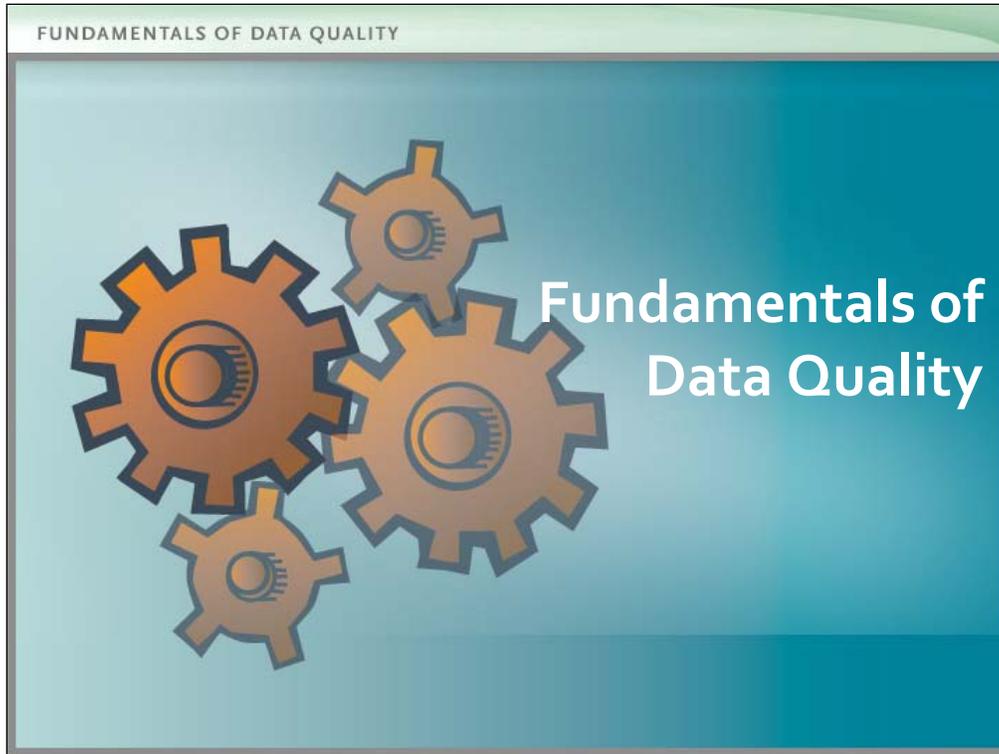


Welcome to Data Academy. Data Academy is a series of online training modules to help Ryan White Grantees be more proficient in collecting, storing, and sharing their data. Let's get started with the module "Fundamentals of Data Quality."



This module is called Fundamentals of Data Quality.

In this module we will review the importance of having good data for reporting to HRSA, the Health Resources and Services Administration, and for your own program purposes. We'll also describe strategies to help ensure the quality of your data.

Learning Objectives



By the end of this module, you will be able to...

- Explain the importance of collecting and reporting good data for the RSR
- Define key terms related to data quality
- Describe strategies to determine if the data you collect are good
- Describe systems and procedures to improve the quality of your data

By the end of this module, you will be able to:

- Explain the importance of collecting and reporting good data for the RSR, the Ryan White Services Report,
- Define key terms related to data quality,
- Describe strategies to determine if the data you collect are good, and
- Describe systems and procedures to improve the quality of your data.

What is data quality?

Features and characteristics that indicate data are:

- Accurate
- Complete
- Consistent

Good data accurately reflect the clients you serve and the services they receive

Let's start by defining data quality. Data quality refers to the features and characteristics that indicate data are accurate, complete and consistent over time and across clients. In other words, good data accurately reflect the clients you serve and the services they receive.

Quality of Care vs. Quality of Data

Quality of Data

- Accurately reflect services provided
- No difference:
 - Services that are actually provided
 - Services your data shows as provided

Quality of Care

- Using data to improve service delivery
- No difference:
 - Services that should be provided
 - Services that are actually provided

It's important to understand the difference between quality of data and quality of care. Quality of data is about having data that accurately reflect the services you provide. If you have good data, there is no difference between what is actually provided and what the data tells you is provided.

Quality of care, on the other hand, reflects what services should be provided to your clients compared to the services they actually receive. Poor quality of care results from gaps between what should be provided and what is actually provided. Providing quality care is an important part of achieving good health outcomes.

