



HIV Continuum of  
Care Collaborative

# Guide to Measurement for Improvement

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## Overview

Measurement for improvement is an important part of participation in the HIV Continuum of Care Collaborative. Measurement tells us if we are improving, reaching our aims, and helps teams communicate about their improvement. Measurement for improvement should be useful, not perfect; just enough, good enough data to take action is the goal.

Each team will collect between 4 and 8 quality improvement measures, accompanied by a narrative of qualitative information, on a monthly basis. **Reports will be due on the 5<sup>th</sup> business day after the first of the month. The first reporting date is scheduled for March 7<sup>th</sup> 2014.**

To support teams with measurement expectations, the following pages describe steps, tools, and tips to assist your team to select, compile, report, and analyze your quality improvement findings.

[Appendix I](#) offers full definitions of measures. For relevance and flexibility, measures have been organized into three broad categories (known as *Aim Foci*) correlating with areas along the HIV Continuum of Care. Identify the Aim Foci most closely aligned with your team's aim to identify required and optional measures. All required and optional measures have been summarized in the table below.

[Appendix II](#) provides answers to some frequently asked questions related to measurement. If you are an experienced team that participated in the first Collaborative, you will find answers to questions related to reporting frequency. For any questions left unanswered, please contact the [Collaborative staff](#) for help.

## Summary of Quality Improvement Measures

	Aim Focus 1	Aim Focus 2	Aim Focus 3
① Identify all Aim Foci aligned with your team's aims	Testing, Diagnosis, and Linkage	Engagement in Care and Support	Treatment, Adherence, and Suppression
② Define your population of focus (POF)	1.1 T-POF 1.2 L-POF	2.1 POF	3.1 POF
③ Collect Required Measures	1.3 Testing: Tests completed 1.4 Linkage: Proportion linked to care within 30 days	2.2 Proportion Engaged in Care / Lost to Care 2.3 ART Uptake	3.2 Rate of Virologic Suppression 3.3 Proportion Achieving Virologic Control
④ Choose from optional measures (where applicable)	1.5 Proportion of Clients Offered an HIV Test, past 12 Months 1.6 Proportion of Clients Accepting an HIV Test 1.7 Proportion Aware of their HIV-Diagnosis Within 30 Days 1.8 Rate of positivity 1.9 Proportion Linked to Care <a href="#">See Appendix I</a>	2.4 Plasma Viral Load (pVL) Testing Frequency 2.5 Patient Reported Confidence in Managing Health 2.6 Pneumococcal Immunization Rate Vaccination 2.7 Syphilis Screening Rates 2.8 Mental Health Screening Rates 2.9 Friends and Family Test <a href="#">See Appendix I</a>	3.4 Self-Reported Adherence to ART 3.5 Rate of Optimal ART Adherence <a href="#">See Appendix I</a>

## Why do we measure for improvement?

Measurement is an important part of improvement. How will you know if the changes you are making are improving outcomes? How will you demonstrate to clients, leaders, and peers that your efforts are contributing to better care?

As we begin to make changes in the care and services we deliver, measurement helps us:

- Understand current performance
- Observe if the changes we are making are having a desired impact on outcomes
- Compare our performance with similar sites to foster learning
- Communicate clearly about our improvement effort and outcomes
- Identify negative or unexpected outcomes related to changes we are making
- Know if we have reached our aims

## What do we measure for improvement?

Your team will track between 4 and 8 quality improvement measures that are aligned with your aim. This document will help you identify the important measures that relate to your aim (required measures). Optional measures are also provided to offer flexibility and fit for your team's unique improvement journey.

Both required and optional measures are organized according to three Aim Foci: (1) Testing, Diagnosis, and Linkage; (2) Engagement in Care and Support; and (3) Treatment, Adherence, and Suppression. Identify the Aim Foci (you may have more than one) most closely aligned with your team's aim to identify required measures and to select among optional measures.

If your team is having difficulty with the measurement offerings, please contact the [Collaborative staff](#) for help.

