

NO TIME TO WAIT!

The importance of early infant diagnosis of HIV



GUIDANCE FOR POLICY MAKERS

This guidance outlines the importance of early infant diagnosis (EID) in the HIV response. It explains how new technology make it possible to produced test results more quickly now and as a result more infants can be diagnosed in the first weeks of life.

The HIV response is failing children

Globally, in 2018:

- Only 54% of children living with HIV were receiving antiretroviral treatment
- There were 72,000 AIDS related deaths in children aged 0-4

Despite the significant successes of prevention of mother-to-child transmission (PMTCT) programmes there were still 160,000 new HIV infections in children in 2018.

How can we improve health outcomes for these children?

- A continued focus and investment on **programmes to prevent vertical transmission** (from mother to child).
- Programmes to **identify children living with HIV** including early infant diagnosis, as well as family testing services and systems to prevent loss to follow up.
- Access to **child-friendly treatment** using medicines that are acceptable to young children.
- **Support for families** of children living with HIV - in addition to the medical care for their children, families may need support with nutrition, travel to health facilities, etc.
- To create **supportive communities** where children are protected and cared for - the HIV response can only eliminate new infections and prevent the onset of AIDS if discrimination and stigma are eradicated.

Why focus on early infant diagnosis?

Any child that may have been exposed to HIV before, during or after their birth needs to be tested soon after they are born to see if they have HIV. This process is called early infant diagnosis (or EID). HIV can progress very quickly in young children and the risk of serious illness is high. Without treatment, 50% of children living with HIV die before their second birthday.

To eliminate paediatric AIDS, children living with HIV must be identified and put on treatment quickly. Globally in 2018, only 59% of infants exposed to HIV were tested within their first two months of life.

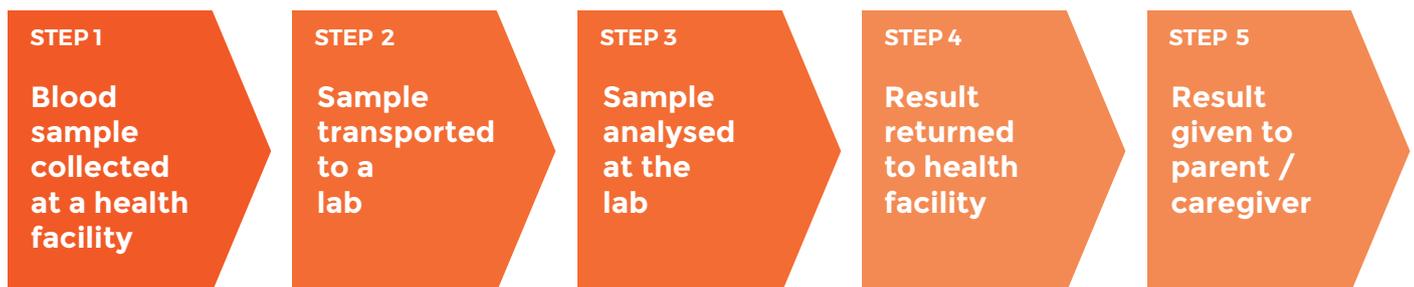
What are the global guidelines on EID?

The World Health Organisation recommends:

- All infants exposed to HIV should be tested at six weeks.
- Those at high risk of HIV infection should be tested at birth.
- Infants who test positive should be quickly linked to care and treatment.
- Infants found to be negative should be retested when they are 9 months old.
- All infants exposed to HIV should have a repeat test at the end of the breastfeeding period.

The problem with conventional lab-based testing

The tests used to detect HIV in adults measure antibodies in the blood – antibodies that are produced by the body to attack the HIV virus. These tests can't be used on young children because they may find antibodies that were produced by the mother and passed on to the baby during pregnancy or through breastmilk. A different test is needed for young children that looks for the HIV virus itself – called a virological test. Usually these virological tests are processed in laboratories – the process can be very slow, taking between 30 and 90 days to complete.



There are many opportunities for delay and the results to be lost. Lab-based testing also relies on caregivers making repeat visit to clinics to get the results and this can be difficult if the health facility is far away or transport costs are high. These problems mean that 50% of caregivers never receive the test results at all.

Point-of-care machines – a breakthrough in early infant diagnosis (EID)

Point-of-care (POC) machines allow HIV test results to be produced at or near the health facility. A blood sample is taken from the baby at a health facility, the sample is put into a machine at the facility, the machine produces the test results within a few hours, and the caregivers can be given the results on the same day.

