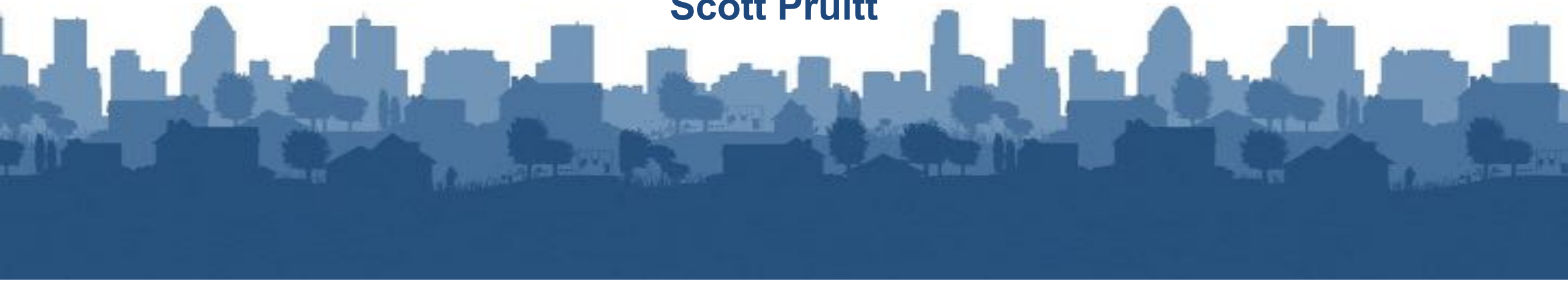




Data Quality 201: DQ Management Program, Part I

April 22, 2021

**Mike Lindsay
Christine Nguyen
Scott Pruitt**



About NHSDC

The National Human Services Data Consortium (NHSDC) is an organization focused on developing effective leadership for the best use of information technology to manage human services. NHSDC provides information, assistance, peer to peer education and lifelong learning to its conference participants, website members and other interested parties in the articulation, planning, implementation and continuous operation of technology initiatives to collect, aggregate, analyze and present information regarding the provision of human services.

NHSDC holds two conferences every year that convene human services administrators primarily working in the homeless services data space together to learn best practices and share knowledge. The past 3 events have been put on with HUD as a co-sponsor. Learn more on our web site www.nhsdc.org.

Learning Objectives

- Participants will learn about the core elements of a Data Quality Management Program (DQMP)
- Participants will be able to identify how a DQMP fits into HUD's Data Strategy
- Participants will identify strategies for improving and updating their DQMP, including viewing DQ tools and templates from HUD's HMIS Data Quality Management Program resource

Session Agenda

- Data Quality Management Program Refresher
- DQMP Components and Tools
 - Data Quality Plan
 - Enforceable Agreements
 - Monitoring and Reporting
 - Encouragements and Enforcements
- Action Planning
- Q&A

Hi!

In the chat, tell us more about you! Name your community and which role(s) apply to you:

- CoC
- HMIS Lead
- HMIS Vendor
- HMIS Participating Organization/End User
- Person with Lived Experience
- Government Entity
- Funder
- Other

Data Quality Defined

Data Quality refers to the reliability and comprehensiveness of your community's data

Components of data quality include:

- Timeliness
- Completeness
- Accuracy
- Consistency



Let's Talk DQMP

What is it?



