# *ICT Innovations in Health Systems as Integral Component of CRVS*

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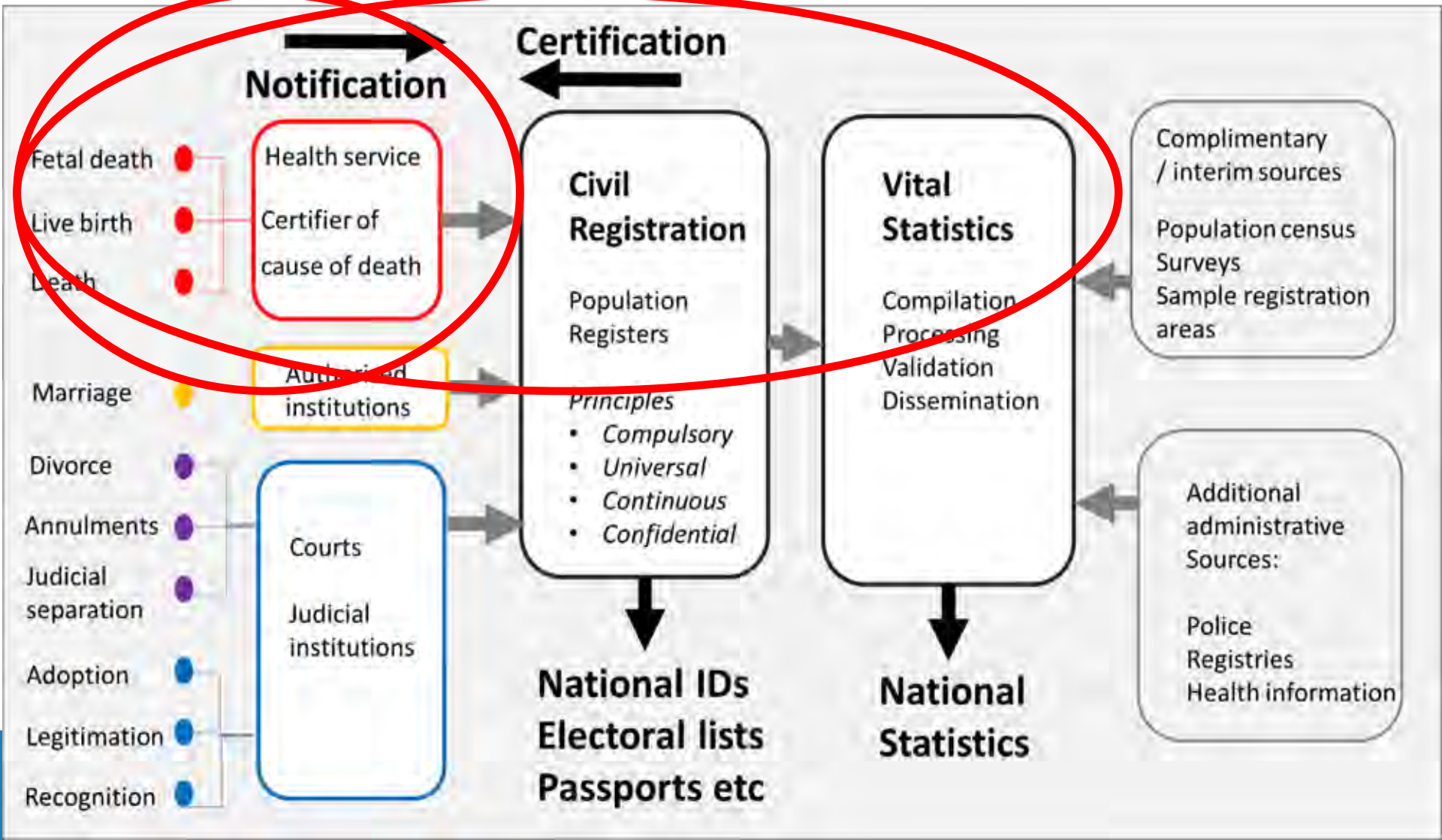
# Health-Related Civil Registration Events and Linkages with Vital Statistics



# Three Keys to Success

1. **Start with Users not Solutions.** Adequate planning and design leads to expected results

2. **Adhere to Standards and Guidelines and Aim for Interoperable and Reusable Solutions.** Scalability and sustainability depend on it

3. **Learn from the Success and Failures of Others.** Peer-to-peer networking can save time and money

# 1 User-Focused *e*CRVS & *m*CRVS Solutions Causing Change

**Birth registration by SMS in Africa**

BY: DUSAN BELIC, INTOMOBILE
MONDAY, AUGUST 16TH, 2010 AT 1:25 AM

Here's another use of technol emerg marke paren able t register newborn babies via SMS in Afr

As you may guess, newborn babies are unfortunately a bit of a blind spot in Afr poorest nations. Both parents and governments have tough time in keepir check of the population. Enter mobile technology, which wants to satisfy the government's need to keep track of the benefits to the new parents.