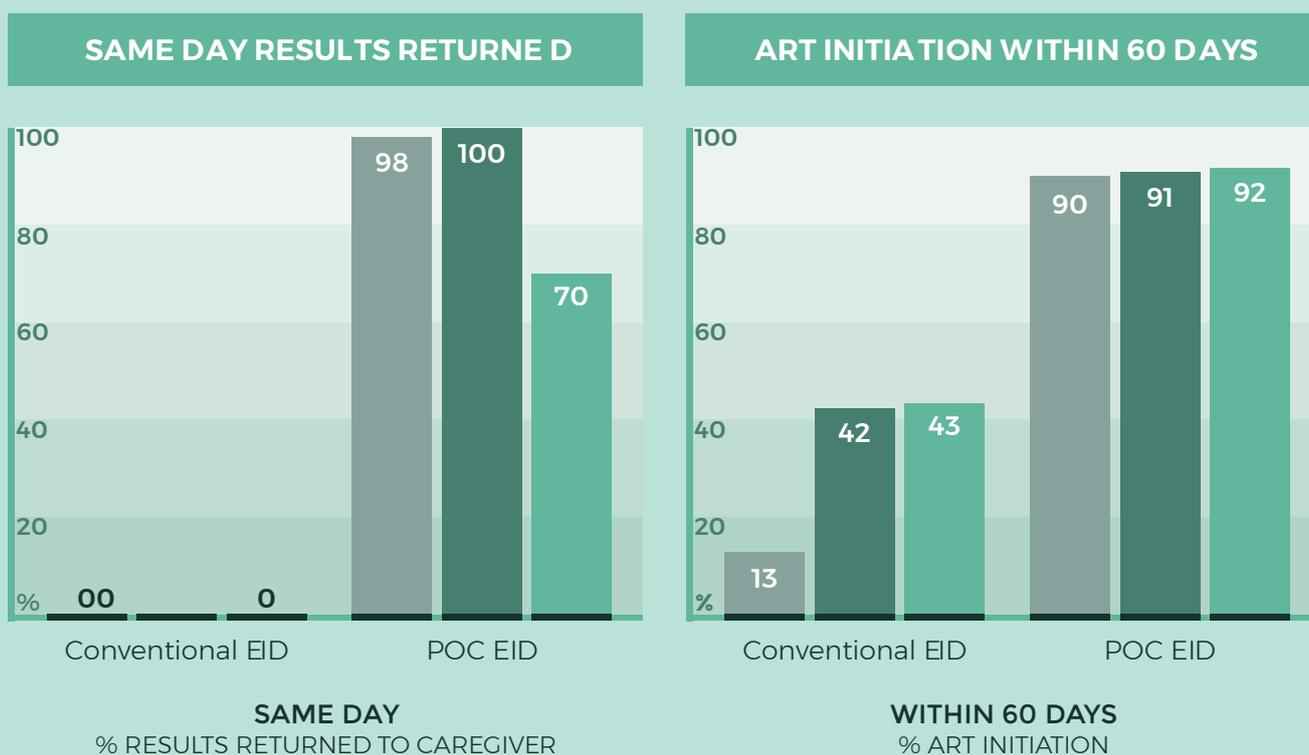


Point-of-care machines are simple to use, there are no delays in returning the results and no opportunities for the results to get lost. Caregivers get the results quickly and, critically, children that are found to be living with HIV can begin treatment sooner.

Is there proof that POC machines work?

Point-of-care machines have been shown to be very effective. The graphs below, based on research undertaken in 2018 in Mozambique and Malawi and combined data from 8 countries (Cameroon, Cote d'Ivoire, Kenya, Lesotho, Mozambique, Rwanda, Eswatini and Zimbabwe) from the same year, show that POC machines enable much higher numbers of results to be returned on the same day and infants found to have HIV begin treatment much more quickly.

Percentage of HIV test results returned to caregiver and percentage of infants newly diagnosed with HIV initiated on ART, by conventional EID and POC EID (three data sources).



Can your country afford POC EID?

The high result return rate makes POC EID very cost competitive as these figures show:

	Lab-based EID	Point-of-care EID
Cost per test result returned to caregiver within 3 months	USD \$ 28-49	USD\$21-33
Cost per HIV-positive infant identified and started on treatment	USD \$ 1,205	USD \$ 1,060

POC machines also have other uses that can make them even more cost effective. When a machine is placed in a health facility where the demand for infant HIV tests is relatively low, the extra capacity of the machine can be used to carry out different tests. This includes testing for other diseases such as TB, HPV, and measuring HIV viral load.

What is needed in your country?

We have the technology and it has been proven to work, now we need to ensure that the machines are available and that caregivers access the tests.

Financial commitment is needed to:

- Strategically place more POC machines and provide the supplies needed for the machines;
- Train health workers and ensure they have enough time to talk to each client;
- Educate caregivers so they understand why it is important to test infants;
- Give practical support to caregivers to enable them to access the tests, e.g. financial help to cover the costs of travelling to a health facility; and,
- Provide grants for NGOs, CBOs and networks of people living with and affected by HIV to encourage health-seeking behaviour by developing and disseminating information materials, holding community health days to reduce stigma around infant testing and coordinating group or one-to-one peer-to-peer support.



Integrated health services are needed that include infant testing as part of a wider package of services for families affected by HIV to create more opportunities to identify infants exposed to HIV, connect them to testing and treatment, and prevent loss to follow-up. In more detail:

- Offer multiple services in one place, e.g. combined clinics, where mothers living with HIV and their infants can access family planning, maternal and child health, and prevention of mother-to-child transmission (PMTCT) services.
- Use POC testing machines to test for other diseases as well (such as TB and HPV), so they are more cost effective. Also, one machine can be used to test from multiple entry points within a health facility e.g. antenatal clinic, paediatric ward and nutrition unit.
- Ensure policies are integrated - e.g. child-friendly medicines are made available alongside improved opportunities for infant testing.