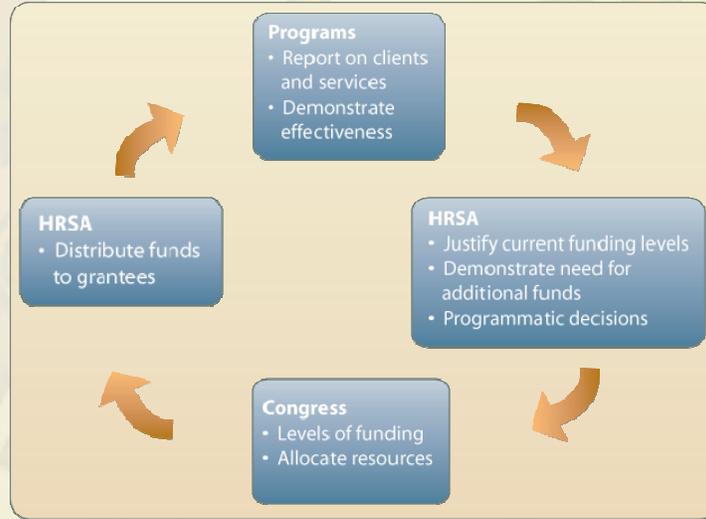
FUNDAMENTALS OF DATA QUALITY

<ul style="list-style-type: none">• 50% of women received a Pap test• You know that you provide Pap tests to 90% of women <p>You may have a data quality issue</p>	<ul style="list-style-type: none">• Your data are accurate• Only 50% of women received a Pap test <p>This is a quality of care issue</p>
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Let's look at an example. If your data show that only 50% of women had a pap test, but you know that you provide Pap tests to 90% of the women in care, this is a quality of data issue. Your data do not accurately represent the services you are providing.

On the other hand, if your data are correct and only 50% of women are receiving pap tests, there is a difference between the services you should be providing and what you are actually providing. This is a quality of care issue.

Public Health Decision-Making



There are many reasons why it is important to have good data. First, it's critical to submit good data for the RSR. HRSA uses your data to learn about the clients you serve and the services you provide. Your data demonstrate the effectiveness of your current programs.

HRSA uses the information you submit to justify current levels of funding, to demonstrate the need for additional funding to Congress, and to make programmatic decisions. Congress uses this same data to make decisions about level of funding and to allocate resources between agencies. Eventually these funds are distributed to grantees by HRSA.

In other words, HRSA and other funding agencies depend on sound, accurate data to make good public health decisions about funding and allocation of resources.

Data for Program Purposes

- Decision-making and allocations
- Quality improvement
- Performance assessment
- Program monitoring and evaluation
- Service coordination
- Client care

In addition to using data for reporting purposes, many grantees use data for decision-making, allocations, quality improvement and performance assessment, monitoring and evaluation, service coordination and, of course, client care. If you have submitted good data for the RSR, this same information can help you conduct other activities more effectively.

Data for Program Purposes

- Understand and monitor how well your clients are served
- Make decisions based on data that include all clients and services
- Accurately measure program performance
- Understand different groups you serve
- Clinicians can rely on data for clinical decision-making

Similarly, the strategies that you'll use to ensure the quality of your data for the RSR can be applied to any other data you collect. This means that you can rely on your data to understand and monitor how well you are serving your clients. And by ensuring the quality of your data, you can be confident that programmatic decisions are based on data that include all the clients you serve and all the services your program delivers. Good data will help you accurately measure program performance, and better understand the experiences of different groups within your client population. On an individual level, data quality affects client care. Good data means that clinicians can rely on their data to assess clients' health and make decisions about their care and treatment.

Data for Program Purposes

- Save time and resources
- Easier to get the data you need
- Data will be available for RSR submission
- Ready to use when you need to develop presentations and reports

Implementing basic data quality procedures can also help you save time and resources. You will find it much easier to get the information you need from your data, whether for reporting purposes or to develop presentations and reports. If you are confident about the quality of your data, when it comes time to prepare and submit your RSR, you won't have to spend extra time finding and cleaning up your data. During the year when you need to develop presentations or generate data reports, your data will be ready to use.

Whether you are evaluating the delivery of services within your clinic or across all of your contracted service providers, you can learn a lot from your data. By reviewing your data on a regular basis, you can identify opportunities for improvement in how data are collected.

This module is designed to help you learn how to implement some basic procedures and systems to make sure you always have good data.

Ensure Good Data

What *are* good quality data?

- Determine whether or not you have good data
- Reviewing your data
- Improve your data

Procedures to collect good data

- Consistent and correct data collection
- Receive and review data in time

So, what are good, quality data? And how do you know if you have quality data? These questions are the basis for the rest of this module.

