed treatment for latent TB	Percentage of contacts with newly diagnosed latent TB infection who (1) started and (2) completed treatment.	Y	Y	Y	Y	Y		Y	Y

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Area	Definition	Recommended Efficiency Measures				Recommended Effectiveness Measures					
		Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors	
COMMUNITY HEALTH ASSESSMENT AND IMPROVEMENT											
Developing a community health assessment	Participate in or conduct a collaborative process resulting in a comprehensive community health assessment meeting the following criteria: (1) Participation of representatives of various sectors of the local community, (2) Description of demographics, (3) General description of health issues and specific descriptions of population groups with a particular health issue, (4) Description of contributing causes of community health issues, (5) Description of community assets or resources to address health issues.	Y		Y					Y		
Developing a community health improvement plan	Participate in or conduct a collaborative process resulting in a comprehensive community health improvement plan meeting the following criteria: (1) Broad participation of community partners, (2) Information from community health assessment is used to guide the improvement plan, (3) Health priorities, measurable objectives, improvement strategies and performance measures with measurable and time-framed targets are included, (4) Individuals and organizations that have accepted responsibility for implementing strategies are specified.	Y		Y					Y		
EMERGENCY PREPAREDNESS											
Adopt and maintain a public health emergency operations plan (EOP)	A) Adopt and maintain a public health emergency operations plan with the following characteristics: (1) List of staff positions involved in response to an emergency, (2) Communication plan including emergency communication network, (3) Continuity of operations plan, (4) Process and frequency for reviewing the plan. B) De-briefing or after-action report from a real emergency event or an exercise.			Y					Y		

Table 1. Program-Service-Function Areas and Recommended Impact Measures		Recommended Efficiency Measures				Recommended Effectiveness Measures				
Area	Definition	Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors
ENVIRONMENTAL HEALTH PROTECTION										
Elevated blood lead level investigation	Number of cases of elevated blood lead (EBL) in children age 0–6 years investigated by the health department (to be expressed as a proportion of reported cases).	Y			Y	Y	Y		Y	
Food safety inspection reach	Number of food service establishments inspected for food safety during the past 12 months, as a percentage of the total number of food service establishments required to be inspected under state and/or local law.	Y		Y	Y	Y	Y		Y	
Environmental inspection reach	Number of inspections of environmental areas where pollutants may impact the public's health. This can be expressed as a percentage of total number of such inspections required under state and/or local law, or a rate per 1,000 people resident in the jurisdictions. Examples of types of inspections are: <ul style="list-style-type: none"> • Water quality at public beaches and/or swimming pools, • Drinking water inspections (either water lines or wells), • Sewage inspection. 	Y	Y	Y	Y	Y		Y		
EPIDEMIOLOGIC SERVICES										
Collect, maintain and analyze data to monitor conditions of public health importance	Maintain a surveillance system including the following characteristics: (1) Availability of a 24/7 on-call trained staff (for infectious disease conditions only), (2) Routine use of primary data from individuals or agencies reporting surveillance information, as demonstrated by at least two reports with aggregate primary data, (3) Routine use of secondary data, as demonstrated by at least two reports with aggregate secondary data, (4) Evidence of distribution of two analytical reports to specific audiences.	Y			Y	Y	Y		Y	

Table 1. Program-Service-Function Areas and Recommended Impact Measures

Area	Definition	Recommended Efficiency Measures				Recommended Effectiveness Measures				
		Saved Time	Reduced Steps	Increased Revenues	Cost	Increased Customer Satisfaction	Increased Reach to Target Population	Dissemination of Information	Quality Enhancement	Increased Preventive Behaviors
EPIDEMIOLOGIC SERVICES (continued)										
Infectious disease investigation volume	Proportion of cases of one or more selected reportable diseases that the health department investigates within the timeframe prescribed by the agency protocols.	Y		Y		Y			Y	
POLICIES AND PLANNING										
Serve as a resource for establishing and maintaining public health policies, practices and capacity	Documentation of the health department informing policymakers and/or the public about potential public health impacts of policies that are being considered or are in place, as demonstrated by two examples, each including at least two of the following three elements: (1) Impact statement or fact sheet that addresses current or proposed policies and is science-based, (2) The distribution of correspondence, emails, briefing statements or reports on policy impacts, (3) A presentation of evaluations or assessments of current and/or proposed policies.	Y		Y		Y		Y	Y	
WORKFORCE DEVELOPMENT										
Assess staff competencies and address gaps by enabling organizational and individual training and development opportunities	A) Adopt and implement a workforce development plan with the following characteristics: (1) Nationally adopted core competencies, (2) Curricula and training schedules. B) Documentation of two examples of implementing the workforce development plan.				Y				Y	