Parents should simply text: "Family Nam will be created. On its first visit, a healt with a basic baby-kit. Moreover, when t

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**SENEGAL: Texting for birth certificates**

Photo: Maxime Le Hégarat/IRIN

KOLDA, 9 August 2012 (IRIN) - Only a handful of births are registered in the remote Kolda region of southern Senegal, but a new mobile phone application that allows parents to text the details of a newborn to obtain a birth certificate could cut down school drop-outs when the children are older.

Senegalese law does not make birth declaration mandatory, yet birth certificates are required for enrolling a child in school and registering to

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August 21, 2012 · by Elly Okutoyi

**Full-scale campaign for mobile birth registration starts in Kenya**

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Kenyan parents can now access birth certificates of their newborns on their phones thanks to a project by PLAN International and World Health Organi (WHO).

The project will save the parents the troub having to travel long distances to register births, as community health workers will no mobile phones to collect information of the births.

HEALTHCARE IT

**THAI HOSPITALS ADOPTED ONLINE BIRTH REGISTRATION SYSTEM**

By Thanya Kunakornpaiboonsiri | 31 October 2012

Thai parents at remote areas can now register their newborns via an online birth registration system provided by hospitals. The system will link birth data of each child in hospital to the civil registration system.

Interior Ministry's Department of Provincial Administration, Ministry of Public Health, and National Health Security Office, in partnership with Unicef, developed an online birth registration programme that is currently used by 44 hospitals across the country.

Using Unicef-supported computers, birth data will be instantly synchronised with the civil registration system where registrar officials will immediately know and can track families that have not come to make a record of their child's birth or obtain a birth certificate.

supporting computers to hospitals, Unicef is ating for one-stop birth registration service have registrar officials stationed at the o issue birth