## How do we measure for improvement?

### Step 1 – Decide your aim

After the first Learning Session, you should have a good sense of what your team wants to accomplish. Your aim should align well with the overarching Collaborative aim (see Tool Box 1) and include all the characteristics of a good aim (e.g., specific, measurable, actionable, time-bound). For examples of team aims aligned with the Collaborative aims, see Tool Box 2.

## Tool Box 1



### Preparation Resource Manual 2.0

Find tips on how to get started and create a great aim.



### Our Quantitative Collaborative Aim

By January 1<sup>st</sup> 2015, we aim to work collaboratively between programs, reach out to individuals in our communities in need, and apply evidence- and experience-based interventions to help our collective population of focus achieve:

- 95% linkage to care
- 95% engagement in care
- 95% virologic suppression while on treatment

We will achieve these aims while focusing on client experience, embedding quality improvement into all we do, and working collaboratively with the community to ensure needs and conditions that promote success along the continuum are met.



## Tool Box 2

### Example of team aims aligned with Collaborative aims, with measures included

**Example 1:** By January 1<sup>st</sup> 2015, we aim to create an information system to identify community members not linked to care, partner with HIV primary care teams to support linkage, and exceed each client's expectations. Our population of focus includes all people in HSDA102 that are diagnosed HIV-positive. We will have achieved our aims when:

- 95% of our population of focus will be linked to their first HIV medical visit
- 100% of newly diagnosed are linked to care within 60 days of diagnosis
- 100% of our population of focus is aware of their infection

**Example 2:** By January 1<sup>st</sup> 2015, we use a registry for monitoring important clinical outcomes, partner with community and others to outreach and connect our clients with important resources, and aim to deliver the best possible experience in care. We will be satisfied we have achieved our aims when:

- 95% of our population of focus is engaged in care
- 95% of our population of focus has a treatment option that works for them
- 95% have a plasma viral load test in the previous 6 months
- 95% of our population of focus on ART is achieving virologic suppression

## Step 2 – Choose measures

Start by identifying all the Aim Foci that align with your team’s aim. This will provide guidance to measure your population of focus (POF) and identify important measures that relate to your aim. These will be your required measures. Full definitions are provided in [Appendix I: Measures Definitions](#).

	Aim Focus 1	Aim Focus 2	Aim Focus 3
① Identify all Aim Foci aligned with your team’s aims	Testing, Diagnosis, and Linkage	Engagement in Care and Support	Treatment, Adherence, and Suppression
② Define your population of focus (POF)	1.1 T-POF 1.2 L-POF	2.2 POF	3.1 POF
③ Collect Required Measures	1.3 Testing: Tests completed 1.4 Linkage: Proportion linked to care within 30 days	2.2 Proportion Engaged / Lost to Care 2.3 ART Uptake	3.2 Maximal Virologic Control if Prescribed ART 3.3 Proportion Achieving Virologic Control

Review the optional measures that relate to your Aim Foci. What are some important processes that you would like to improve to reach your aims? Select from the optional measures and/or use [Appendix III: Measures Template](#) to define new measures. If your team is having difficulty with the measurement offerings, please contact the [Collaborative staff](#) for help.

④ Choose from optional measures (if applicable)	<a href="#">See Appendix I</a>	<a href="#">See Appendix I</a>	<a href="#">See Appendix I</a>
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## Step 3 – Confirm how you will collect your data

What data do you need and where will it come from? Sometimes the data will already be something that you collect (e.g., patient chart, EMR, administration records, other), or you may have to set about collecting it for the first time.

Use [Appendix III: Measures Template](#) to help you confirm how you will collect each measure. This will help you define very specifically what you are measuring and how it will be measured.



### Tool Box 3

#### **Use consistent definitions**

The easiest way to ensure you are consistently tracking the same measure is to use the definitions described in and to clearly document how each measure is collected. Use [Appendix I: Measures Definitions](#) and [Appendix III: Measurement Template](#) for standard definitions and collections practices.