In the first half of this module we will show you how to determine whether or not you have good data. We'll discuss the basics for reviewing your data and ways to improve them.

The second half of this module will focus on how to implement procedures to help you collect good data. We'll show you how to collect data consistently and correctly, and how to make sure you receive and review your data in plenty of time to meet RSR and other reporting deadlines so you can submit data you feel good about.

Ensure Good Data

Making sure your data are

- Complete
- Valid (accurate)

Often called “Data Cleaning”

Let’s begin by making sure your data are complete. We’ll then focus on making sure your data are valid – which means that your data provide an accurate picture of the clients you serve and the services you fund and provide. Checking to make sure that data are complete and valid is often referred to as data cleaning.

FUNDAMENTALS OF DATA QUALITY



Complete Data

- No missing data elements
- Include all clients served and services delivered
- Improve accuracy of information

Complete data do not have missing elements, and include all of the clients that you serve, and the services delivered.

Complete data improve the accuracy of the information you use for reporting and for program decision-making.

Complete data provide a full picture of the work you do. If some of your data are missing, you may underreport the services you provide or the number of clients served. In some cases, incomplete data can make it seem like you are not providing some of the services that your clients need, even though you really are providing those services.

Incomplete Data

Missing clients

- Make sure you have data on all clients
- Include data from all sites

One or more missing data elements for an individual client

- Data may be missing due to an error
- Intentionally skipped (e.g. not applicable)

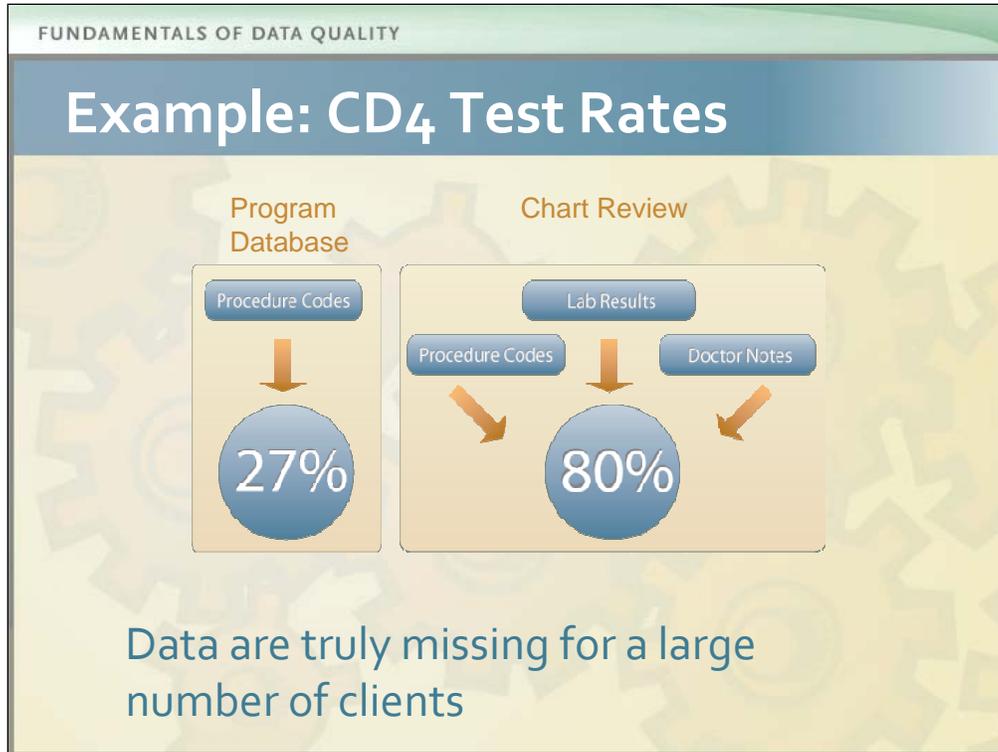
There are two types of incomplete data.

The first type is when specific clients are totally missing from your data set. In other words, there are particular clients for whom there are no data at all. It's important to have data for your entire client population so your data reflect services provided to all the clients that you serve. If your program funds or provides services at more than one site, make sure that all the clients from all the sites you serve are included in your data set.

The second type involves one or more missing data elements for an individual client. In this case, you'll want to find out why the information is missing.