ration is the government child's name

Vitalware®
Vital Records Management

RapidPro

ChildCount+
Using Our Software
Forms, Reports, and Design Documents

InterVA

IRIS INSTITUTE
*Automated ICD-10 Cause of Death Coding*

World Health Organization
Western Pacific Region

# 1 EXAMPLE: The THRIVE Consortium Open Smart Register Platform (OpenSRP) for RMNCH

motech
Mobile Technology for Community Health

OnaData

Norad

BILL & MELINDA GATES foundation

wellcome trust

THE EARTH INSTITUTE
COLUMBIA UNIVERSITY

Foundation for Research in Health Systems

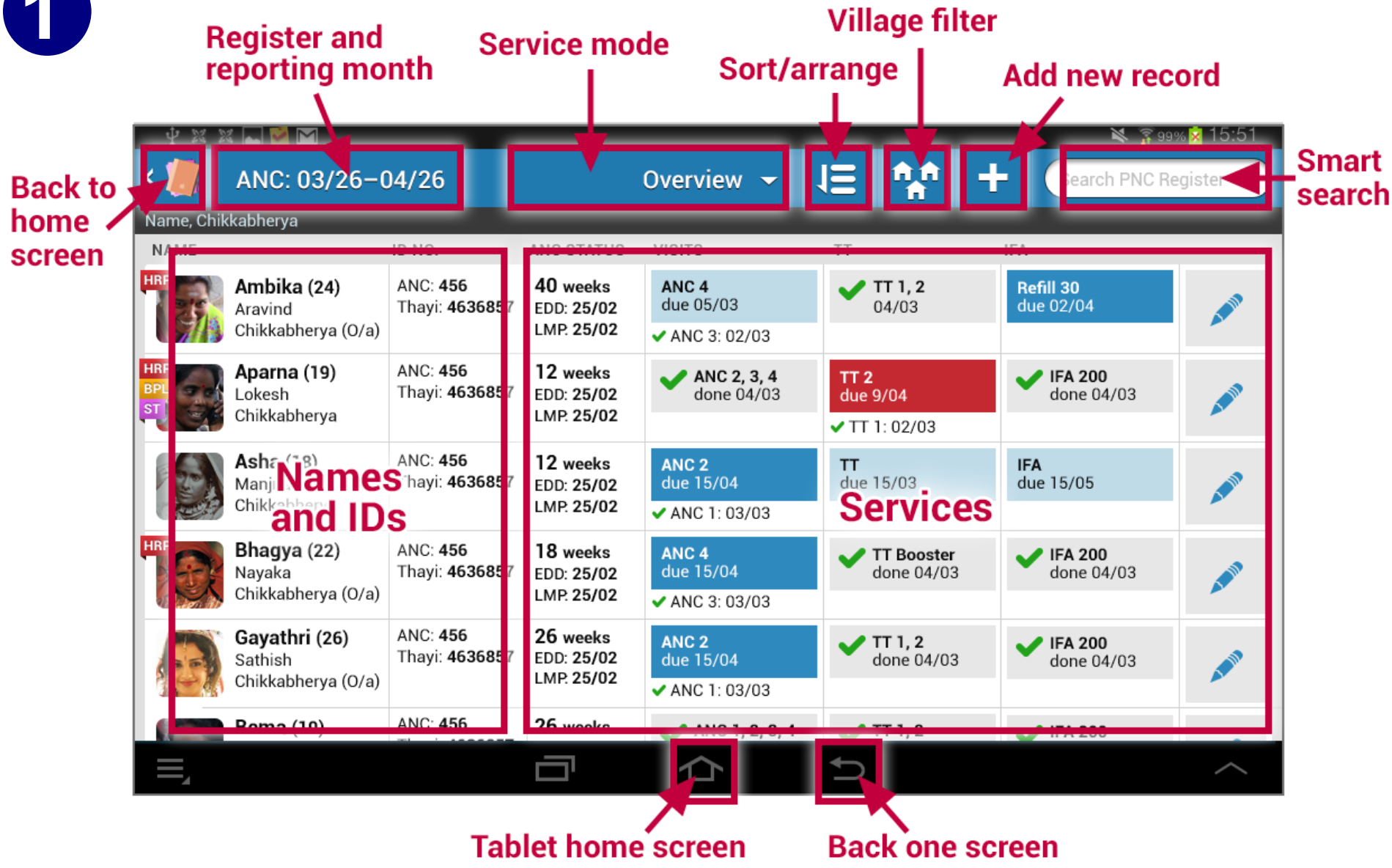
hrp
UNDP · UNFPA · WHO · World Bank
Special Programme of Research, Development and Research Training in Human Reproduction

World Health Organization

# 1 Consolidation of multiple registers into a "Smart Register", in India called Dristhi

| No. | Register name | DRISTHI impact |
|---|---|---|
| 1 | Diary | |
| 2 | Eligible Couple Register | Yes |
| 3 | ANC Register | Yes |
| 4 | PNC Register | Yes |
| 5 | Birth Register | Yes |
| 6 | Infant Death Register | Yes |
| 7 | Maternal Death Register | Yes |
| 8 | 1 to 5 years children disease and death register | Yes |
| 9 | General Death Register | |
| 10 | High Risk Pregnancy Register | Yes |
| 11 | Immunization Register | Yes |
| 12 | Vitamin A Register | Yes |
| 13-16 | Family Planning Register | Yes |
| 17 | Reproductive tract infection/Sexually transmitted infection register | |
| 18 | Village Blindness Register (VBR) | |
| 19 | Blood smear register | |
| 20 | TB Register | |
| 21 | School Health programme register | |
| 22 | Janani Suraksha Register | Partial |
| 23 | Janani Suraksha Expenditure Register | |
| 24 | Madilu Register | Partial |
| 25 | Untied Expenditure Register | |
| 26 | Stock and issue register | |

1




# PARTS OF User Interface of OpenSRP

mehlg@who.int

# 1 Registering Maternal and Child Deaths

## ANC Close

**Reason for closing ANC case? ANC ಕೇಸ್ ಮುಚ್ಚುವಿಕೆಗೆ ಕಾರಣ? ***

- Spontaneous abortion ನೈಸರ್ಗಿಕ ಗರ್ಭಪಾತ
- Induced abortion ವೈದ್ಯಕೀಯ ಗರ್ಭಪಾತ
- Relocation (temporary) ಸ್ಥಳಾಂತರ (ತಾತ್ಕಲಿಕ)
- Relocation (permanent) ಸ್ಥಳಾಂತರ (ಶಾಶ್ವತ)
- (●) Woman died ಮಹಿಳೆ ಮರಣ