#### **Use sampling for surveys**

Sampling works well for surveys if you have a large population. For example, if you have 95 clients in your population of focus, you can randomly select and input 52 surveys. See [Appendix IV: Sampling](#) for sample size and more tips.

## Step 4 – Compile, present, and report your data

Two reporting templates are available to teams to compile, present, and report quality improvement data and narrative. The first template (an excel spreadsheet) will be for your measures (i.e., numerical data). The second template is for narrative to qualitatively describe your improvement efforts. See Tool Box 4.

Reporting will occur monthly. **Reports will be due on the 5<sup>th</sup> business day after the first of the month beginning in March 2014.** The first reporting date will be **March 7<sup>th</sup>, 2014** etc. See [www.stophiv aids.ca](http://www.stophiv aids.ca) for a schedule of events.

### Tool Box 4



#### **Excel Reporting Tool (for data)**

Customizable spreadsheets are available to track data and compute measures, over time. Teams will be able to input aggregate quality improvement data for each measure that is tracked. As values are input, the spreadsheet will automatically calculate proportions and create *run charts* (see Tool Box 5).



#### **Word Reporting Tool (for narrative or qualitative descriptions of changes)**

A word template is also available for teams to report their aims, changes being tested each month, things they are most proud of, and challenges. The narrative describes the overall improvement effort and helps to explain improvement data.

## Step 6 – Analyze your data to decide what it is telling you

Your team should dedicate regular team meeting time to look at what your measures are telling you. Measurement should help you decide if you are getting closer to your aims. Measurement can also inform your next steps.

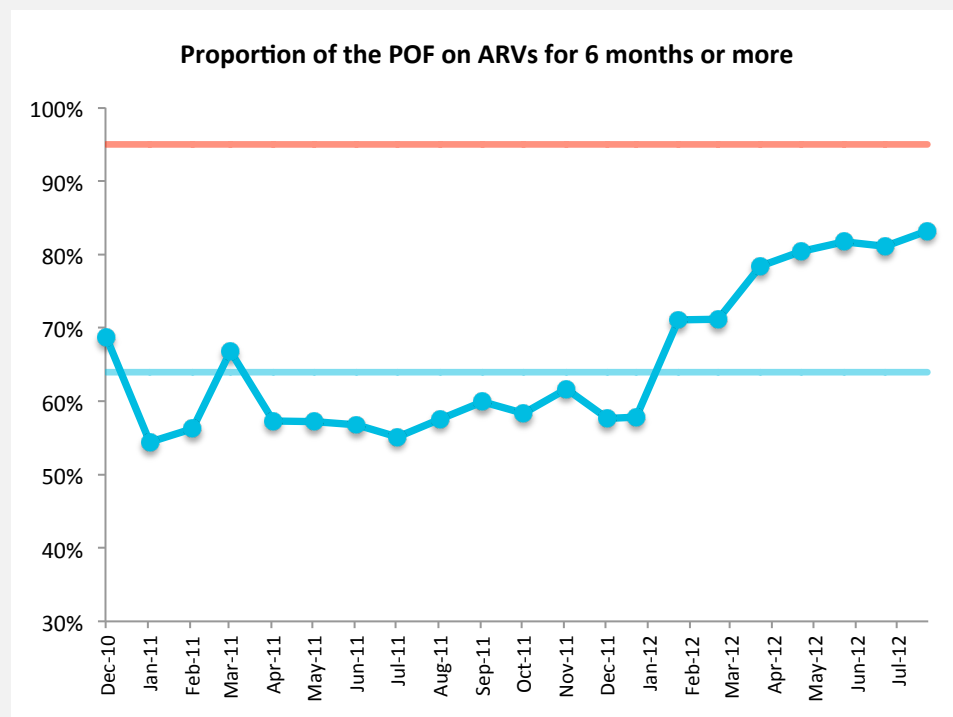
Use data in your Excel reporting tool at team meetings. This tool will automatically calculate and present your data in run charts; a very common way to present improvement data (See Tool Box 5).