DQMP Review

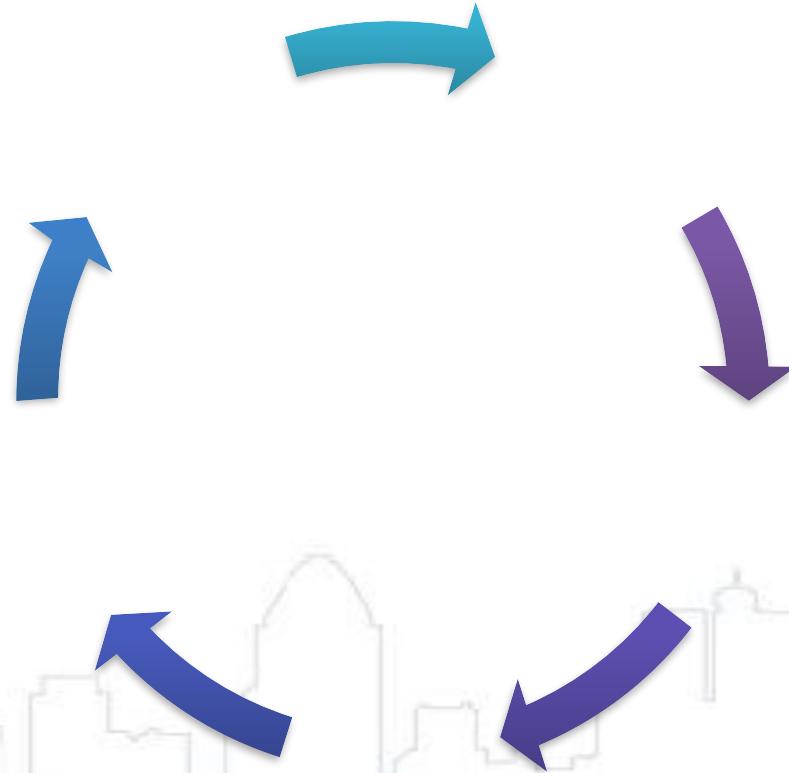
A Data Quality Management Program (DQMP) is the overall framework from which a community works to understand their current data quality, their baseline requirements, their ideal, and what tools to use to get from here to there

- It serves as the anchor for all HMIS data quality expectations, roles, responsibilities, and activities



What is a DQMP?

- It's a process
- Iterative
- Continuous
- Actionable
- Measurable
- Never stops evolving



DQMP Framework & Agreements

Include a clear and transparent DQMP framework and develop enforceable agreements based on that framework

- Implement agreements with all organizations participating in HMIS
- Provide guidance on the consequences for failure to meet the baselines in the DQMP framework
- Outline the process for notification of failure to meet a standard/baseline
- Lay out the responsibilities of the HMIS participating organization, the HMIS Lead, and the CoC

DQMP Components and Tools



Major Components:

- 1) Data Quality Plan
- 2) Enforceable Agreements
- 3) Monitoring and Reporting
- 4) Encouragements and Enforcements

Roles & Responsibilities



Everyone has a part to play in maintaining high data quality and supporting a data quality management program.

Component 1) Data Quality Plan

Data Quality Plan

An effective DQ Plan:

- Serves as the community's overall framework for data quality, including data monitoring and quality control.
- Provides locally defined benchmarks for completeness, accuracy, timeliness, and consistency, all of which are informed by the community's baseline.
- Does not sit on a shelf waiting to collect dust!

How Does it Look in Real Life?

Respond in the chat: How often do stakeholders in your community reference the DQ plan on a regular basis?



Sitting on a shelf

Our community lives, breathes our DQ plan!



Make updates annually but that's it

Review DQ quarterly

Publish DQ reports

Tools to Assist with the DQ Plan

Roles & Responsibilities Worksheet

Appendix A. Roles and Responsibilities Worksheet

Background

The different roles associated with Homeless Management Information System (HMIS) data collection, operations, policy and procedure development, and data quality (DQ) monitoring and reporting can all play a meaningful part in upholding a Continuum of Care (CoC)'s DQ Management Program. This worksheet is intended as an exercise for CoCs to review each role/responsibility and consider which entity should be responsible for carrying out the task in their CoC. Keep in mind for some communities that roles and responsibilities listed may be filled by a single entity, shared across stakeholders, or not assigned at all. CoCs should note this on the worksheet and utilize this document to ensure clear expectations across stakeholders. More or fewer roles and responsibilities may exist in a community, and the checklist should be customized locally to account for these differences.

Data Collection and Entry

Collect intake assessment data from clients	
Enter intake assessment data in HMIS	
Update HMIS to reflect changes in income, benefits, etc.	
Collect exit assessment data from clients (including exit destination)	
Enter exit assessment data in HMIS	
Make or change a bed/unit reservation for a client	
Merge duplicate clients across the HMIS	
Secure paper forms according to privacy and confidentiality standards	
Maintain workstation security	

Sample Data Quality Plan

Appendix B. Sample Data Quality Plan

Introduction

The introduction should include an explanation of why the CoC has created a Data Quality Management Plan (DQMP)—not only why it matters at the broader systems level, but also why it matters locally, with any locally relevant reasons. This should set the tone for the overall framework surrounding HMIS data quality within the CoC.