You may have data that are missing due to an error. A staff member may have left an item on a data collection form blank by mistake, or they might not have entered it into your database. In this case, the item is incomplete. To accurately represent your client and the services they received, try to find the missing information. This may mean going back to a paper form, or talking with a provider or data collection staff to find out what should have been filled in.

It's also possible that there is a legitimate reason the data appear to be missing. For example, a question may be intentionally skipped because it doesn't apply to a particular client or because a client refused to answer it. We'll talk more about this in a few minutes.



Here's an example of data that are truly incomplete.

Let's say that your program is compiling medical service data for the RSR. When you look at the data in your program database, you find that only 27% of your clients are getting a CD4 test every 6 months.

You are surprised by this low rate, and believe that the actual rate is higher, so you look at a sample of paper charts, one at a time. This helps you determine if there is a problem with your data, or whether the testing rate is actually this low. By reviewing this sample, you learn that 80% of your clients received a CD4 test at least once during the last 6 months.

During this process, you discover that CD4 tests are documented in several different places in the client's medical record, including the provider notes, the lab results, and sometimes in the procedure codes. However, your program database only pulls data from the procedure code field.

In this case, data are truly missing from your database for a large number of your clients. You've also uncovered a larger data quality problem: CD4 tests are not recorded consistently or completely in your clients' records. In this example missing data will result in low reported rates in the RSR, and may make it challenging for a provider to have the most recent CD4 count for an individual client. As we've said before, improving data quality is not only important for the RSR, but for all of the ways you use data in your program, including client care.

Are your data complete?



Concerned about missing full client records?

- Do you have data on all the clients you serve?
- Have you received data from all the sites that report to you?
- Do you have all the data?

As you review your data, here are some questions to help determine if your data are complete.

If you are concerned that you are missing full client records: Do you have data on all the clients you serve? Have you received data from all sites that report to you? Are all the data included in your program's dataset?

Are your data complete?



Missing data within client records

- Look at paper forms before data entry
- Look at your electronic data
- Truly missing, or not applicable?
 - Example: Prenatal care for HIV positive women

Next, look for missing data within client records. This means looking at any paper forms before they are entered into an electronic system to make sure nothing has been left blank by mistake. It also means looking at your electronic data set.

When you find data that seem to be missing, investigate further to determine whether they are truly missing or if they are not applicable to that particular client.

Questions about prenatal care for HIV positive women, for example, should not be completed for men, for women that are not pregnant, or for pregnant women who are not HIV positive.

FUNDAMENTALS OF DATA QUALITY

Ensuring Complete Data



Check for missing data routinely

- Built-in reports
- Checks for completeness

When developing a data form or system

- Anticipate scenarios
 - Build in “skip patterns” if needed
 - Create specific codes for “refused”

Document when data are missing

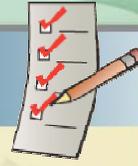
Now that you know how to recognize incomplete data, how do you reduce it?

Check for missing data routinely - once a month is a good place to start. Your data system may already have built-in reports to help you find incomplete data, or you may be able to ask a programmer or statistician to help you do checks for completeness.

When you develop a data collection form or a data system, you can anticipate scenarios when an item might not apply to a particular client. In cases where an item does not apply to certain clients, like the example we just gave about only collecting data on prenatal care for women who are HIV positive and pregnant, you can build in “skip patterns.” In this case, if you are entering data for a male client into an electronic data system, you will automatically skip questions about pregnancy, and any other female-specific data elements. If you are collecting data on a paper form you might see written instructions to skip certain items for male clients. You can also create specific codes such as “refused to answer” for items that are optional for your clients.

If data are being entered from paper forms into an electronic system, make sure to document whenever data are missing from the forms. Keep in mind that the more time has passed, the harder is it to find missing data— and once you get behind it is hard to catch up.

Ensuring Complete Data



Train staff

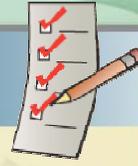
- Check for missing data
- Follow up with data collection staff
- Keep track of missing data
- Develop a regular schedule to communicate
- Provide feedback on recurring items
- Review definitions and procedures
- Procedures for data collection
- Clear and consistent definitions and instructions

Look for data elements that often have data missing. If you see a pattern, find out why, and clarify how data should be collected to improve completeness and reduce errors.

Train data collection staff to check for missing data before they hand in forms and when they enter data into an electronic database. Make sure to follow up with program staff or contractors on any missing data. Consider keeping a list to track missing items and develop a regular schedule to communicate your questions about missing or confusing data. If you find that the same items are repeatedly missing, provide feedback to data collection staff and review definitions and data collection procedures as needed.