Table 2. Impact Measures

Saved Time (Efficiency Measure)

What to Measure	Time to complete a specific process / deliver a specific service.
Measure Definition	<p>Time from initiation to completion of a process or service. The specific process or service is to be identified and indicated in the application. Specific activities or events that start and end the process / service delivery must be identified to calculate time. Examples of time measures include, but are not limited to:</p> <ul style="list-style-type: none"> • Time to award contracts. • Wait time for clinic services. • Time to process a bill. • Time to provide permits / vital records (e.g., time saved through movement to electronic systems).
Measure Reporting	<p>The following three data points will be reported for the measure. Time increment used (e.g., hours or days) must be reported along with the time value. Guidance for calculating time is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Time recorded for identified process / service before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded time following the implementation of a sharing agreement. 3. <u>Time saved</u>: The difference between the times recorded after implementation of the sharing agreement and before. In other words: actual value – baseline value.
Additional Guidance: Saved Time	<p>For the baseline, target and actual values, the time to complete the process or deliver the service must be determined using the same start and stop times to ensure that the times reported represent the same completed process or service. Calculate the time as follows:</p> <ul style="list-style-type: none"> • <u>Start time</u>: Date and time the given process or service delivery event begins. This would represent the step / task / encounter that is determined to initiate the process. • <u>Stop time</u>: Date and time the given process or service delivery event ends. This would represent the step / task / encounter that is determined to complete the process. • <u>Time to complete the process or deliver the service</u>: The time elapsed from the date / time that the process starts (start time) until the date / time that the process ends (stop time) represents the time to complete the process or deliver the service.
Additional Information to Report	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Reduced Number of Steps (Efficiency Measure)

What to Measure	Number of steps required to complete a specific process or deliver a specific service.
Measure Definition	<p>Number of discrete steps or tasks necessary to complete a given process or deliver a specific service. The specific process or service is to be identified and indicated in the application. Examples may include:</p> <ul style="list-style-type: none"> • Elimination of duplicate efforts to meet state or federal grant reporting requirements through submission of a joint report. • Elimination of duplicate efforts to apply for grants through submission of a joint grant. • Reduction of the number of steps necessary to schedule clients for appointments.
Measure Reporting	<p>The following three data points will be reported for the measure. Basic guidance for calculating number of steps is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Number of steps required to complete the identified process or deliver the identified service before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded number of steps following the implementation of a sharing agreement. 3. <u>Reduction in the steps</u>: The difference between the number of steps recorded after implementation of the sharing agreement and before. In other words: actual value – baseline value.
Additional Guidance: Reduced Number of Steps	<p>Identifying the number of discrete steps or tasks required to complete a process or deliver a service, as well as eliminating unnecessary steps to make a process / service more efficient, can be performed by:</p> <ul style="list-style-type: none"> • Determining the activities and sequence of activities used to complete a process or to deliver a service before a sharing agreement is implemented. This can be accomplished using a variety of QI approaches such as process mapping or flow charting. This number will serve as the baseline value. • Identifying steps that, as a result of the implementation of the sharing agreement, are not necessary to successfully complete the process or deliver the service, may be redundant or do not add value to the process. Then, eliminating the identified steps and implementing a new process flow. Repeat until the most efficient process has been identified. The number of steps left in the process will serve as the actual value.
Additional Information to Report	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Lessons learned from the implementation and measurement of the sharing agreement

Table 2. Impact Measures

Increased Revenues (Efficiency Measure)