### Tool Box 5



#### Using run charts to analyze your improvement data

Run charts are a common way to display data for improvement. Observed data are plotted in a time sequence with time plotted on the horizontal or x-axis. An example of a run chart is shown below and tips for interpreting run charts are presented in [Appendix V: Interpreting Run Charts](#).





## Step 7 – Get started!

Remember, measurement is for quality improvement. It should be useful, not perfect. You should collect just enough and good enough data to be able to take action based on what you are learning. Make a commitment early to embed data collection, review, and analysis into your team and organizational processes.

Don't hesitate to reach out to peers, colleagues, and the Collaborative staff. You will have questions, no doubt, and we're here to help.

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# Appendix I: Measures Definitions

## Aim Focus 1: Testing, Diagnosis, and Linkage

### Step 1: Define Population of Focus (POF)

How you conceptualize your POF will depend on whether you are focusing on testing or linkage:

**For testing**, you will be focusing on increasing access and uptake to HIV testing within a population that may need and/or want HIV testing. Your POF should include all these people that you would like to reach.

Testing: Population of Focus (T-POF)		1.1
<b>List</b>	The number of people for whom you would like to offer testing.	
<b>Notes</b>	<i>Link your T-POF to your aims. For example, if you are trying to increase access to testing in your office practice, you may want to include all clients registered at your clinic aged 18-70. If you are a testing facility, perhaps your T-POF will be all citizens in a geographic region.</i>	

**For linkage**, your POF should include all those that are newly diagnosed and without previous HIV care.

Linkage: Population of Focus (L-POF)		1.2
<b>List</b>	All newly diagnosed HIV-positive clients without evidence of an HIV-related service*	
<b>Notes</b>	<i>*Evidence of an HIV-related service includes a: 1) pVL test or CD4 test after the date of diagnosis, and/or 2) HIV-related care team visit</i>	

### Step 2: Select Required Measures

**For testing**, your required measure will be number of tests.

Testing: Tests Completed		1.3
<b>Numerator</b>	Number of HIV tests completed	
<b>Denominator</b>	T-POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	<i>Choose your own target based on the size and range of your population. Reflect on: what is your goal number of tests completed given your population size and distribution?</i>	

Linkage: Proportion Linked to Care within 30 Days		1.4
<b>Numerator</b>	Number of clients with a CD4 or plasma viral load test within 30 days of diagnosis	
<b>Denominator</b>	L-POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested goal</b>	100%	

### Step 3: Select Among Optional Measures

Proportion of Clients Offered an HIV Test, Past 12 Months		1.5
<b>Numerator</b>	Number of clients in the T-POF offered an HIV test in the past 12 months	
<b>Denominator</b>	Number of clients in the T-POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested goal</b>	>90%	

Proportion of Clients Accepting an HIV Test		1.6
<b>Numerator</b>	Number of clients that consent to an HIV test offered	
<b>Denominator</b>	Number of clients offered an HIV test	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested goal</b>	No target. Observe trends.	

Proportion Aware of their HIV-Diagnosis Within 30 Days		1.7
<b>Numerator</b>	Number of clients with an HIV-positive diagnosis who received their test results within 30 days	
<b>Denominator</b>	L-POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested goal</b>	100%	

Rate of Positivity		1.8
<b>Numerator</b>	Number of new HIV-diagnosis	
<b>Denominator</b>	Number of HIV tests completed	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	Lower is better	
<b>Notes</b>	<i>Will vary by prevalence of HIV in population tested. You may observe a higher rate of positivity as you begin to increase testing followed by a decrease in new diagnosis.</i>	

Proportion Linked to Care		1.9
<b>Numerator</b>	Number of HIV-positive clients that have evidence of an HIV-related service*	
<b>Denominator</b>	L-POF	
<b>Calculation</b>	Numerator / Denominator) x 100%	
<b>Suggested Target</b>	100%	
<b>Notes</b>	* Evidence of an HIV-related service such as 1) pVL test or CD4 test after the date of diagnosis, and/or 2) HIV-related care team visit	