Document – and provide training - on procedures for data collection. Staff may not complete items that they don't understand, or they may complete them incorrectly. Training should include clear and consistent definitions of required data elements, and should provide clear instructions for how and when each item should be collected.

Ensuring Complete Data



Paper forms

- It is possible to miss entire pages or entire data collection forms
- Procedures in place for paper forms
 - Make sure they are turned in ASAP
 - Number pages
 - Data entry and filing

Incomplete data can present particular challenges when you are dealing with paper forms. If staples fall out, or forms are not copied on both sides, you may end up with entire pages of missing data for a particular client. Further, if you are missing an entire paper form such as a client intake, you may not know that the information is missing –because you don't have any data at all for that client.

Put procedures in place to make sure paper forms are turned in as soon as they are completed, that pages are numbered, and that forms aren't misplaced before the data are recorded electronically.

FUNDAMENTALS OF DATA QUALITY



Valid Data

- Accurate data
- Reflect clients you serve and services you deliver
- Accurate picture

We mentioned earlier that data cleaning involves checking to make sure your data are complete and valid. Now that we've covered complete data, what are valid data and how do you review your data to make sure they are valid?

Ensuring valid data is often a major concern for Ryan White grantees.

Valid data are accurate data. Valid data truly reflect the clients you serve, the characteristics of these clients, and the services you deliver; they provide an accurate picture of what you are doing.

Are your data valid?

How are data collected?

- Does the setting compromise the answers?
- Are any questions unclear?
- Are staff trained to collect and enter data?
- Check for errors in calculations and formulas



See module
"Getting Data from
Existing Sources"

What are some of the reasons your data might not be valid?

Start by thinking about how the data are collected. Does the setting where the questions are asked compromise the answers? For example, asking an adolescent about sexual activity in front of a parent may elicit a different response than asking them when they are alone.

Are any of the questions you are asking unclear? If a client is filling out a paper form and misunderstands one of the questions, he or she may not provide the response you need.

Many grantees have issues with data entry errors. Have your data collectors been properly trained to collect and enter the required data? If a staff person makes an error entering data into the client's electronic record, it will have incorrect information.

Finally, consider errors in calculations or formulas – even in a simple spreadsheet it is easy to make and repeat errors, so always check and recheck your formulas. To learn more about this, see *Getting Data from Existing Sources*.

Example: Cervical Pap test rate

- Rate of Pap tests (95%) is higher than you expect
- Take a closer look:

LAB_ID	CLIENTID	SITEID	GENDER	SPECIMEN_SOURCE TEXT
08st7986	TV8549	SiteA	Female	Cervix/Endocervix
08st7986	YN3945	SiteB	Male	Cervix/Endocervix
08st7986	SJ3926	SiteB	Male	Cervix/Endocervix
08st7986	MI3409	Site A	Female	Cervix/Endocervix

- Consider validation rules to prevent errors whenever possible

Consider the following example:

Your RSR report showed that the cervical Pap test rate was 95% among the women served by your program's two clinics. This is a much higher rate than you expect, so you decide to look more closely by extracting the data into a simple spreadsheet.

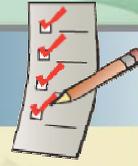
After some investigation, you find that the females at one of your clinics were incorrectly labeled as males in that clinic's data set. So, while the number of Pap tests was correct, the number of female clients was actually much higher.

After fixing this error, you find that 70% of female clients received a Pap test in the last year. You are much more confident that these data accurately reflect both the number of female clients you serve and the number of Pap tests provided.

You can set up your data system to prevent errors like this one. For example, you might be able to set up your data system so that a Pap test can be reported for female clients as either cervical or anal, while for males the site of the specimen can only be reported as anal.

Simple steps like this can easily prevent both data entry errors and larger problems. Try to anticipate situations like this in data collection, and consider setting up validation rules in your data system wherever you can.

Ensuring Valid Data



- Provide training to program staff and contractors
- Build in validation rules
 - Data cannot be entered without passing rule
- Run validation checks
 - Define acceptable data and outliers
 - Help catch data collection and entry errors
 - If outside the acceptable range: is it possible? Likely?

Now let's look at strategies to help ensure that your data are valid.

Provide training to program staff and contractors to reduce errors – make sure that they are trained on data definitions and on how to complete data entry fields.

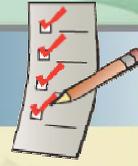
Include validation rules in databases where possible. This means that data cannot be entered into a certain field unless they pass a specific rule. For example, as we discussed earlier, you could set up a validation rule so that you cannot enter a cervical Pap test for a male client. Or, you could set up a rule so you cannot enter data on services delivered for a date in the future.