This section should also include any stakeholders involved in the creation, oversight, monitoring, and enforcement of the DQMP.

Reference [HUD TA Data Strategy](#) throughout relevant sections.

Example:

The _____ Continuum of Care (CoC), the Homeless Management Information System (HMIS) Lead, and providers have created this Data Quality Management Plan (DQMP) to provide actionable, measurable steps to address data quality within the HMIS. Data quality within HMIS affects everything we do in our work to address and end homelessness, and its importance cannot be overstated.

While focusing on data quality for federally funded projects that enter data into HMIS is necessary to ensure accurate reporting for those grants, any project that enters data into HMIS contributes to the overall picture of homelessness within the CoC and, therefore, is expected to participate in this DQMP.

The reasons why data quality is important are many, including but not limited to:

- Requirements based on funding the CoC receives;
- Data quality, or lack thereof, can directly affect the funding opportunities for providers;
- Accurate reporting for federal, state, and local funding;
- The ability of the CoC, and providers within the CoC, to tell the story of homelessness as realistically and completely as possible; and
- The data entered into HMIS directly affects clients through the coordinated entry process and may determine which services they may or may not be eligible for.

Roles & Responsibilities Worksheet

- Used as an exercise for the CoC to review each role/responsibility and consider which entity should be responsible for carrying out the task in their CoC
- For some communities, roles and responsibilities listed may be filled by a single entity, shared across stakeholders, or not assigned at all
- CoC should complete the worksheet and use it to ensure clear expectations across stakeholders

Sample Data Quality Plan

This is an example of how a Data Quality Plan can be structured and lays out the common DQMP elements

1. Introduction
2. Encouragements & Enforcements
3. Data Quality Benchmarks (Completeness, Timeliness, Accuracy, User Access & Consistency, HMIS Bed Coverage)
4. DQ Monitoring

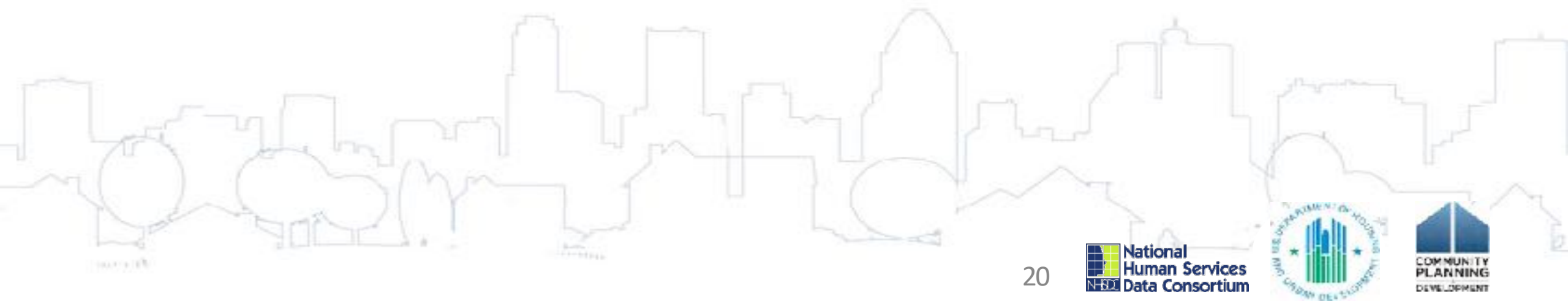
How Does it Look in Real Life?



Respond in the chat:

- (1) Given shifts to the remote environment over the last 12+ months, how have your staff worked to build trust and comfort so participants provide honest data? How have roles shifted over the last year?
- (2) How have you addressed new and evolving roles and responsibilities for HMIS Data Quality with the influx of CARES funds?

Component 2) Enforceable Agreements



Enforceable Agreements

Enforceable Agreements should:

- Define expectations of participating organizations and the monitoring process
- Describe how DQ measures will be monitored
- Describe the steps that will be taken if the organization fails to uphold the expectations laid out in the Data Quality Plan.
- Incentivize meeting and/or exceeding data quality targets.
- Provide minimum timelines for informing the CoC and HMIS Lead when a current project will end or a new project will begin.