## Aim Focus 2: Engagement in Care and Support

### Step 1: Define Population of Focus (POF)

Population of Focus (POF)		2.1
<b>List</b>	All HIV-positive clients ever registered in your practice/program/records, from records dating back three years	
<b>MOGE</b>	All clients meeting the numerator definition that have clear documentation of having moved or gone elsewhere* (MOGE)	
<b>Calculation</b>	(List) – (MOGE) = POF	
<b>Suggested goal</b>	No goal.	
<b>Notes</b>	MOGE documentation includes a request to transfer care (e.g., request from another primary care provider), documentation of death, of documentation of moved without a forwarding address.	










### Step 2: Select Required Measures (2)

Proportion Engaged in Care / Lost to Care		2.2
<b>Numerator</b>	HIV-positive clients with at least two HIV care visits* (at least 60 days apart) in the past 12 months	
<b>Denominator</b>	POF	
<b>Calculation 1</b>	(Numerator / Denominator) x 100% = [Proportion Engaged in Care]	
<b>Calculation 2</b>	100-[Proportion Engaged in Care] = Lost to Care	
<b>Suggested Target</b>	95% Engaged in Care	
<b>Notes</b>	* With any HIV care team member	

ART Uptake		2.3
<b>Numerator</b>	Number of HIV-positive clients on ART	
<b>Denominator</b>	POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%*	
<b>Notes</b>	*Only a small population may not need ART (e.g., elite controllers, those who decline treatment), therefore the target has been set at 95% to account for this small percentage.	

### Step 3: Select Among Optional Measures

Plasma Viral Load (pVL) Testing Frequency		2.4
<b>Numerator</b>	Number of HIV-positive clients with at least one pVL test in the past 6 months	
<b>Denominator</b>	POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	100%	

Patient Reported Confidence in Managing Health		2.5															
<b>Numerator</b>	Total number of responses 'very confident' during the survey period																
<b>Denominator</b>	Total number of responses during the survey period																
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$																
<b>Suggested Target</b>	95%*																
<b>Notes</b>	<p>*Evidence shows that greater confidence in managing health is related to better health outcomes. Use this also to plan for self-management support to assist patients in managing their health.</p> <p>Put a ✓ in the box that best describes how confident you are:</p> <table border="1"> <thead> <tr> <th></th> <th>Not Very Confident</th> <th>Somewhat Confident</th> <th>Very Confident</th> <th>I do not have any health problems</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>How confident (sure) are you that you can control and manage most of your health problems?</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Not Very Confident	Somewhat Confident	Very Confident	I do not have any health problems						How confident (sure) are you that you can control and manage most of your health problems?				
	Not Very Confident	Somewhat Confident	Very Confident	I do not have any health problems													
																	
How confident (sure) are you that you can control and manage most of your health problems?																	

Pneumococcal Immunization Rate Vaccination		2.6
<b>Numerator</b>	Number of HIV-positive clients with documented receipt of pneumococcal vaccine at base-line	
<b>Denominator</b>	POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%	

Syphilis Screening Rates		2.7
<b>Numerator</b>	Number of HIV-positive clients screened for Syphilis using an RPR test in the past 12 months	
<b>Denominator</b>	POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%	

Mental Health Screening Rates		2.8
<b>Numerator</b>	Number of HIV-positive clients screened for depression (using the PHQ9 questionnaire) in previous 12 months	
<b>Denominator</b>	POF	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%	