Similar to validation rules are validation checks. For example, a validation check might confirm that data fall within acceptable ranges. To do this, you would need to define what you consider acceptable, and what data are likely to be outliers. For example, people over 110 years of age, or CD4 counts greater than 3,000 may be unrealistic, or even impossible. Once you have defined your ranges of likely, or acceptable data, you can program your data system to run a validation check or look for outliers. This will be much more efficient than looking at your data one record at a time.

Validation checks can help you catch data collection and data entry errors. Common data entry errors include typos, and entering the right data in the wrong field, or even the wrong record. It's also quite common to invert numbers by mistake, like 1983 and 1938, or to add extra digits, such as typing 1,000 instead of 100. Too many data entry errors can result in data that are not valid.

When a validation check shows data outside the acceptable ranges, ask yourself if the information is possible, and also whether it is likely. Consider whether there might be an error, and use other information you have about the client, like paper records, to determine if the data are truly incorrect or if there is another explanation.

Ensuring Valid Data



- Look at comparisons between data elements
 - Example: are most clients with low CD4 counts also taking PCP prophylaxis?
- Compare sample of paper charts to electronic data

You can also look at comparisons between data elements – in other words, using one data element to help you figure out if another one is correct.

For example, the RSR requires that you report whether PCP prophylaxis has been prescribed to your clients during the reporting period. PCP, or pneumocystis jiroveci pneumonia, is the most common opportunistic infection in people living with HIV. The RSR also requires that you report CD4 counts for your clients. Take a look at your data on PCP prophylaxis and compare it to your CD4 count data. If you have a large number of clients with CD4 counts below 200, and few or none of them appear to be taking medication to prevent PCP, it is possible that clients are not receiving the appropriate medication, but it is also possible that there is a problem with your data.

Another strategy to check for valid data is to review a sample of paper charts and compare the information to your electronic data. Consider reviewing a sample of charts if you see an unexpected change in your numbers, or if your numbers look very different than you would have expected. Although it can be time-consuming, you can also do an occasional sample chart review as a spot check if you want to assess the overall quality of your data.

Ensuring Good Data

What are good data?

- Valid
- Complete

How do you get good data?

- Skip patterns
- Validation rules
- Routine training

We just finished discussing what makes good data. You can get good data by cleaning your data to ensure that it's valid and complete.

We've also talked about some basic procedures, like creating skip patterns and validation rules, and providing routine training on data collection, that can help ensure that you collect good data in the first place.

Now let's discuss additional procedures you can put into place before and during data collection to make certain that the data are reasonably good when you start reviewing them. You're always going to have to do a certain amount of data cleaning, but there's a lot you can do to keep it to a minimum.

Implement Clear and Consistent Procedures

Train staff and service providers

- Use the same definitions, procedures and versions

Why?

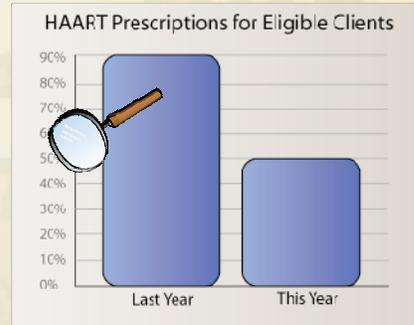
- Compare data between clients
- Compare within and across programs
- Reduce errors

The most important way to ensure that good data are collected is to implement clear and consistent data collection procedures. This means making sure that your data collection staff, and any contracted service providers, are trained to use the same definitions and procedures to collect data, and that they are using the same versions of any data collection manuals, instructions, and data collection forms.

Why is this important? If you know that your data have been collected in the same way, and you know that the data conform to the same set of definitions, you'll be able to compare data between clients, within a program, or across programs. You'll also reduce errors related to misunderstandings and incorrect interpretations of what data need to be collected.

Example: Antiretroviral Therapy

- Any differences in HAART prescriptions?
- What's going on?
 - HAART data were entered into the wrong place
 - Lack of training → inconsistent documentation
- Provide consistent training across all sites and providers



Let's look at an example of the importance of consistent data collection.

Because it is a standard of care, the RSR requires that you report which clients received HAART, or highly active antiretroviral therapy, during each reporting period. As part of a quality improvement effort, you've decided to use this data to look for any differences between last year and this year in how often HAART has been prescribed to HAART-eligible clients. As a measure of HAART-eligibility you select clients with CD4 counts under 350.