What to Measure	Revenues generated by changing the implementation of a billable process or service.
Measure Definition	<p>Revenue generated by adding or changing the implementation of a billable process or service. This can be achieved by adding new billable processes / services or increasing the number of instances that a billable process / service is delivered. The specific approach used to increase revenue is to be identified and indicated in the application. Examples of measures include but are not limited to:</p> <ul style="list-style-type: none"> • Increase in clinic revenue through increase in number of individuals served that are covered by public or private insurance (e.g., Medicaid, Medicare). • Increase in revenue through increase in the average number of permits issued on a monthly basis. • Increase in revenue generated through fines or citations due to development or expansion of services, such as restaurant or nuisance inspections.
Measure Reporting	<p>The following three data points will be reported for the measure. Basic guidance for calculating revenue generated is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Revenue generated through identified process or service before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded revenue generated following implementation of the CJS agreement. 3. <u>Change in revenue generated</u>: The difference between the revenue generated after implementation of the CJS agreement and before. In other words: actual value – baseline value.
Additional Guidance: Increased Revenue	It is recommended that awardees use their agency accounting system to track revenue gains before and after implementation of the CJS agreement. If relevant revenue is tracked by other agency systems, please use those instead of, or in addition to, the accounting / payroll system.
Additional Information to Report	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • How additional revenue is to be / was used by the grantee to support other agency needs or priorities (if known). • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Cost (Efficiency Measure)

<p>What to Measure</p>	<p>Cost to complete a specific process, deliver a specific service, implement a specific program or maintain a specific function.</p>
<p>Measure Definition</p>	<p>Costs reduced in the delivery of an existing program-service-function area. OR delivering a new program-service-function area at lower costs than would be the case if it were delivered by a single health department. This measure may be used when the awardee has identified the opportunity to perform a process or deliver a service at lower costs by using a sharing agreement. The process or service could be one already in place, or a new one established as a result of the sharing agreement. In other words, the intent is to lower total costs (or the cost per unit of service) through a sharing agreement without decreasing the quality of a certain process or service. The specific process or service to be targeted is to be identified and indicated in the application. Examples include, but are not limited to:</p> <ul style="list-style-type: none"> • Reduced costs through economy of scale in purchasing supplies. • Reduced labor costs by combining multiple positions. • Reduced costs of conducting a diabetes outreach program. • Reduced costs of conducting restaurant inspections. • Reduced training costs due to shared staff.
<p>Measure Reporting</p>	<p>The following three data points will be reported for the measure. Basic guidance for calculating costs saved is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Costs of completing a process or delivering an identified service before implementation of a sharing agreement. When appropriate, the cost can be expressed per unit of service (e.g., cost per client served, cost per inspection performed, etc.). <i>For a new service, baseline is the estimated costs of delivering the service without the implementation of a sharing agreement.</i> 2. <u>Actual value</u>: Recorded costs following implementation of the sharing agreement. 3. <u>Costs saved</u>: The difference between the costs recorded after implementation of the sharing agreement and before. In other words: actual value – baseline value. The value reported will depend on the method selected to calculate costs as described below. Options for reporting costs saved include but are not limited to: <ol style="list-style-type: none"> a. Difference in one categorical costs area (e.g., administrative only, supplies only, etc.). This level of data collection may be best tailored to track reductions in costs associated with process implementation. b. Difference in total program costs represented by several categories of costs (including a combination of personnel, supplies, operation costs, etc.). This broader data collection may be best tailored to track reductions in costs associated with service delivery or program implementation.