Friends and Family Test		2.9
<p>The Friends and Family Test (FFT) is a 3-part survey, which asks patients whether they would recommend the service they have received to friends and family who need similar treatment or care</p>		
<b>Survey Question</b>	<p>We would like you to think about your experience at your &lt;service&gt; today.</p> <p>How likely are you to recommend &lt;our services&gt; to friends and family if they needed similar care or treatment?</p> <p>Response options: (1) Extremely unlikely, (2) unlikely, (3) neither likely nor unlikely, (4) likely, (5) extremely likely, (6) don't know</p> <p>Please can you tell us the main reason for the score you have given? Response options: free form</p>	
<b>Survey method</b>	<ul style="list-style-type: none"> <li>• Online feedback; SMS/Text Message; Smartphone apps</li> <li>• Voting booth' kiosks; telephone interviews</li> <li>• Postcard solutions; to be either completed on site or mailed back</li> </ul>	
<b>Notes</b>	No later than 48 hours after service	
<b>Calculation</b>	$[\text{Proportion of respondents who would be extremely likely to recommend (response category: "extremely likely")}] - [\text{Proportion of respondents who would not recommend (response categories: "neither likely nor unlikely", "unlikely" \& "extremely unlikely")}]$	
<b>Notes</b>	<p><i>Question adapted from the work of the National Health Service, friends and family test. More background and resources available: <a href="http://www.england.nhs.uk/wp-content/uploads/2013/07/fft-imp-guid.pdf">http://www.england.nhs.uk/wp-content/uploads/2013/07/fft-imp-guid.pdf</a></i></p>	

## Aim Focus 3: Treatment, Adherence, and Suppression

### Step 1: Define Population of Focus (POF)

Population of Focus (POF)		3.1
<b>List</b>	All HIV-positive clients ever registered in your practice/program/records, from records dating back three years	
<b>MOGE</b>	All clients meeting the numerator definition that have clear documentation of having moved or gone elsewhere* (MOGE)	
<b>Calculation</b>	$(\text{List}) - (\text{MOGE}) = \text{POF}$	
<b>Suggested goal</b>	No goal	
<b>Notes</b>	<i>MOGE documentation includes a request to transfer care (e.g., request from another primary care provider), documentation of death, or documentation of moved without a forwarding address.</i>	

### Step 2: Select Required Measures (1)

Rate of Virologic Suppression		3.2
<b>Numerator</b>	Number of HIV-positive clients that have both: (1) On ART, <b>AND</b> (2) A plasma viral load less than 200 copies/ml at last measure	
<b>Denominator</b>	Number of HIV-positive clients on ART	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%	
<b>Notes</b>	<ul style="list-style-type: none"> <li>• <i>For newly on treatment, ARTs won't render the pVL &lt;200 copies for a period of 3-6 months. When analyzing outcomes, insufficient duration of therapy might be a reason.</i></li> <li>• <i>Persons on ART for 6 months or more not achieving pVL &lt;200 copies, are at a greater risk of developing ART resistance. Check adherence.</i></li> </ul>	

Proportion Achieving Virologic Control		3.3
<b>Numerator</b>	Number of HIV-positive clients that with a plasma viral load less than 200 copies/ml at last measure	
<b>Denominator</b>	Population of Focus	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%$	
<b>Suggested Target</b>	95%	



### Step 3: Select Among Optional Measures

Self-Reported Adherence to ART		3.4
<b>Numerator</b>	Number of doses missed in previous 7 days	
<b>Denominator</b>	Number of HIV-positive clients with doses needed to take during the same period	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%^*$	
<b>Suggested Target</b>	95%	
<b>Notes</b>	<p><i>* For instance a patient may be taking a fixed dose combination of ARVs requiring him/her to take one tablet daily. During a week he/she is expected to take 7 tablets. The patient reports one missing tablet in the previous 7 days. Adherence will then be rated as 6/7 (~86%). Other patients may be taking 3 tablets twice daily requiring them to take 14 doses during a 7-day period. If he/she misses one dose, adherence rate will be 13/14 (~93%).</i></p>	

Rate of Optimal ART Adherence		3.5
<b>Numerator</b>	Number of HIV-positive clients on ART who report greater than 95% adherence*	
<b>Denominator</b>	Total number of HIV-positive clients on ART	
<b>Calculation</b>	$(\text{Numerator} / \text{Denominator}) \times 100\%^*$	
<b>Suggested Target</b>	95%	
<b>Notes</b>	<p><i>* For instance, if you have 10 patients and 4 report adherence less than 95% and 6 report adherence greater than 95%, the proportion of individuals achieving virologic suppression is 6/10 (60%)</i></p>	