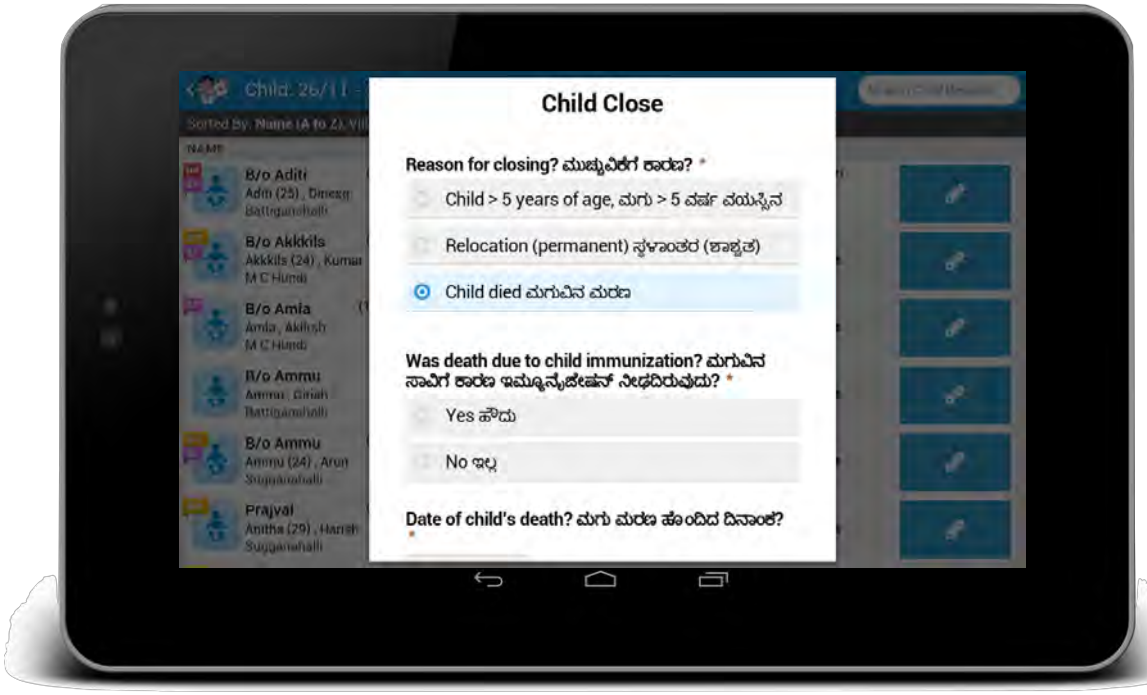
**Is the death a maternal death? ಈ ಮರಣ ತಾಯಿಯ ಮರಣವೇ? ***