<p>Additional Guidance: Cost</p>	<p>Help in the calculation of cost data can be found in the resources provided below:</p> <p>Guides / Manuals for Calculating Programmatic Costs</p> <ul style="list-style-type: none"> • Part III: Programmatic Cost Analysis (http://www.cdc.gov/dhdsp/programs/nhdsp_program/economic_evaluation/Module_III/Podcast_III.pdf) – Developed by the CDC’s Division of Heart Disease and Stroke Prevention. • Calculating Health Intervention Costs (http://www.hsph.harvard.edu/ihsig/publications/pdf/No-5.PDF) – Worksheets to calculate programmatic costs, and costs saved only (Please look at table 5.6 on pg. 71, and Appendix A18). Users enter recurrent and one-time costs for personnel, supplies, pharmaceuticals, equipment and/or vehicle operation and maintenance, administration, and training and promotional materials. Examples of unit costs required and sources of cost information are also provided. • Cost-Benefit Analysis: A Primer for Community Health Workers Chapters 2-3 (https://apps.publichealth.arizona.edu/CHWToolkit/PDFs/Framework/costbene.pdf) – These chapters focus on calculating programmatic costs. • Cost Estimating Worksheet (http://media.roiinstitute.net/tools/2007/05/24/CostEstimatingSummary.pdf) – Developed by the ROI institute. <p>Example of Calculating Costs for Public Health Interventions</p> <ul style="list-style-type: none"> • Estimating costs of surveillance – <i>SurvCost template</i> (http://www.cdc.gov/globalhealth/dphswd/idsr/tools/survcost.html) – Spreadsheet developed to help public health officials estimate the cost of Integrated Disease Surveillance and Response systems. <p>Methods to Compute the Cost of Shared Services</p> <ul style="list-style-type: none"> • <i>Determining and Distributing Costs of Shared Public Health Services.</i> (http://phsharing.org/wp-content/uploads/2015/04/DeterminingDistributingCostsCJS.pdf) – Developed by the Center for Sharing Public Health Services.
<p>Additional Information to Report</p>	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Specific types of costs and other related data used in calculations. • How cost savings are to be / were leveraged or reprogrammed to support other agency needs or priorities (if known). • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Increased Customer Satisfaction (Effectiveness Measure)

What to Measure	Percentage of customers and/or staff who report being satisfied or extremely satisfied with a specific service or process.
Measure Definition	<p>Percentage of individuals in a defined target population that are satisfied with a process or service. The target population may be external customers (e.g., clinic clients, health system partners) or internal staff (e.g., staff engaged in a process or delivery of a service), depending upon the specific process or service. The specific process or service to be targeted is to be identified and indicated in the application. Examples include but are not limited to:</p> <ul style="list-style-type: none"> Improved scores on satisfaction surveys administered internally to staff or externally to customers.
Measure Reporting	<p>The following three data points will be reported for the measure.</p> <ol style="list-style-type: none"> <u>Baseline value</u>: Percentage of customers or staff reporting satisfaction or extreme satisfaction with a process or service before the implementation of a sharing agreement. <u>Actual value</u>: Recorded percentage of customers or staff reporting satisfaction or extreme satisfaction following the implementation of a sharing agreement. <u>Calculated change in customer / staff satisfaction</u>: The difference between the percentages of customers or staff reporting satisfaction or extreme satisfaction recorded after the implementation of a sharing agreement and before. In other words: actual value – baseline value.
Additional Guidance: Assessing Customer Satisfaction	<p><u>Identify the target population</u>: For improvements in service delivery, the target population includes clients or other customers (e.g., health system partners) using the services. For internal process improvements, the target population includes staff members who are directly affected by the process.</p> <p><u>Develop the satisfaction survey</u>: Identify domains and items for the satisfaction survey that are specific to the target audience (e.g., customers or staff) and to the identified process or service. Likert scales for satisfaction are a fairly straightforward way to track change over time, and a five-point scale is often employed (Extremely satisfied – Satisfied – Neutral – Dissatisfied – Extremely dissatisfied). Surveys should be incorporated into the process with an effort to maximize response rates.</p> <p><i>Examples of customer / staff satisfaction questions</i></p> <p>Please rate your level of satisfaction in the following areas:</p> <p>Quality of the service you received (or quality of the process being implemented):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely satisfied <input type="checkbox"/> Satisfied <input type="checkbox"/> Neutral <input type="checkbox"/> Dissatisfied <input type="checkbox"/> Extremely dissatisfied