## Appendix II: Frequently Asked Questions

**Q1: As a team that participated in the first Collaborative, I've been collecting some measures for the past two years and now collect them on a quarterly basis to sustain performance. Do I really have to go back to monthly reporting?**

No. Monthly collection and reporting should be reserved for those measures that relate directly to your priority improvement objectives (aims). Quarterly collection and reporting is more suitable for experienced improvement teams that are looking to sustain a given level of performance after earlier improvement focus. As an experienced team joining this Collaborative, you may wish to think about your new improvement priorities (updated aims) and track monthly measures that relate to these new aims.

**Q2: My team provides care for people that sometimes receive care from other practices and organizations. Should I be worried about the overlap and the possibility of duplicate reporting?**

No, not when your goal is improvement. Don't worry about duplicates, focus on the aims you have for your population and the measures you need to know if this population (including your shared care clients) is achieving the desired aims. This can lead to valuable insights and changes in ways that your team organizes and coordinates care with other care partners.

**Q3: Why do we have to report data that the BC Centre for Excellence in HIV/AIDS already has access to?**

I promise, it's not because we're lazy. While we make every effort to limit your burden of data collection and reporting, the Collaborative cannot access Drug Treatment Program (DTP) data directly for important reasons. This data can only be shared with the most responsible physician or nurse practitioner. This is a strictly controlled process that facilitates appropriate sharing to the benefit of the patient and provider, while also respecting important principles of patient confidentiality.

**Q4: Our aims cover all the Aim Foci including testing, engagement, and suppression. Do I have to track every single indicator?**

Yes. Just kidding. Aim to track between 4-8 quality measures. We don't want you to have too many. If you're planning on tracking all five required measures, that doesn't leave you with a lot of room for process measures that can tell you how you're doing. Above all, remember that measures should be useful and reflect your progress in meeting your aims. If you are a team in this position and feel stuck, get in touch with Collaborative staff and we'll see how we can help.

**Q5: Can we create our own measures that are important to our service focus and aims?**

Absolutely! You will likely find the Measures Template in [Appendix III](#) helpful as you seek to define your measure.

**Q6: We don't have an EMR to pull this data, what can we do?**

There is no one single way to find and pull this data. Think about the measures that are required and important to your aims. Where can you find this data: Charts? Administrative databases? BC-CfE database? Will you have to start tracking it for the first time? You will have to be resourceful to locate the data. This may take some extra exertion in the beginning, especially if chart reviews are required, but your efforts will be well worth it.

**Q7: Something is wrong with the excel calculation; I keep getting results over 100%.**

Start by reviewing your numerator and denominator inputs to make sure you don't have a denominator that is larger than your numerator? If you're still stuck, ease the pain by calling or emailing the Collaborative staff.

**Q8: Do I have to complete every field in the narrative?**

No. Just fill in areas on the narrative that apply to the activities and changes that you've made in the reporting month.

**Q9: What does the Collaborative do with our reports?**

When you report your numerical and qualitative data to the Collaborative, our coaches are able to provide encouragement and expert quality improvement coaching to help you as you pursue your aims. Based on what you are telling us, we are also able to customize learning agenda to meet your needs and to connect you with peers for collaboration and shared learning.

**Q10: Why do we have to collect and report data monthly?**

It goes back to the principles of measurement for improvement. Measurement should be useful. When you are actively trying to improve a process or outcome, you will need information to act on. You will need around 5-6 different data points to be able to assess if you have changed your system. If you collect quarterly data, you just won't have enough data to learn about the impacts of your changes on your systems. Monthly data capture gives you more information, more quickly, which is needed to learn about your system and respond in a meaningful and timely way.

## Appendix III: Measurement template

### Measure setup

<b>Measure name:</b>	
<b>Measure definition</b>	What is the numerator?
	What is the dominator <i>(not always required)</i>
	What is the calculation?
	What is the population of focus?
<b>Goal Setting</b>	What is your numerical goal?
	Who is responsible for setting this?
	When will it be achieved by?

