

## CASE STUDY ON 'DEVELOPMENT OF AN ONLINE TOOL TO ASSESS VIRAL LOAD SUPPRESSION BASED ON CLINIC/COHORT LEVEL DATA'

### Context

Many countries find it challenging to collect long-term clinical data on people living with HIV and taking ART at clinical and national levels. This makes monitoring the progress of HIV treatment and care challenging. Many countries reported in the Dublin Declaration that they lacked a national HIV cohort, or that their existing cohorts were not nationally representative. Cohort data has the advantage that it can link patient-level data; however, whether the data represents the entire diagnosed population is often unclear.

The HIV Continuum of Care (CoC) is a health system instrument promoted by the Joint United Nations Programme on HIV/AIDS (UNAIDS), the European Centre for Disease Prevention and Control (ECDC) and the World Health Organization (WHO). It describes the spectrum of HIV infection; from diagnosis, to linkage to care, appropriate treatment and finally achieving HIV viral suppression. Gaps at each stage increase the probability of poor outcomes for the individual and the risk of onward HIV transmission in society. This makes the CoC an essential aid for identifying strengths or weaknesses in a country's ability to diagnose and link HIV-positive persons with care, as well as monitoring the HIV treatment programme once persons are engaged in care – the 'right-hand side'. While national surveillance systems have progressed on reporting the 'left-hand side of the CoC', improvements in capturing the 'right-hand side', particularly viral suppression, is falling behind. Viral suppression remains one of the main stages of the continuum where European and Central Asian countries are least likely to have data available.

Achieving the 'right-hand side' targets, wherein those diagnosed are on ART and of those on ART are virologically suppressed, is key to both ensuring a better quality of life for PLHIV and reducing new HIV infections.

### Introduction

To address the challenges of collecting long-term clinical data, the RESPOND consortium (the International Cohort Consortium of Infectious Disease) a non-interventional, non-randomised, open-label, multi-cohort observational study <https://chip.dk/Studies/RESPOND>, aims to develop an online tool to determine the 'right-hand side' of the CoC for use at national as well as clinic level. It will enable clinics to monitor their progress in providing optimal care for PLHIV seen at their clinic and will be available online.

The study proposes developing a new standardised methodology and tool for assessing levels of ART coverage among those in care and virological suppression among those on ART in any clinical setting, particularly for those settings lacking national level registries and data linkage. The tool will support countries in monitoring the effectiveness of their HIV programme and will also be useful for assessing progress against the UNAIDS '90-90-90' targets. This is part of the public health module within the RESPOND study.

## Aims

The overall objective of the study is to develop a standardised tool to enable any clinic or country to assess the 'right hand side' of the HIV continuum by analysing a defined sample of patients from a national clinic.

This will be done in two phases.

## Method

In phase 1, 'Proof of Concept' (PoC), the aim is to assess the representativeness of cohort study data for longitudinal monitoring of the CoC by comparing data on all patients seen at three EuroSIDA collaborating clinics with the existing EuroSIDA cohort data. The EuroSIDA study is a prospective observational cohort study that examines the long-term clinical prognosis for the general population of HIV-infected patients living in Europe and the impact of ART on their long-term prognosis. EuroSIDA is coordinated by CHIP (the Centre of Excellence for Health, Immunity and Infections) and all three clinics selected have a long-standing, well-established EuroSIDA HIV cohort.

The data collection period was 15 May – 31 June 2018. Data for the PoC was collected on everyone seen at the clinic for follow-up from 1 January – 31 December 2017 and was submitted through an electronic data submission tool developed by CHIP (the coordinating Centre) – two clinics provided data dating back five years to January 2013.

Data analysis will explore different sampling techniques to determine what proportion of a given clinic population needs to be included to provide an accurate continuum of care. Is it one in five persons, one in ten, or will a completely random sample provide a robust estimate of the continuum of care? Data analysis is expected to be complete before January 2019.

In phase 2, the online tool will be developed using the sampling methodologies and indicators identified through the demonstrated PoC. The standardised tool will enable any clinic to assess levels of ART coverage among those in care and virological suppression among those on ART. The tool will be piloted at a number of clinics in other countries to verify its validity and support the PoC.

## Results

The PoC intends to verify how existing clinical cohort data can be used to the 'right hand side' of the HIV continuum of care in countries where such data are missing or insufficiently reported at a national level – i.e. data on the number of people on ART and those virologically suppressed. The developed methodology, expertise and infrastructure will help clinics to determine the 'right hand side' of the HIV continuum by measuring the proportion of people in care at the clinic, the proportion on ART and the proportion of PLHIV on ART who are virologically suppressed.

## Recommendations

A recent systematic review of the current state of global HIV care continua found that countries that reported on viral suppression represented 54 percent of the 2015 global estimate of PLHIV. There is an urgent need to improve data collection on long-term ART care at all organisational levels. A better surveillance system will help identify the gaps in linkage to, and retention in, care and decrease the numbers lost to follow-up. Interventions are required to improve synergies/communication between national and clinical surveillance systems.

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