

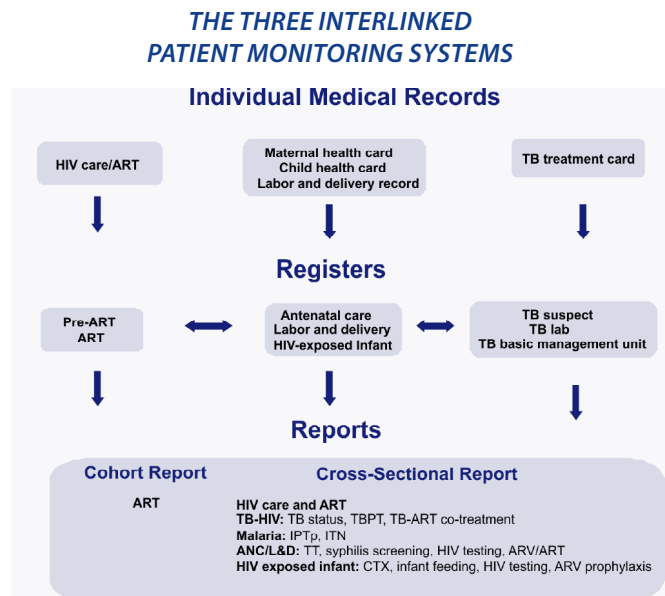
Patient Monitoring

WHO's Interlinked Patient Monitoring Systems for HIV, MCH, and Tuberculosis

OVERVIEW — Patient monitoring systems are an important component of high quality, integrated patient care, treatment, and prevention. A longitudinal patient monitoring system supports continuity of care and long-term patient tracking and follow-up. It allows clinical teams to monitor programs and collect data for key programmatic indicators and quality improvement activities.

It is now increasingly recognized that services for HIV should be integrated or linked with other services in the health sector, including those for tuberculosis (TB), sexual and reproductive health, and maternal and child health (MCH). As health services become integrated, the tools used to monitor patients and data collection and reporting systems must also be integrated or interlinked. Interlinked, longitudinal patient records for the provision of HIV, TB, and MCH services will improve patient care, eliminate duplicate record-keeping, and focus staff efforts on the collection of essential, harmonized indicators that are important for national reporting as well as quality improvement at the facility level. The World Health Organization (WHO) and collaborating partners updated and expanded the HIV care/antiretroviral therapy (ART) patient monitoring system in 2009 to strengthen linkages between services in order to reflect an integrated and holistic approach to patient monitoring. The following summarizes the 2009 updates and their relevance to The U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

SUMMARY OF THE 2009 UPDATES — The original WHO *Patient Monitoring Guidelines for HIV Care and Antiretroviral Therapy* from 2006 outline a minimum data set and illustrative, generic tools for the collection and reporting of HIV care and treatment data. Since 2006, over 25 countries have adapted and used the guidelines to build single national systems that support standardized monitoring and recording of HIV care and treatment service provision. Consequently,



an increasing number of countries are now able to collect and report on core national and international indicators from their routine, national systems.

The updated *Three Interlinked Patient Monitoring Systems for HIV care/ART, MCH/PMTCT (including malaria prevention during pregnancy), and TB/HIV: Standardized Minimum Data Set and Illustrative Tools* builds on the 2006 guidelines. The interlinked tools support mother-infant follow-up and monitoring of key pediatric variables in the context of routine MCH services. The updated MCH data set includes all core, routine maternal and infant variables and key HIV-related variables. The tools also support monitoring of key HIV Drug Resistance Early Warning Indicators (HIVDREWIs) and key TB variables. The ART cohort report has been simplified and the cross-sectional report is now integrated to collect and report on HIV, as well as MCH and TB/HIV indicators.

The illustrative interlinked forms, registers, and reports and accompanying training materials can be accessed at:

http://www.who.int/hiv/pub/imai/three_patient_monitor/en/index.html.

An adaptation guide, to help countries customize these generic tools and roll-out country-specific patient monitoring systems, can be requested from WHO by sending an e-mail to imaimail@who.int. Finally, a data model for the three interlinked patient-monitoring systems that uses conventions drawn from the Unified Modeling Language (UML), which is amenable to expression within computerized health care applications, is under development and will soon be available. Further information can be requested from WHO by sending an e-mail to imaimail@who.int.

These tools can enhance our ability to monitor effectively efforts to reach the United Nations' Millennium Development Goals for PMTCT and MCH, scale-up HIV care and treatment service provision to infants and children, monitor TB screening and treatment in HIV care and treatment settings, and continue to improve survival of patients on ART.

RELEVANCE TO PEPFAR — PEPFAR's five-year strategy for 2010-2014 (available at <http://www.pepfar.gov/strategy>) calls for a sustainable approach to development where country ownership is essential. The strategy also highlights the importance of creating linkages between HIV and other programs, including MCH, TB, and malaria, to provide clients with comprehensive care, increase efficiencies between services, and maximize impact. The development of the WHO patient monitoring tools was also guided by similar principles. The tools strengthen patient and program monitoring systems that enable women and children to access comprehensive care. Furthermore, the tools allow the tracking of key PEPFAR indicators, including those for maternal and child ARV treatment, infant infections averted, and assessment and treatment of TB among HIV-positive persons in care and treatment settings. Country adaptation and roll-out of the updated 2009 interlinked patient

monitoring tools is aligned with PEPFAR's strategy to support the development of country-owned interlinked and interoperable national systems that are crucial for long-term patient follow-up and effective program monitoring.

FOR MORE INFORMATION — Country teams interested in receiving more information on the updated patient monitoring tools, and/or for specific questions on adapting, implementing and/or budgeting for patient monitoring activities through the Global Fund, PEPFAR Country Operational Plans, or other funding mechanisms, are encouraged to contact their WHO country offices. Alternatively, the following people can be contacted with questions or requests for assistance:

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