	<p>Quality of educational materials (or quality of guidance / instructions for staff):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely satisfied <input type="checkbox"/> Satisfied <input type="checkbox"/> Neutral <input type="checkbox"/> Dissatisfied <input type="checkbox"/> Extremely dissatisfied <p>Timeliness of the service (or time required to complete the process):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely satisfied <input type="checkbox"/> Satisfied <input type="checkbox"/> Neutral <input type="checkbox"/> Dissatisfied <input type="checkbox"/> Extremely dissatisfied <p><u>Determine how to administer the survey:</u> The entire target population or a representative sample will be invited to take the survey (paper-based or web-based) before the implementation of a sharing agreement (baseline value) and after (actual value). The same tool must be used at baseline and at follow-up to ensure comparability of results.</p> <p><u>Reporting on Satisfaction:</u> The percentage of satisfied customers / staff is calculated such that: Numerator: Number of customers / staff that report being satisfied or extremely satisfied with the process or service. Denominator: Total number of customers / staff that responded to the survey.</p>
<p>Additional Information to Report</p>	<p>In addition to the data reported for the measure itself (baseline, actual value, and calculated change in customer / staff satisfaction), additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Target population: Total number (e.g., number of staff involved in process / service or number of clients served). • Surveyed population: Number that were asked to take the survey. • Response rate: Number of individuals who responded to the surveys divided by the number of individuals who were asked to take the survey. • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Increased Reach to Target Population (Effectiveness Measure)

What to Measure	Percentage of target population that has been offered, received, or completed a specific public health service or program. The target population may include the general public or a segment of the population identified as having a high risk or need.
Measure Definition	<p>Percentage of individuals in an identified target population that are offered or receive a given service. The specific service to be targeted is to be identified and indicated in the application. <i>Reach</i> can be defined in three different ways:</p> <ul style="list-style-type: none"> • Number of individuals in a target population <i>offered</i> services. Examples might include: <ul style="list-style-type: none"> ○ Increased community outreach through events such as health fairs, with services made available to participants. • Number of individuals in a target population <i>receiving</i> at least one instance of an identified service. Examples might include: <ul style="list-style-type: none"> ○ An increase in the number of services provided, such as the number of individuals who receive cholesterol testing through community outreach events. ○ Increased percentage of testing sites using the T-SPOT TB test. ○ Increased number of individuals who receive diagnostic testing (e.g., A1C, cholesterol, HIV). ○ Increased number of restaurant or nuisance inspections. • Number of individuals in a target population <i>receiving a complete service package</i>. Examples might include: <ul style="list-style-type: none"> ○ Number of individuals attending <i>all</i> prenatal visits; ○ Number of individuals receiving <i>all</i> immunizations; ○ Number of diabetic individuals in a target population receiving <i>all</i> recommended glucose (A1C) tests.
Measure Reporting	<p>The following three data points will be reported for the measure. Basic guidance for calculating reach is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Percentage of individuals in a target population that have been reached with a given service before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded percentage of individuals in a target population that have been reached with a given service after the implementation of a sharing agreement. 3. <u>Calculated change in number of individuals reached</u>: The difference between the percentages of individuals in a target population that have been reached with a given service recorded after the implementation of a sharing agreement and before. In other words: actual value – baseline value.
Additional Guidance: Increased Reach	<p>The numerators for this measure will depend on what type of reach is to be achieved.</p> <p><i>Percentage of individuals offered the service:</i></p> <p>Numerator: Number of individuals in a given target population that have been offered services during a given timeframe. Denominator: Number of individuals comprising the target population that are eligible for the identified service or program.</p> <p><i>Percentage of individuals served:</i></p> <p>Numerator: Number of individuals in a given target population that have received services during a given timeframe. Denominator: Number of individuals comprising the target population that are eligible for the identified service or program.</p>

	<p><i>Percentage of individuals that receive all components of a service or program package (this measure would be most relevant to programs requiring follow-up or multiple visits):</i></p> <p>Numerator: Number of individuals in a given target population who attended all sessions / received all components of a service or program to successfully complete the program.</p> <p>Denominator: Number of individuals comprising the target population that are eligible for the identified service or program.</p>
<p>Additional Information to Report</p>	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Dissemination of Information (Effectiveness Measure)