For the most recent reporting period, the percent of eligible clients receiving HAART prescriptions is only 50%. This is much lower than before – last year showed a rate near 90%. There haven't been any changes in HIV treatment guidelines, and CD4 rates haven't changed much either, so you're concerned about this lower rate of HAART prescriptions. What's going on?

The eligibility criteria based on CD4 counts were accurate because they came directly from lab results, but HAART prescriptions have to be hand-entered into the EMR by clinical staff. After some investigation, you discover that a new physician has been incorrectly entering HAART prescriptions into a "general prescription" field, instead of a specific field for "HAART prescriptions." Because you pull data for the RSR from the "HAART prescriptions" field, you were missing HAART data for all of the clients seen by this particular physician. The physician had not yet been trained to use the EMR, and you have a problem with consistent documentation across providers because training was not provided as part of this physician's orientation.

Train everyone to collect data in the same way, using the same definitions. It's important that this training is clear and consistent across all sites and providers so that everyone is collecting the same data in the same way.

Example: Antiretroviral Therapy



See module
"Building Data
Partnerships with Staff
and Contractors"

You can learn more about how to work with your contractors in the module *Building Data Partnerships with Staff and Contractors*.

Ensure Consistency

- Make guidance and instructions available
 - A written manual or other documentation is best
- Use the same data collection tools
- Provide training
 - How to ask each question
 - How to enter data
- Always “pull” or extract data in the same way



See module
"Getting Data from
Existing Sources"

In addition to training, it's important that guidance or instructions are available to all sites and providers. Ideally, this would be a written data manual or other documentation so procedures can be implemented consistently even with staff turnover.

Another way to ensure that your data are collected consistently is to use the same tools. Asking your staff and contractors to use the same data collection forms will help decrease the frequency of missing data. You may even have them use the same electronic system for collecting information about clients.

If you require everyone to use the same data collection form – or the same system for data entry – make sure that they are all trained on how to ask each question, and how to enter data into each field in your data system.

If you are going to pull, or extract, data from an electronic data system or from a paper chart make sure it is always extracted in the same way. You can learn more about data extraction in the module *Getting Data from Existing Sources*.

Timely Data

- Allow time to review and clean data
- Must be received by deadline
- Essential to ensure quality of data

In this final section, we'll review why it's important that your data are timely.

Getting your data in a timely manner allows you to review and clean your data before submitting the RSR, or using data for other program purposes. Timely data must be received by an established deadline.

This concept may seem obvious, but timeliness is essential to ensure the quality of your data.

Why are timely data important?

- Fix major errors and omissions
- Improve accuracy
- Meet reporting deadlines
- Time to prepare, review and clean data
- Easier to prepare reports, respond to requests and support ongoing activities
- Remember to consider timeliness for all the data you receive

Why is it so important to have timely data?

If you schedule adequate time to review your data, you will be able to fix major errors and omissions, and improve the accuracy of your data.

First and foremost, HRSA and other agencies have specific deadlines. If your data are not timely, you may miss reporting deadlines, or may not have enough time to prepare, review and clean your data before they are submitted.

Timely data are just as important for your program: timely data are up-to-date whenever you need them - so it's easier to prepare reports, respond to data requests, and support ongoing program activities.

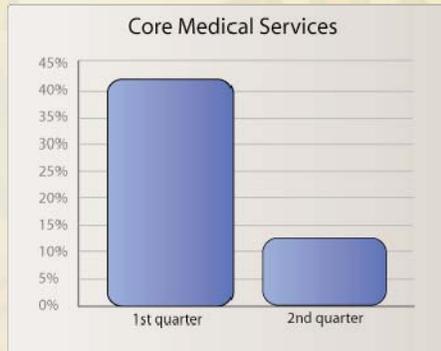
Don't forget to consider timeliness for both the data you receive from contractors as well as the data you compile from your own program. Is there adequate time to review data for other aspects of quality, like completeness, and address identified gaps before the reporting deadline?

Example: Using Data for your Program

Reporting data on services provided

- Two sites have not submitted data yet

You need to get the data on time



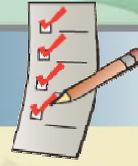
Let's look at an example.

Your local Ryan White Planning Council asks you, the Part A grantee, to present data describing the services provided during the last quarter. The report must include data from all providers of care, but you do not have the data from the two contracted service providers that provide a majority of the core medical services you fund.