HMIS Participating Organization Agreement

The HMIS Participating Organization Agreement lays out the roles and responsibilities for stakeholders involved in HMIS data quality monitoring

- HMIS Participating Organization
- HMIS Lead
- CoC

Agreements should be clear and enforceable

Tools to Assist with Adopting Enforceable Agreements

Sample HMIS Participating Organization Agreement

Appendix C. Sample HMIS-Participating Organization Agreement

Any organization participating in the CoC's HMIS is expected to adhere to the data quality standards as laid out in the Data Quality Plan. This includes baseline requirements for the following pieces of data quality:

- **Data Completeness** (how many of the required data elements in HMIS are completed for any given client).
- **Data Timeliness** (how long it takes for the data to be entered into HMIS once it is collected from the client).
- **Data Accuracy** (how much the data entered into HMIS reflects the client's or project's reality).
- **Data Consistency** (how equally the data elements are explained, interpreted, and entered into HMIS).

This organization is entering data into HMIS for the following project(s): **(list out the project names and types)**

The above project(s) are required to abide by the following baseline requirements, as laid out in the Data Quality Management Plan: **(list out the specific baseline requirements as laid out in the DQMP for completeness, timeliness, and accuracy)**

Data Completeness:

Data Timeliness:

Data Accuracy:

How Does it Look in Real Life?

How do you hold Participating Organizations accountable for HMIS Data Quality and addressing issues that arise?



Enforced through
“Carrots”

Enforced through
“Sticks”



Who plays a role enforcing DQ? HMIS lead alone or HMIS lead + CoC?

Component 3) Monitoring and Reporting

Monitoring and Reporting

Monitoring includes a clearly defined process for when participating organizations are monitored, which entities are involved in monitoring, and what will be reviewed during monitoring.

Reporting and analysis of data quality should happen on a consistent, ongoing basis in addition to the official monitoring process

Primary Components of Data Quality Monitoring and Reporting:

Monitoring and Reporting (cont'd)

- Identifying specific monitoring and reporting methods (e.g., on-site monitoring, remote monitoring, or a combination)
- Monitoring and Reporting Frequency: Consider how often monitoring will occur
- Designating a Monitoring Entity: Roles could include a monitoring and oversight entity at the systems level or agency-level staff responsible for managing and reporting DQ to meet their agency's DQ targets.
- Addressing Data Quality Improvement: Developing appropriate measures in place to be able to diagnose and resolve underlying DQ performance issues

Tools to Assist with DQ Monitoring and Reporting

Sample DQ Monitoring Visit Report & Improvement Plan

Appendix D. HMIS Data Quality Monitoring Visit Report and Improvement Plan

Data Quality Monitoring Visit Report

Date of Monitoring Visit: _____

Person Conducting Monitoring Visit: _____

Name of Organization: _____

Organization Contact and Information: _____

Name of Project and Type of Project Monitored: _____

Organization Staff Present During Monitoring: _____

Each baseline and expectation met below accounts for (____) points for a total of (____) allowable points.

Include the specific baseline requirements for the project type to be monitored:

Data Completeness baseline: _____ Baseline Met? ☐ Yes ☐ No

Data Timeliness baseline: _____ Baseline Met? ☐ Yes ☐ No

Data Accuracy baseline: _____ Baseline Met? ☐ Yes ☐ No

Data Consistency expectation met? ☐ Yes ☐ No

Coverage & Utilization expectation met? ☐ Yes ☐ No ☐ Not applicable

Total Score: _____

HMIS Data Quality Performance Monitoring and Improvement Strategies

Appendix E. HMIS Data Quality Performance Monitoring and Improvement Strategies

Part I. User/Front End Data Quality

Data Completeness

Why It Matters	How to Address	How Often
For accurate reporting and to analyze trends in homelessness data over time, data needs to be complete.	Data Completeness Begins is with deadlines for fixing errors.	Data Designation Reports provides to individuals, users/agencies monthly / every other month.
Attempts to have an few staff, missing data not collected, client refused, and client doesn't have options as possible.	Report Cards that say be publicly available.	Report Cards publicly available quarterly (by provider or project type).
Data completeness is the easiest thing to focus on when discussing overall data quality because it is easy to tell if a client's HMIS record is complete or not.	Set a baseline for data completeness for each project type in Policies & Procedures (P&P).	Review P&P annually and review data completeness baseline for each project type.
Data collection and data entry is not a one-time event and agencies should attempt to collect data for clients served over time as working relationships are developed and trust is built.	Provide one-on-one/onsite training for users.	HMIS Lead offers one-on-one/onsite training for users on an ad-hoc/regular basis.