What to Measure	Percentage of target individuals or public health partner organizations reached through health education materials and messages, risk communication efforts, and other vehicles for information. The target population may include the general public or a segment of the population identified as having a high risk or need.
Measure Definition	<p>Dissemination of public health-related information, health department products, and/or evidence-based practices to the public and/or public health system partner organizations. This is, in essence, a different type of ‘reach,’ where the focus is on reaching the public and/or public health system partners with information in order to:</p> <ul style="list-style-type: none"> • Improve access to public health information or resources, and/or • Improve the performance of the public health system. <p>This measure captures improvements resulting from increased outreach that leads to a greater access to information, uptake of services by clients or adoption of best practices by health system partners. The specific process or service to be targeted is to be identified and indicated in the application. Examples include but are not limited to:</p> <ul style="list-style-type: none"> • Increased number of individuals accessing public health information on the health department website. • Increased community outreach through events, such as number of public health education courses (e.g., nutrition education, vaccination, parenting, breastfeeding) or community health fairs. • Increased number of individuals from a target population attending a public health education class. • Increased percentage of public schools using evidence-based school health asthma guidelines. <p>Please note: The focus of this outcome is NOT on the reach of public health services to individuals in a target population, for which the “Increased Reach to Target Population” outcome should be used instead.</p>
Measure Reporting	<p>The following three data points will be reported for the measure. Basic guidance for calculating this measure is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Percentage of individuals or public health system partners that are accessing the information or using evidence-based practices before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded percentage of individuals or public health system partners accessing the information or using evidence-based practices following the implementation of a sharing agreement. 3. <u>Calculated change in number of individuals or public health system partners reached</u>: The difference between the percentages of individuals or public health system partners accessing the information or using evidence-based practices recorded after the implementation of a sharing agreement and before. In other words: actual value – baseline value.
Additional Guidance: Dissemination of Information	<p>The unit of interest for this measure can either be individuals or organizations depending on who the organization is <i>directly</i> trying to reach through dissemination of information, products, or evidence-based practices.</p> <ul style="list-style-type: none"> • If the target of the dissemination is the general public or a specific segment of the population, then the unit of measurement will be the individual.

	<ul style="list-style-type: none"> If, on the other hand, the direct target of the dissemination strategy is another entity in the broader public health / health care system, then the unit of measurement is the organization. The numerator and denominator will be calculated the same way for both units of measurement: Numerator: Number of individuals or organizations that access the information or use evidence-based practices being disseminated. Denominator: Total number of relevant individuals or organizations (e.g., total number of individuals that should be reached by select health department web content; total number of local health agencies that should be using the selected evidence-based practice).
Additional Information to Report	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Quality Enhancement (Effectiveness Measure)

<p>What to Measure</p>	<p>Description of issues or improvement opportunity and its resolution for a specific service, program, function or data / health information system (qualitative or quantitative).</p> <p>Improving the quality of a specific service, program, function, or data / health information system. The focus of the quality enhancement measure is on improving the quality of the agency's services, information systems, or programs. The specific process or service to be targeted is to be identified and indicated in the application. The types of specific improvements intended to be captured by this measure follow:</p> <ul style="list-style-type: none"> • Improved standardization or consistency in adopting and meeting existing standards or protocols of service, program delivery, or data / health information systems. <p>Examples include but are not limited to:</p> <ul style="list-style-type: none"> • Introduction of standard quality or performance criteria (e.g., checklists or protocols across providers or staff). • Increased completeness or accuracy of data elements in a surveillance system. • Increased percentage of agency databases that are compliant with relevant standards or requirements. • Improved access to data, including increased access and ability to acquire data. • Increased agency IT capacity for public health surveillance. • Improved functionality of linked data systems by adding the ability to automatically generate linked data sets for a specific population. • Increased staff knowledge regarding external legal requirements related to data. • Increased ability of agency staff to meet external legal requirements and internal procedures related to data acquisition, security and dissemination in key chronic diseases. • Increased compliance with established policies or procedures across health department programs. <p>NOTE: If quality enhancements yield timeliness, cost savings, increased customer satisfaction, increased reach or other outcomes highlighted in this document, applicants are encouraged to develop measures for those outcomes as well.</p>
<p>Measure Reporting</p>	<p>The following three data points will be reported for this measure. Due to the varied ways that quality may be enhanced, reporting on this measure may be quantitative or qualitative. Basic guidance for reporting is found below.</p> <ol style="list-style-type: none"> 1. <u>Baseline value:</u> Description of the specific issue or aspect of the service or program requiring improvement at the time of measure identification and submission. If the issue / improvement opportunity is quantifiable, please reflect this in baseline value (e.g., current percent of staff using standardized protocol for identified process or service). If not, please provide a description of the current status of the process or service and the specific area to be improved. 2. <u>Actual value:</u> Recorded status of the service or program following implementation of the sharing agreement. If the recorded status is quantifiable, please reflect this in the actual value (e.g., percent of staff using standardized protocol for identified