- (●) Yes ಹೌದು
- No ಇಲ್ಲ
- Don't know ಗೊತ್ತಿಲ್ಲ

**Date of maternal death? ತಾಯಿಯ ಮರಣ ದಿನಾಂಕ? ***

**Cause of maternal death? ತಾಯಿಯ ಮರಣಕ್ಕೆ ಕಾರಣ?**

- Abortion ಗರ್ಭಪಾತ

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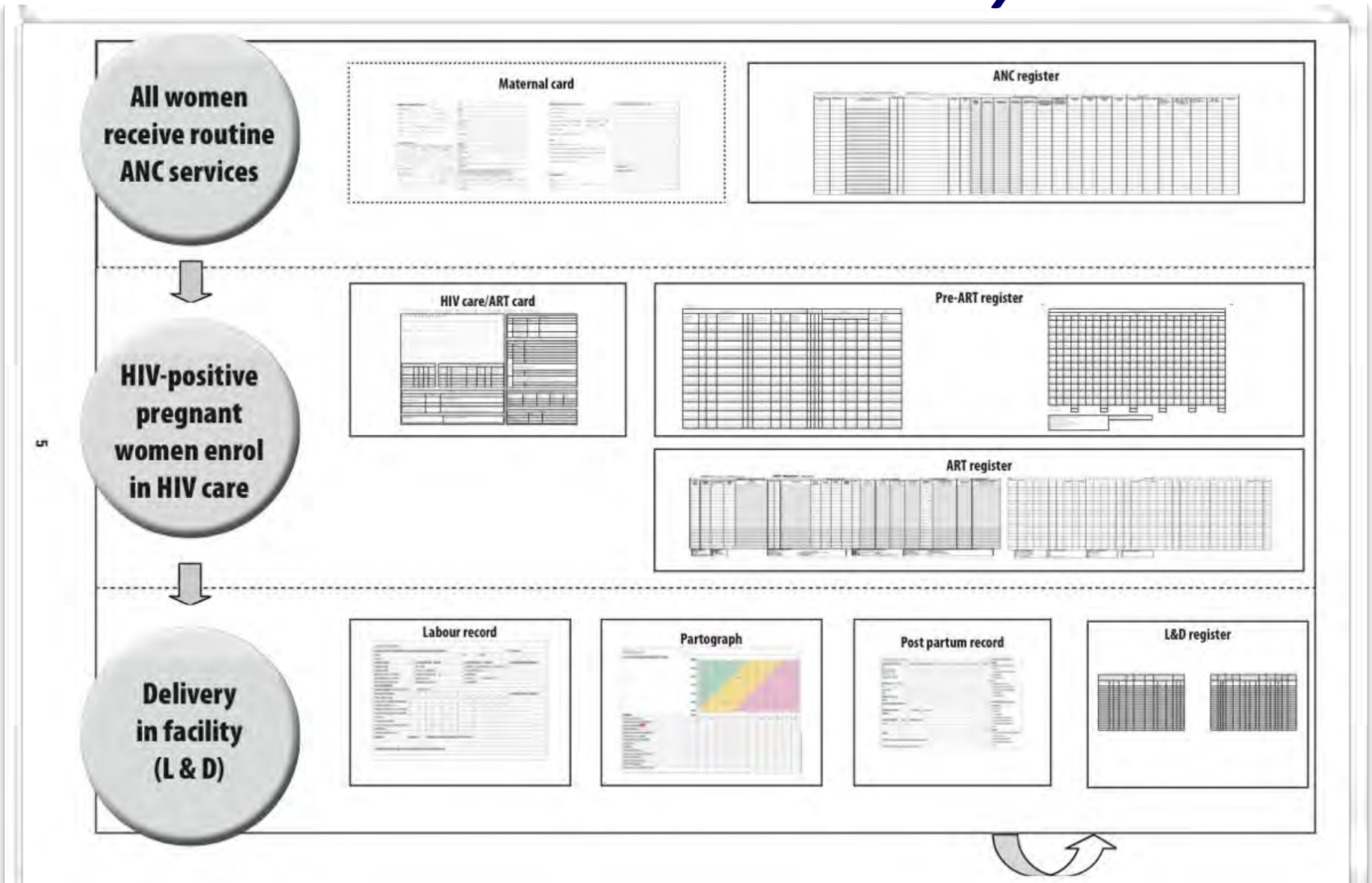
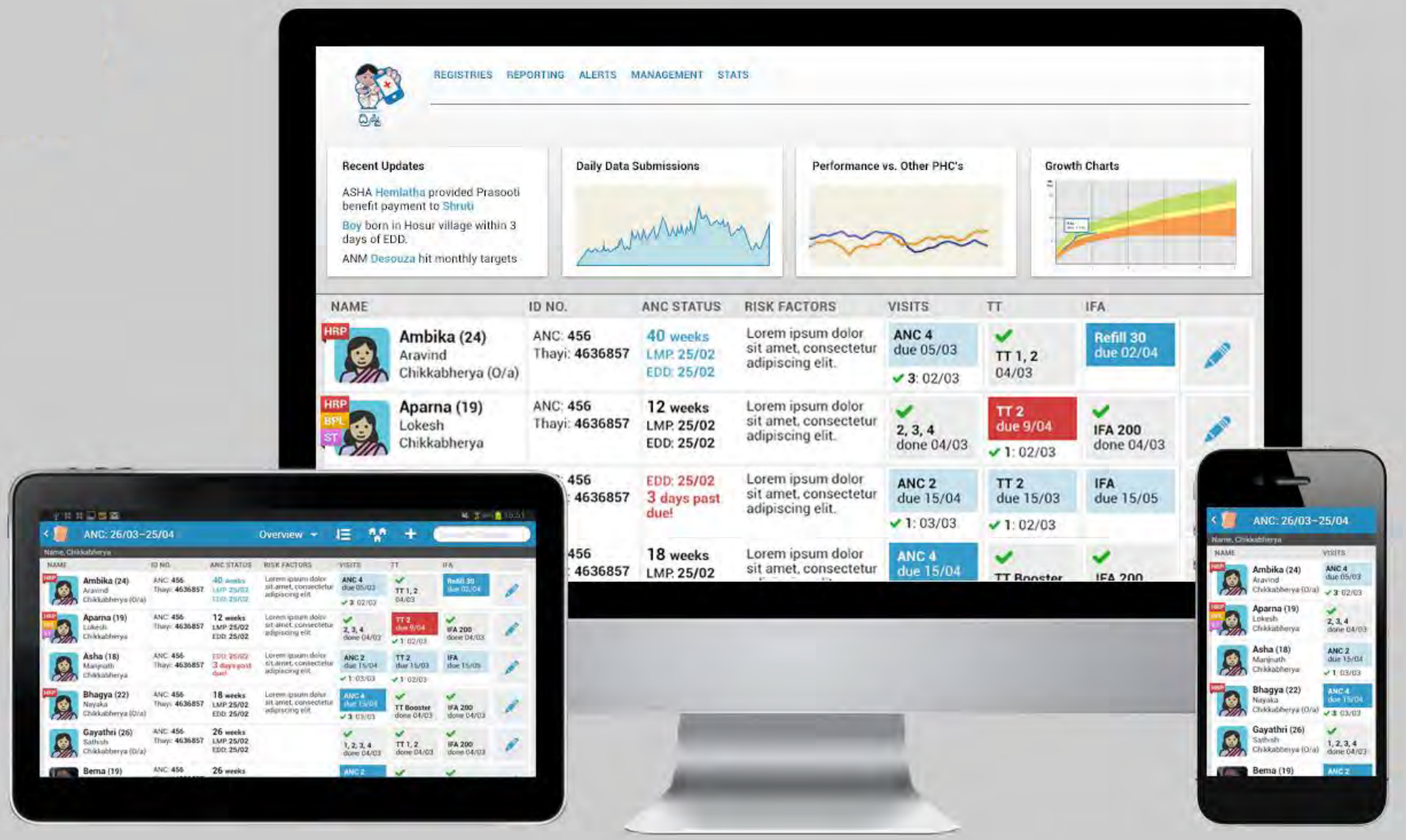
# 2 OpenSRP Aligned with WHO Guidance on Routine Client Information Systems



