

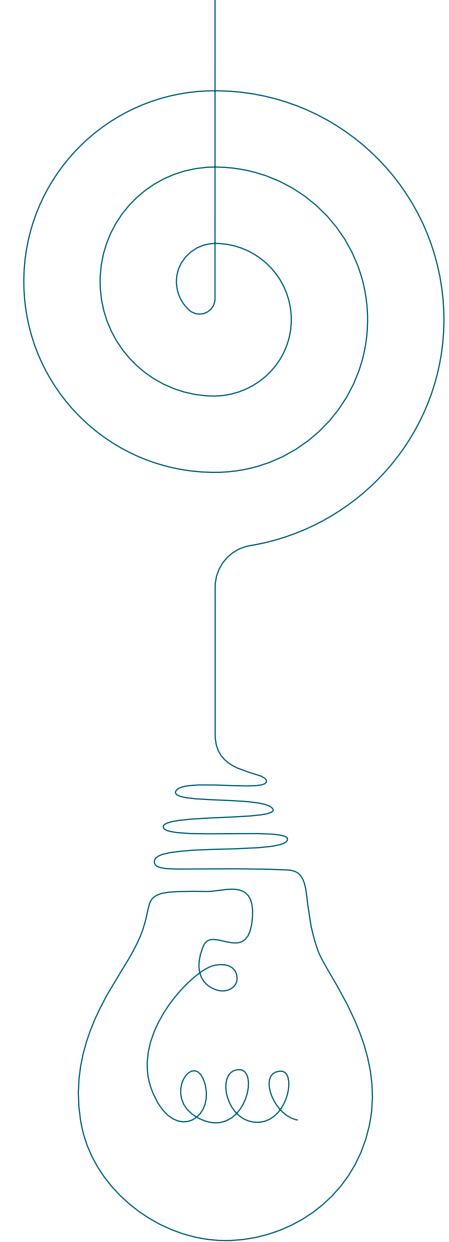
Case Service Design 2025-2026 Executive Summary

September 2025



Bottom Line Up Front - BLUF

- **The Case Service Design (CSD) initiative** establishes a collective vision and framework for how we, as public health, improve the service of public health data exchange.
- **The central deliverable of Case Service Design is the Future State Story.** The Future State Story is created by epidemiologists, data scientists, informaticians, and leaders across public health. It articulates a shared vision of public health data exchange. The future state story uses case data as an example but is not limited to case data.
- **Successful implementation of service-design artifacts begins with establishing broad awareness of the Future State Story.** The accompanying documentation serves as a structured framework to align and focus modernization initiatives toward a cohesive, unified strategy.
- **This executive summary is part of a larger package of artifacts** that represents information gathered by the CSD Team. The artifacts in this package can help public health deliver better data and services to our communities.



Why is this work meaningful?



Aligns to a shared, tangible vision

A shared vision can make abstract goals easier to understand. Everyone can know what success means for their work and the broader service of public health.



Builds trust

This is a shared mission. Sharing these artifacts creates transparency and accountability. If we do what we say we're going to do, and we continue to include everyone along the way, hopefully we can start to rebuild trust.



Simplifies complexity

This is a big, complex problem we are trying to solve. Establishing shared definitions in common language helps simplify the complexity to allow everyone to see their work as part of a shared vision.



Supports adoption

This work was co-created by people across public health. That means if the work you are doing is aligned with this foundation, you will have a better chance for faster and broader adoption.



Makes our direction sustainable

Change is inevitable. Establishing a united vision across public health helps keep us moving in the same direction.



Fosters efficient collaboration

When we can show where we're going and talk about how we're getting there, we can reduce redundancy at every level.

Background

In early 2024, in support of the Public Health Data Strategy, CDC deployed a team of epidemiologists and service designers to go on **site visits to over 30 state, tribal, local, and territorial public health agencies across 10 states to:**

- **Document** the work practices, behaviors, tools, processes and perspectives of the individuals and teams who conduct reportable disease surveillance in public health agencies across the country.
- **Understand** relationships between different public health agencies, how they communicate, exchange data and use data for public health action.
- **Validate** whether state, tribal, local, and territorial professionals' experiences are common across health departments.



In fall 2024, CDC gathered an in-person summit of over 100 epidemiologists, data scientists, informaticians, and leaders from across the public health. These professionals created a unified vision for data exchange—a future state story .