Sample DQ Monitoring Visit Report & Improvement Plan

- This is a sample of how the CoC monitors and improves data quality through onsite monitoring
- Data Quality monitoring should be done regularly (monthly) off-site
- Data Quality monitoring should also be done onsite regularly (yearly or otherwise)
- Also includes a template to improve data quality during the onsite monitoring process through an improvement plan
- Data quality is not a one-time, “you’ve got bad data quality” conversation, but an ongoing improvement process

HMIS Data Quality Performance Monitoring and Improvement Strategies

This tool lays out some common strategies for improving data quality

- Why it Matters
- How to Address
- How Often

And across several domains:

- Completeness
- Timeliness
- Consistency
- Accuracy
- Timely Project Entries
- Timely Project Exits
- All Clients Served

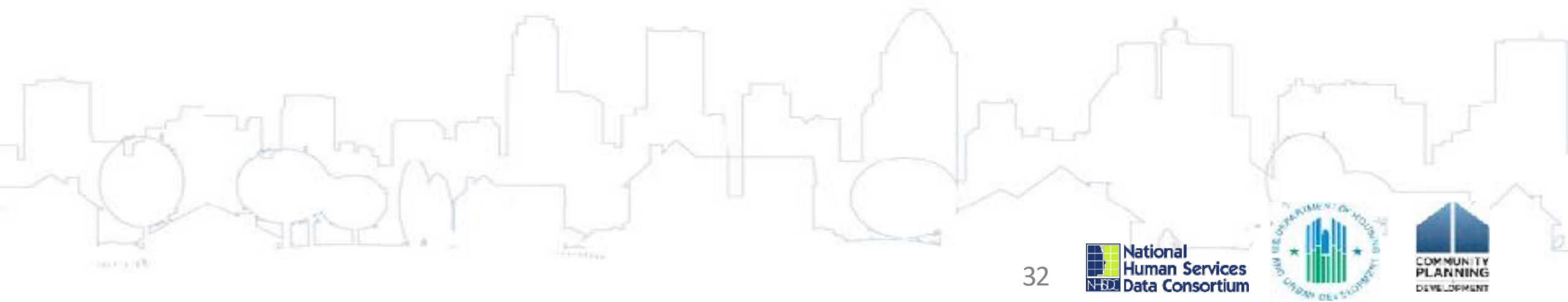
How Does it Look in Real Life?

How do monitoring and improvement processes function in your community? How have you adapted to remote monitoring?

What's working and what's not working based on what you've seen over the last year?