# 2 Common individual data-points leads to standard analytics

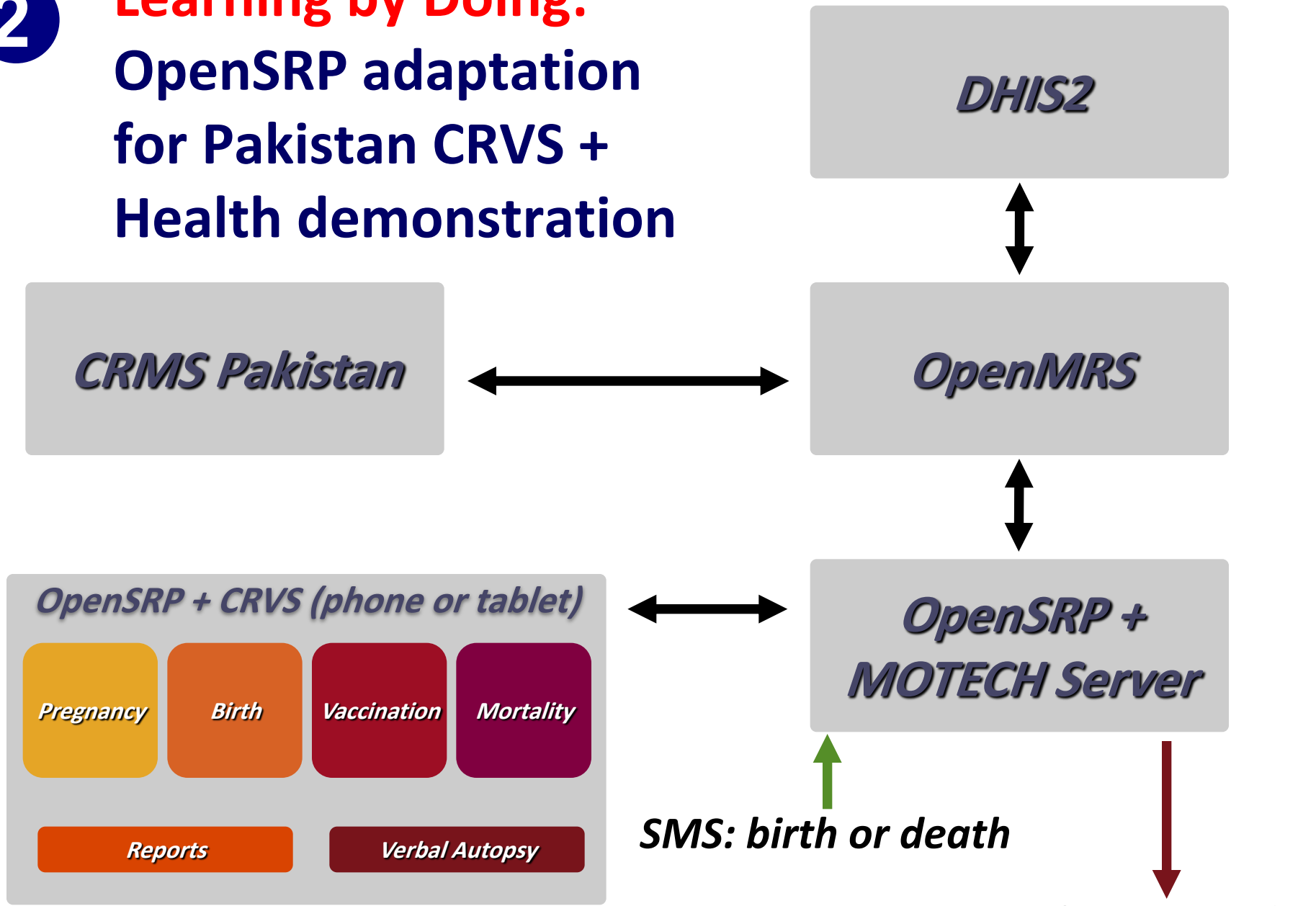




hrp UNDP · UNFPA · WHO · World Bank Special Programme of Research, Development and Research Training in Human Reproduction

World Health Organization

# 2 Learning by Doing: OpenSRP adaptation for Pakistan CRVS + Health demonstration



# 2 Build, Buy or Modify?

Consider the Total Cost of Ownership (TCO) over the long-term, i.e., costs and benefits to each alternative

- Plan, design, build custom software and solutions
- Buy proprietary software solutions
- Modify existing solution(s) or tech-transfer from other context
- Other key considerations:
  - open standards compliant
  - open source vs. proprietary software solutions
  - adequate capacity for all ICT phases
  - compliance with legal requirements and national policies