While this initiative focused on case data exchange, we also uncovered current challenges and aspirations of other types of public health data exchange.

Objectives

Case Service Design supports the [Public Health Data Strategy](#) by creating documentation and tools that:



Anchor the strategy to an actionable vision of a robust, interconnected data infrastructure that is ready to detect and respond to any health crisis



Build awareness and establish a common language for our opportunities, challenges, roles, and responsibilities



Provide insights into how people, processes, and technologies work together to deliver a better public health service

Overview of the Case Service Design Artifacts Package

Partners at all levels of public health are working on solutions to shared challenges. Case Service Design provides public health partners the tools they need to develop solutions

Tools created by Case Service Design include:

Future State Story and Moments that Matter - articulates a shared vision of public health data exchange.

- Each step of the Future State Story represents a “Moment that Matters.” Moments that matter are key points in a public health workflow that shape how well the overall service functions. We can use Moments that Matter for strategic focus and alignment.

FUTURE STATE STORY PAGE 8

Future moments that matter with case data exchange

1. CASE DETECTION 2. CASE INVESTIGATION 3. OUTBREAK DETECTION 4. OUTBREAK INVESTIGATION 5. OUTBREAK INTERVENTION 6. DATA SHARING, ANALYSIS AND DISSEMINATION

Multiple cases are identified and additional investigation begins to identify common exposure; sometimes the exposure source is a transmission chain and sometimes it is a single source.

MOMENT 4A
Investigator collects and shares data

MOMENT 4B
Contact and exposure lists are easily disseminated

MOMENT 4C
New questions are disseminated and quickly incorporated

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION Case Service Design (CSD) Artifacts Draft – Pre-Decisional – Do Not Distribute v30 - 06.02.2025

Overview of the Case Service Design Artifacts Package (2)

Future State Overview – The Future State Overview breaks down the details of what’s occurring in each Moment that Matters. During the summit, we asked public health practitioners, “What are the jobs that need to be done during this moment?” and “What must be true to achieve this future state?” These questions help us focus on the specific problems we are trying to solve with our overall strategy.

- **Jobs to Be Done** help us understand what people are really trying to accomplish when they use a product or service.
- **What Must Be Trues** allow us to identify gaps between the current state and the future state.

Case Future State At A glance

* See [Explanation of Terms](#) on slides 19-20

4. Outbreak Investigation

<p>Moments</p> <p><i>a. Investigator collects and shares data</i></p> <hr/> <p>Jobs to be Done</p> <ul style="list-style-type: none"> • Jurisdictions, including tribal public health agencies, have real-time access to case, contact, and supplemental information on the outbreak which are accessible through their data systems based on pre-existing data sharing and access agreements. • CDC and jurisdiction epidemiologists confer to confirm and define the outbreak. <hr/> <p>What Must Be True</p> <ul style="list-style-type: none"> • As information is collected and entered into jurisdiction data systems, it is quickly available to all public health staff involved in the outbreak response and available to CDC epidemiologists through ICDP. • Public health staff can access synchronized analytic-ready data. • Data sharing agreements are well established, including agreements assuring that tribal public health has access. • Tribal public health agencies are full and equal participants. Case, contact, and supplemental data are immediately available to the tribal public health agency through their surveillance systems and data repositories so that they have real-time data to monitor and respond to the situation in their community. 	<p><i>b. Contact and exposure lists are easily disseminated</i></p> <hr/> <p>Jobs to be Done</p> <ul style="list-style-type: none"> • CDC and health departments obtain lists of named contacts and potentially exposed individuals (e.g., from airplane manifests, shopper cards, appointment lists). • They load the lists to their integrated data repositories, which automatically share information with the relevant health departments (de-identifying the data where appropriate). • Jurisdiction ISS or outbreak management systems use the lists to assign follow-up activities to staff based on pre-defined operations protocols. <hr/> <p>What Must Be True</p> <ul style="list-style-type: none"> • Additional information (e.g., contact lists) can be easily disseminated and automatically updated in the ISS. • Predefined processes in the jurisdiction systems automate and coordinate work assignment. • ISS and outbreak management systems have front-facing functionality to help with case management activities. 	<p><i>c. New questions are disseminated and quickly incorporated</i></p> <hr/> <p>Jobs to be Done</p> <ul style="list-style-type: none"> • CDC disseminates new interview questions to test emerging hypotheses and disseminates them to jurisdictions electronically. • Jurisdiction ISS integrate the questions so that they are included in any new interviews. • The ISS send automated texts to previously interviewed cases and contacts asking the new questions. <hr/> <p>What Must Be True</p> <ul style="list-style-type: none"> • When additional data elements and / or new interview questions are needed, CDC programs, jurisdictions, and the Council of State and Territorial Epidemiologists (CSTE) collaborate to develop them. • Additional information (e.g., new requested data elements) can be easily disseminated by ICDP and automatically updated in the jurisdiction ISS. • Predefined processes in the jurisdiction systems automate and coordinate work assignment.
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Overview of the Case Service Design Artifacts Package (3)