	<p>process or service following completion of QI cycles). If not, please describe the recorded status of the process or service following implementation of the sharing agreement.</p> <p>3. <u>Calculated change in quality</u>: The difference in the quality of a service or program recorded after the implementation of a sharing agreement and before. In other words: actual value – baseline value.</p>
<p>Additional Guidance: Description of Quality Enhancement</p>	<p>Describing specific improvements to a service or program depends largely on the characteristics of the identified improvement opportunity. Examples of improvements to quality include but are not limited to:</p> <p><i>Standardization of service delivery</i>: Increasing the consistency with which services are delivered by developing procedures, tools, or other mechanisms to assist service providers. Alternatively, enhancements could involve conducting regular fidelity assessments to ensure that services are delivered in a consistent manner and providers are consistently applying existing protocols or procedures. The same concept can be applied to program implementation and the consistent application of protocols, guidelines, procedures, etc.</p> <p><i>Evidence-based practices or guidelines</i>: Improvement in program implementation or service delivery by implementing evidence-based public health or clinical interventions or evidence-based business processes and management strategies.</p>
<p>Additional Information to Report</p>	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Evidence / data / documentation used to inform quality enhancement. • Lessons learned from the implementation and measurement of the sharing agreement.

Table 2. Impact Measures

Increased Preventive Behaviors (Effectiveness Measure)

<p>What to Measure</p>	<p>Percentage of preventive or health promoting behaviors or early indicators of preventive behaviors in a target population. The target population may include the general public or a segment of the population identified as having a high risk or need.</p>
<p>Measure Definition</p>	<p>Increase in the rate of preventive / health promoting behaviors and/or reduced risk of preventable risk factors. The specific process or service to be targeted is to be identified and indicated in the application. If possible, awardees should report data on actual behavior change for this outcome / measure. Examples of actual changes in preventive behaviors include but are not limited to:</p> <ul style="list-style-type: none"> • Increased percentage of adults who self-report engaging in 30 minutes of physical activity five or more days a week. • Increased proportion of children receiving childhood immunizations (i.e., increased vaccinations). • Increased percentage of individuals who self-report always using a seat belt while driving or riding in a car. • Increased proportion of cigarette smokers who self-report a quit attempt. • Increase proportion of WIC participants who initiate breastfeeding. <p><u>Early Indicators / Intermediate Outcomes:</u> Measurable characteristics or changes that indicate <i>progress toward</i> the identified preventive / health promoting behavior also can be reported. Measures of intermediate steps in achieving behavior change can fall into one of the following areas:</p> <ol style="list-style-type: none"> a. <i>Awareness or knowledge</i> – increased awareness and/or knowledge about the need for behavioral change to improve health. <p><u>Example of survey questions:</u></p> <p>Q. Which of the following do you think increases a woman’s chances of getting cancer of the breast?</p> <p>R. Increasing age, high-fat diet, low-fiber diet, smoking, family history, having multiple sex partners, none of these, don’t know.</p> b. <i>Acceptance and support</i> – increase acceptance and/or support of behavioral change to improve health. <p><u>Example of survey questions:</u></p> <p>Q. Smoking should not be allowed in any public place. Do you:</p> <p>R. Strongly Agree, Agree, Disagree, Strongly Disagree.</p> c. <i>Motivation to engage in preventive behaviors / access public health services</i> – increase in motivation to access services as a proxy for behavioral change. <p><u>Example of survey questions:</u></p> <p>Q. How likely is it that you will seek counseling and testing for HIV?</p> <p>R. Very likely, likely, somewhat unlikely, unlikely.</p>