2

World Health Organization

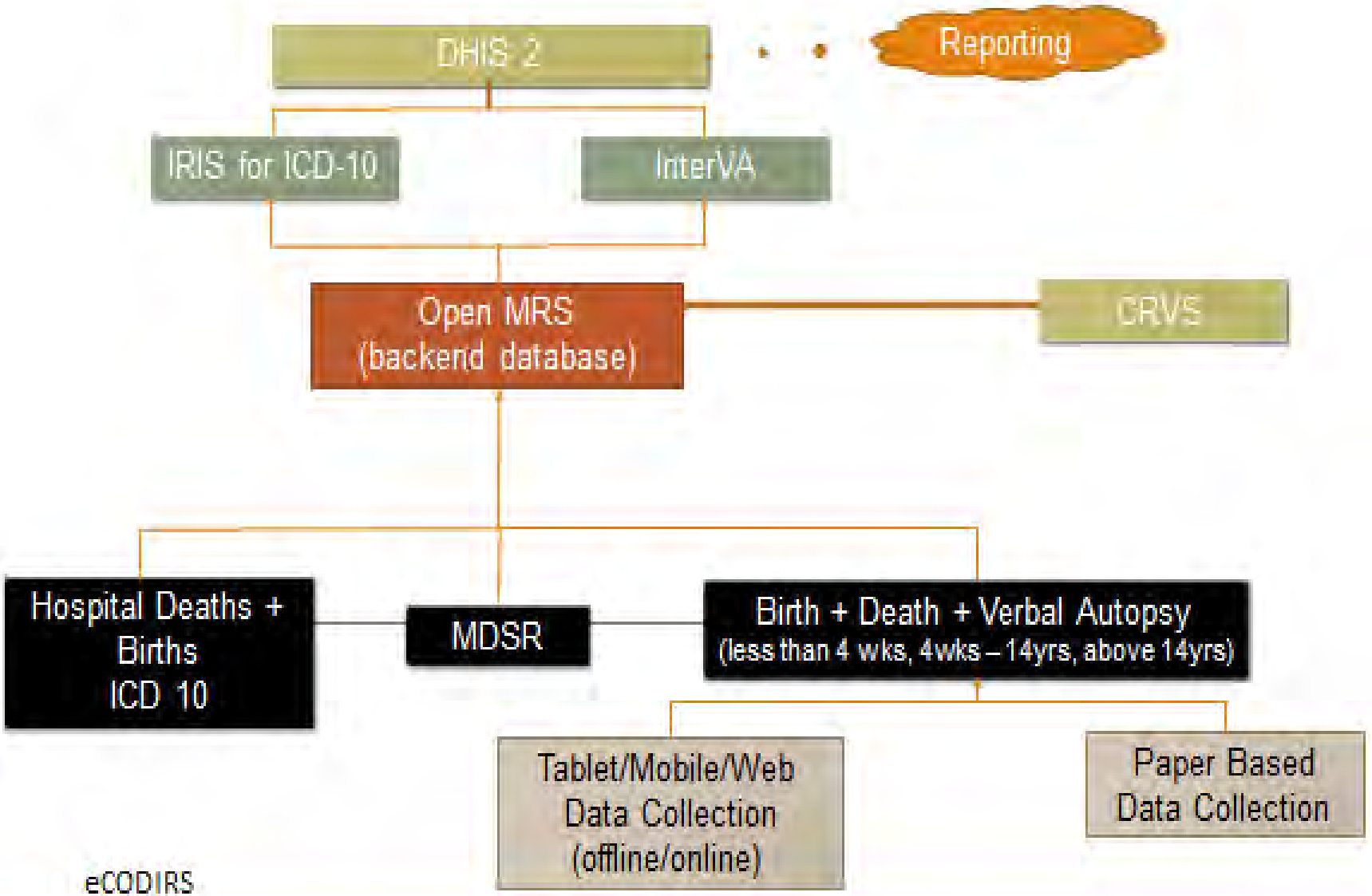
Regional Office for South-East Asia

# Electronic Cause of Death Integrated Reporting System (eCODIRS)

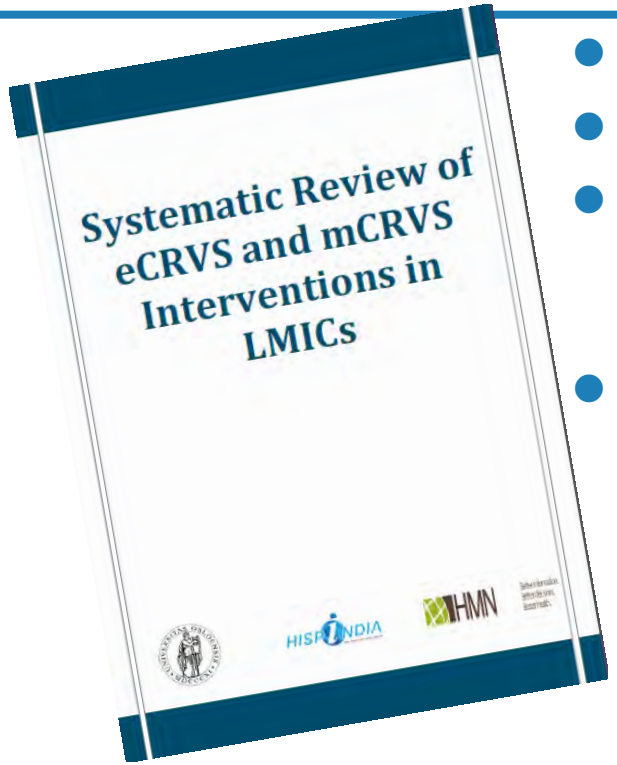
***Note: Information provided by Jyotsna Chikersal, Regional Advisor, WHO Regional Office for South East Asia (SEARO), chikersalj@who.int***

Disclaimer: The boundaries shown on the above map do not imply official endorsement by the World Health Organization
(This Disclaimer applies to the entire presentation)

# 2 eCODIRS Architecture



# 3 Systematic *e/m*CRVS Review and Experiences in the Region




- Health Metrics Network-commissioned study (2012)
- Majority of *ICT* interventions are related to births
- Innovations tend to be added for civil registration only, while providing vital statistics functioning through an existing data warehouse
- Link *e/m*CRVS to other systems defined within an architecture approach

- Highlights of select innovations in CRVS in Asia and the Pacific (2014)
- Tailored solutions to local contexts

# 3 Collaborative Communities of Practice

www.phinnetwork.org

**Focus:** advocacy, analysis and use of reliable health information, governance, capacity building

**Membership:** HIS and eHealth professionals from 17 Pacific island countries and territories

Asia eHealth Information Network www.aehin.org

**Focus:** governance, strategies and policies, standards-based architectural approaches, capacity building

**Membership:** 500+ *e*Health and HIS professionals from 25+ countries in South and Southeast Asia

**Asia-Pacific Civil Registrars Network**

**Focus:** Knowledge sharing and learning, peer-to-peer technical support

**Membership:** Civil Registrar professionals from across Asia and the Pacific (50+ countries) organized into 4 sub-regions

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# Thank You

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