Year One Discovery - A summary of what the service design team found in the first year of the initiative to understand the current state of public health, including archetypes that define roles and responsibilities, a consolidated list of all the pain points we heard and moments that matter to address the pain points, and a wishlist of potential solutions.

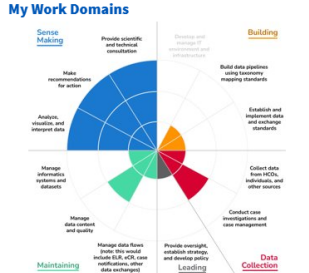
- **Archetypes** define types of workers across public health. Archetypes help us understand the people whose problems we are solving.
- **Big Rocks** categorize the pain points that we heard from the field. These represent the most important -problems we need to solve.
- We've included **an exhaustive list of pain points and a wishlist of solutions** to represent all we heard in the field to help public health deeply understand our current challenges.

Epidemiologist



I am the Swiss army knife of public health—my role can shift based on needs and situations. I do straight data analysis, and I am also an expert at translating and interpreting data and providing recommendations for public health investigation, intervention, and outbreak response.

My Work Domains



- Source Making**
 - Provide scientific and technical consultation
 - Make recommendations for action
 - Analyze, visualize, and interpret data
 - Manage information systems and datasets
 - Manage data content and quality
- Maintaining**
 - Manage data flows, enter the world, include EHR, eCR, case modifications, other data exchanges
- Building**
 - Develop case management and surveillance systems
 - Build data pipelines using business mapping standards
 - Establish and implement data and exchange standards
 - Collect data from eCRs, individuals, and other sources
 - Conduct case investigations and case management
- Data Collection**
 - Provide oversight, standardize strategies, and develop policy
- Leading**

My Routine Activities

- I apply evidence-based interventions by managing and analyzing data and interpreting the results to describe factors that affect the health of a community.
- I lead surveillance and epidemiologic investigations.
- I apply epidemiological methods to evaluate and investigate health in the community.
- I use systems thinking to ensure our data flows and systems support our work.
- I provide a variety of partners with epidemiologic and surveillance data to inform and advise them on the development and improvement of policies, programs, services, and laws.

My Needs

- Specialized staff with skills to support case interviews and data collection, disease response, informatics, data management and communications.
- Systems that talk to each other for easier access to data - from healthcare, in my agency and across public health.
- Knowledgeable subject matter experts to turn to for uncommon diseases and illnesses.
- Time to focus on public health impact and important project work.
- More automation, including easier ingestion and integration of data into systems.
- To maintain relationships that foster trust around data, data sources, and data use.
- Consistent support and guidance from leadership to continuously improve my work.
- Good communication among health departments.

My Tools

- Disease surveillance system such as NBS, Maven, EpiTrix
- Data collection tools such as RedCap, Excel, pdfs
- Information channels such as telephone, email, fax machine
- For data software, tools like SAS, SPSS and R
- For data processing and management, tools like SQL
- For data visualization, tools like PowerBI and Tableau

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Conclusion/Expected Outcomes

Establishing a collective vision and framework for improving data exchange across public health **lays the foundation for a more effective, collaborative, and sustainable public health service.**

By anchoring innovation across public health to a singular vision, **we align the work we are doing, bolster transparency to our plans and processes, and, most importantly, build trust.**



Aligning modernization efforts to the future state story can deliver a public health service that:

- Offers more timely data delivery
- Shortens the time between identifying data that needs to be exchanged and exchanging the data
- Faster time to threat and outbreak detection
- Reduced cost and complexity of connection
- More comprehensive data collection
- More complete data
- Reduced burden on public health practitioners
- Increased automation and increased productivity

Please contact us at
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to continue the conversation.