<p>Measure Reporting</p>	<p>The following three data points will be reported for the measure. Basic guidance for reporting on the rate of preventive behaviors is found below:</p> <ol style="list-style-type: none"> 1. <u>Baseline value</u>: Percentage of individuals demonstrating preventive / health promoting behaviors or intermediate outcomes before the implementation of a sharing agreement. 2. <u>Actual value</u>: Recorded percentage of individuals demonstrating preventive / health promoting behaviors or intermediate outcomes after the implementation of the sharing agreement. 3. <u>Calculated change in preventive behavior</u>: The difference between the percentages of individuals demonstrating preventive / health promoting behaviors or intermediate outcomes after the implementation of the sharing agreement and before. In other words: actual value – baseline value.
<p>Additional Guidance: Increased Preventive Behavior</p>	<p>Identify the target population, then develop a survey. <i>Percentage of individuals demonstrating preventive behavior:</i> Numerator: Number of patients / customers practicing preventive / health promoting behavior. Denominator: Number of patients / customers at risk in population. <i>Percentage of individuals demonstrating knowledge, acceptability or motivation to engage in preventive behavior (intermediate outcomes):</i> Numerator: Number of patients / customers who are aware or knowledgeable about health risks, supportive of healthy behaviors, or motivated to engage in preventive behaviors. Denominator: Number of patients / customers at risk in population.</p>
<p>Additional Information to Report</p>	<p>Additional information will be collected to provide context for this measure. This information is:</p> <ul style="list-style-type: none"> • Evidence / data / documentation used to inform initiatives to address preventive behavior such as the <i>Community Guide</i>, evaluation data, pilot study, etc. • Lessons learned from the implementation and measurement of the sharing agreement.

Appendix B: List of Resources

Resources to Assist with CJS Arrangements

The Center for Sharing Public Health Services has resources available to assist public health officials and policymakers as they consider and adopt CJS approaches. Some are listed here. Many more are available on our website at <http://phsharing.org/>.

A Roadmap to Develop CJS Initiatives

The Roadmap guides readers chronologically through three distinct phases of CJS. Along the way, it provides a broad range of topics to address and poses specific questions to answer. The Roadmap also offers links to a host of tools and resources to further facilitate the work. Find the Roadmap online at <http://phsharing.org/Roadmap>.

Comprehensive Assistance for Shared Services (COMPASS)

COMPASS provides access to tools, methods, and models to help you explore, prepare for, plan, implement, and improve a CJS arrangement. These are steps along the Roadmap to Develop Cross-Jurisdictional Sharing Initiatives developed by the Center for Sharing Public Health Services to assist public health agencies and policymakers as they consider and adopt CJS approaches. Find COMPASS online at <http://compass.phsharing.org/>.

Determining and Distributing Costs of Shared Public Health Services

This guide helps identify all costs associated with a shared service and presents options for allocating the costs across all jurisdictions participating in a CJS arrangement. (Please note: this resource is not designed to take the place of accountant services.) Find this publication online at <http://phsharing.org/Costs>.

Guide for Developing Legal Documents Governing CJS Arrangements

Prepared in collaboration with the Network for Public Health Law, this guide offers a checklist of items specific to CJS agreements to be considered for inclusion in any legal agreements that govern CJS arrangements. (Please note: this guide is not designed to replace the need for legal counsel in the development and implementation of a complete legal agreement.) Find this guide online at <http://phsharing.org/LegalChecklist>.

Spectrum of CJS Arrangements

The Spectrum identifies four main types of CJS arrangements. Moving from left to right along the Spectrum, the level of service integration increases, the level of jurisdictional autonomy decreases, and implementation becomes more complex, as can governance. This publication is available online at <http://phsharing.org/Spectrum>.

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Success Factors in CJS Arrangements

This document describes several factors that can increase the likelihood that a CJS arrangement will be successful. This publication is available online at <http://phsharing.org/SuccessFactors>.



**Center for Sharing
Public Health Services**

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