A few days before your presentation, these providers have not submitted their quarterly data. If you only present the data that you've received so far, it will appear that are not funding much primary medical care – even though it is one of the major service categories that you fund.

In this example, timely data would have allowed you to present data on all the services delivered – and all clients served by your program.

Ensure Timely Data



- **Set deadlines**
 - Allow adequate time to receive and review data
 - Work together on reasonable deadlines
 - Stay on top of data entry
- **Communicate deadlines**
 - Does everyone understand the deadline?
 - Is it consistent across sites?
- **Stay focused on the schedule**
- **Check on data collection progress**

Here are some practical strategies you can implement to ensure that your data are timely.

First, set deadlines. Your deadlines should allow for adequate time to review your data to see if they are complete and valid, address any issues before you need to report RSR data, or present your data to others in your program or your community. Include adequate time to receive the data, review the data for quality, and address identified gaps *before* data are needed for reporting or other use. It's important to have clear and consistent deadlines for your contractors and staff. Do you have a regular data collection schedule? Work with contractors to set timelines that are reasonable. If you have paper data that need to be hand-entered into an electronic data system, timeliness also means staying on top of data entry so that your electronic data are ready when it is time to review them.

Second, communicate these deadlines. Do people that are responsible for data collection understand the reporting deadline? Is the deadline consistent across all reporting sites? Include these deadlines, along with any consequences for missed deadlines, in a program manual, contract, or Memorandum of Understanding.

Finally, stay focused on the schedule. *Setting* deadlines may not be enough – ensuring timeliness is about making sure that data are collected and reported according to your timeline.

Send reminders or schedule routine conference calls or meetings with appropriate staff and contracted service providers. Remind all sites and contractors to get data from their staff, and to check on data collection and data entry progress. This will give you a chance to identify data collection issues that may affect timeliness.

Establishing, communicating, and enforcing reasonable deadlines will allow time to review and correct errors in your data before they are submitted to HRSA.

Summary

- Good data accurately represent clients served and services provided
- Key data quality concepts:
 - Complete data
 - Valid, accurate data
- Routine procedures before and during data collection
 - Clear and consistent procedures
 - Realistic deadlines

In this module, we explained that good, quality data accurately represent the clients you serve and the services you provide. This is essential for the data you submit to HRSA, and will allow you to rely on your data for program planning and management.

We also learned about key data quality concepts. We went over the importance of reviewing your data to ensure that they are complete and valid.

Complete data provide a full picture of your clients and services. If your data are incomplete, you risk underreporting your services or total number of clients, which could jeopardize your funding levels. Incomplete data often result from data entry errors or inconsistent documentation procedures.

Valid data provide an accurate picture of what you are doing at the service-delivery level. If you have confidence in the accuracy of your data, you can rely on them for program decision-making. In addition, you can be assured that HRSA is getting an accurate depiction of your program.

In the second half of this module we discussed routine procedures you can put into place before and during data collection to make certain that the data are reasonably good when you receive them.

We presented strategies to address common data quality concerns, beginning with the importance of implementing clear and consistent procedures for data collection. We also discussed the importance of timeliness, suggesting that you work with staff and contractors to set realistic deadlines so that there's enough time for data to be entered, reviewed and cleaned before they are submitted.

What's Next?

- Data quality assurance practices should be routine and ongoing
- Visit the National Quality Center
www.nationalqualitycenter.org
- Apply quality improvement strategies to systemic data quality challenges

Data quality assurance practices should be routine, and ongoing. By implementing these procedures, you will be able to use your data at any time and have confidence in the data you submit to HRSA and other funders. You'll also be able to rely on your data for program purposes.

What's next? After implementing the strategies we've suggested, you may sometimes identify significant data quality issues. What do you do when there is a larger, systemic problem with the quality of your data?

The NQC, or National Quality Center has a series of learning modules about quality improvement. You can use these modules for ideas on how to find, and address, the source of a systemic issue. In many cases, the same strategies that are designed to improve quality of care can also be applied to improving the quality of your data. Applying quality improvement strategies to data quality challenges will help you plan for future data collection and continue to improve the quality of your data.

Additional resources and modules

- View more modules at the Data Academy Website

www.careacttarget.org/dataacademy

- For more resources, visit the TARGET Center website

www.careacttarget.org

You have now reached the end of this module. We hope that you enjoyed the module and that it helped you build skills for collecting, reporting, using and sharing data. To view more Data Academy modules, visit the Data Academy home page. And to learn about other resources for Ryan White HIV/AIDS Program grantees, visit the TARGET Center website.