### Measure process

<b>Collect</b>	Is the data available?  <i>Currently available / Available with minor changes / prospective collection needed</i>
	Who is responsible for data collection?
	What is the process of collection?
<b>Analyze results Calculate measure and present results</b>	What is the process for presenting results?  <i>Enter into online form / Run chart in excel?</i>
	Who is responsible for the analysis?
	How often is the analysis completed?
<b>Review</b>	Where will decisions be made based on results?
	Who is responsible for taking action?

\*Adapted from the How-to Guide for Measurement for Improvement. Available at:

<http://www.patientsafetyfirst.nhs.uk/ashx/Asset.ashx?path=/How-to-guides-2008-09-19/External%20-%20How%20to%20guide%20-%20measurement%20for%20improvement%20v1.2.pdf>

## Appendix IV: Sampling sizes

### Tips:

- Avoid introducing bias into your sample by surveying on different days and times of the weeks and reaching a representative sample of your population of focus
- Consider surveying a larger population of clients. To gather feedback specific to your population of focus, customize a few of the surveys with a small character (e.g., \*). Hand these customized forms out to your population of focus so that you can easily identify them when you are collecting and compiling results.
- Use the following sample sizes based on your population of focus:

Population of Focus	Minimum Records (90% confidence interval with a width of 0.16)	Population of Focus	Minimum Records (90% confidence interval with a width of 0.16)
Up to 24	All	160-179	67
25-30	24	180-199	70
31-40	30	200-249	75
41-50	35	250-299	79
51-60	39	300-349	82
61-70	43	350-399	85
71-80	46	400-449	87
81-90	49	450-499	88
91-100	52	500-749	94
101-119	57	750-999	97
120-139	61	1000-4999	105
140-159	64	5000 or more	107

## Appendix V: Interpreting Run Charts

Run charts are the tools of choice to help you make decisions about whether your changes are leading to improvements. There are 4 tests that you can apply to run charts to help you identify what's happening after you've made change and therefore determine whether it is really an improvement.

### **Rule 1: A Shift**

A shift is six or more consecutive points that all fall above the median or below the median. When counting, skip any points that fall on the median and keep counting. Points on the median do not add to, nor break a shift. To find out if you have too many or too few changes, check against the table below.

### **Rule 2: A Trend**

A trend is five or more consecutive points all ascending or all descending. If two or more consecutive points are the same value, only count one towards the trend. Same values do not make or break a trend.

### **Rule 3: A Run**

A run is indicated when the line connecting the data points crosses the median line too many or too few times, indicating a non-random pattern (expected number of runs can be found in Table 1, below). To figure out the number of runs on your run chart, count the number of times the line crosses the median line and add one. If a point is on the median but the line doesn't cross, do not count it towards the run.

### **Rule 4: Astronomical Point**

An astronomical point is any unusually large or small number. It's usually identified by observation, characterized as:

- An obviously, blatantly different value
- Anyone studying the chart would agree that is unusual
- Caution: Every data set will have a highest and lowest data point, this does not mean the high and low are astronomical

Table 1: Expected Number of Runs in a Run Chart

Number of data points	Lower limit for number of runs	Upper limit for number of runs	Number of data points	Lower limit for number of runs	Upper limit for number of runs
10	3	8	34	12	23
11	3	9	35	13	23
12	3	10	36	13	24
13	4	10	37	13	25
14	4	11	38	14	25
15	4	12	39	14	26
16	5	12	40	15	26
17	5	13	41	16	26
18	6	13	42	16	27
19	6	14	43	17	27
20	6	15	44	17	28
21	7	15	45	17	29
22	7	16	46	17	30
23	8	16	47	18	30
24	8	17	48	18	31
25	9	17	49	19	31
26	9	18	50	19	32
27	9	19	60	24	37
28	10	19	70	28	43
29	10	20	80	33	48
30	11	20	90	37	54
31	11	21	100	42	59
32	11	22	110	46	65
33	11	22	120	51	70