Component 4) Encouragements and Enforcements

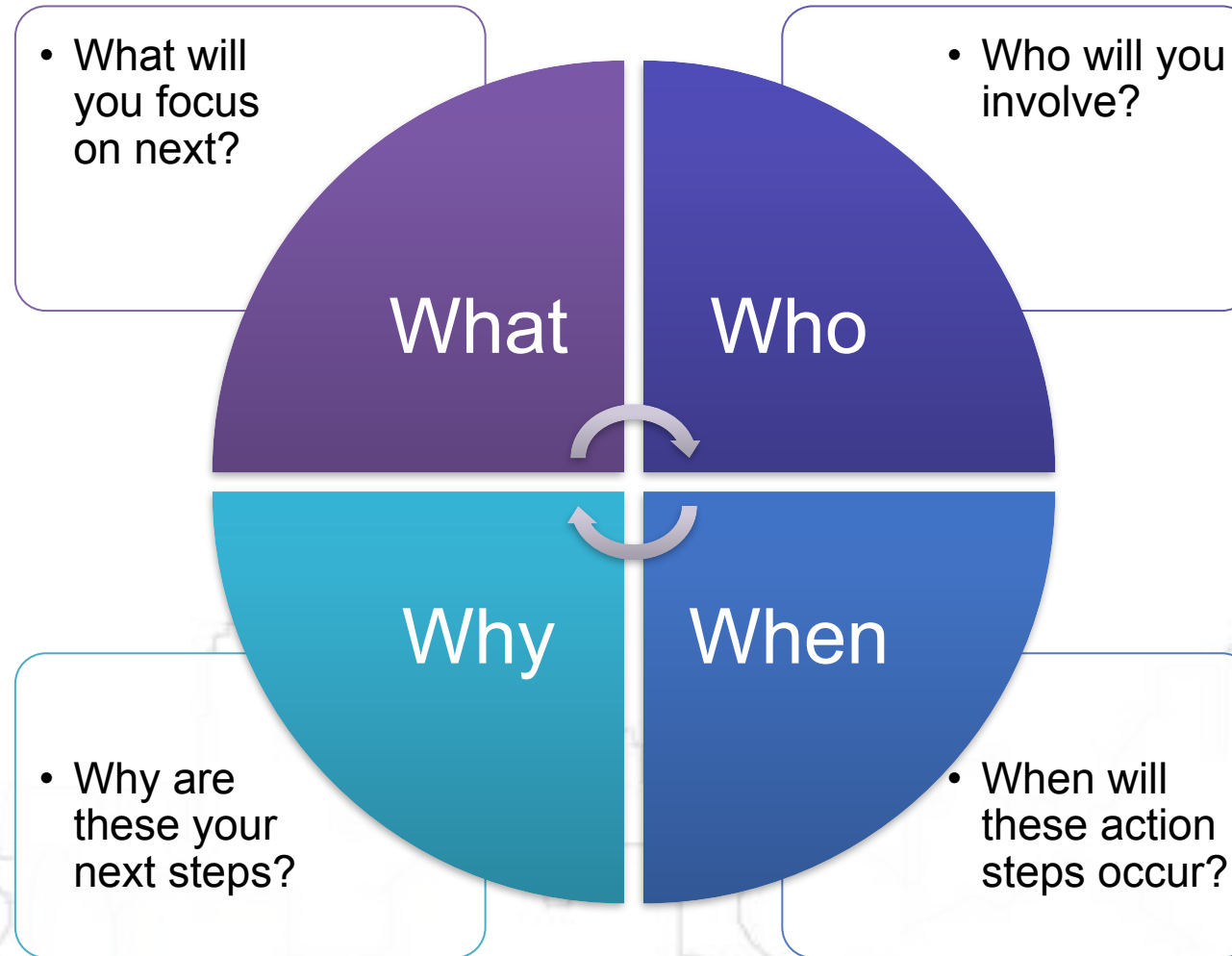


Encouragements and Enforcements

Primary components for effective DQ encouragement and enforcement:

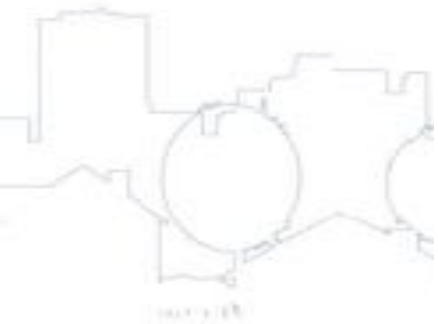
- Identifying community resources that can be used (e.g., receiving public recognition for high DQ performance or using DQ performance as a basis for funding)
- Communicating and sharing DQ performance and system-wide progress: Develop robust communication strategies to keep stakeholders updated and engaged with system-level DQ performance

Action Plan for Continuous Quality Improvement



Questions?

Q&A



ational
man Services
NBDI Data Consortium



Additional Resources on Data Quality

- HMIS Lead Series Page: <https://www.hudexchange.info/resource/6261/hmis-lead-series/>
- Data Quality Management Program (DQMP): <https://files.hudexchange.info/resources/documents/HMIS-Data-Quality-Management-Program.pdf>
- For more HMIS resources, visit the HUD Exchange HMIS Guides and Tools page: <https://www.hudexchange.info/programs/hmis/hmis-guides/>

Thank You!

Mike Lindsay

ICF

Michael.Lindsay@icf.com

Christine Nguyen

ICF

Christine.Nguyen@icf.com

Scott Pruitt

Cloudburst

Scott.Pruitt@cloudburstgroup.com