DEFINING THE CONTENT FOR ELECTRONIC REGISTIRES SUPPORTING CONTRACEPTIVE CARE

An Experience in Research Data Management

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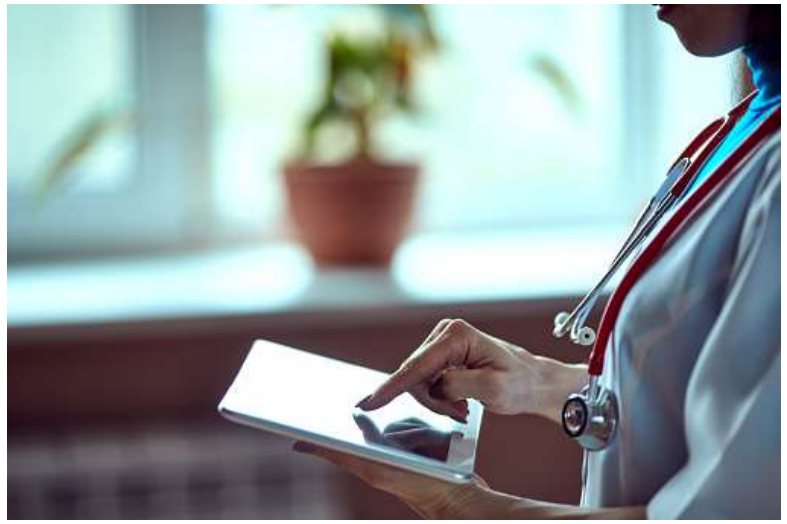
ABOUT ME

Background



Domain-specific electronic registries can only be appropriately designed by getting a comprehensive picture of:

- the workflows associated with service provision,
- issues and barriers experienced during workflow
- the content and flow of data

all within the local context and aligned to the local infrastructure.[1]

[1]. Svetlana Z. Lowry, Michael C. Gibbons, Mala Ramaiah, Emily S. Patterson, Paul Latkany, David Brick. *Integrating Electronic Health Records into Clinical Workflow: An Application of Human Factors Modeling Methods to Obstetrics and Gynecologyand Ophthalmology*.; 2015. https://doi.org/10.6028/NIST.IR.8042.

Goal

- To collaboratively define the information that will inform the digitization of family planning processes as conducted by the various cadres involved in family planning service provision.

Why?

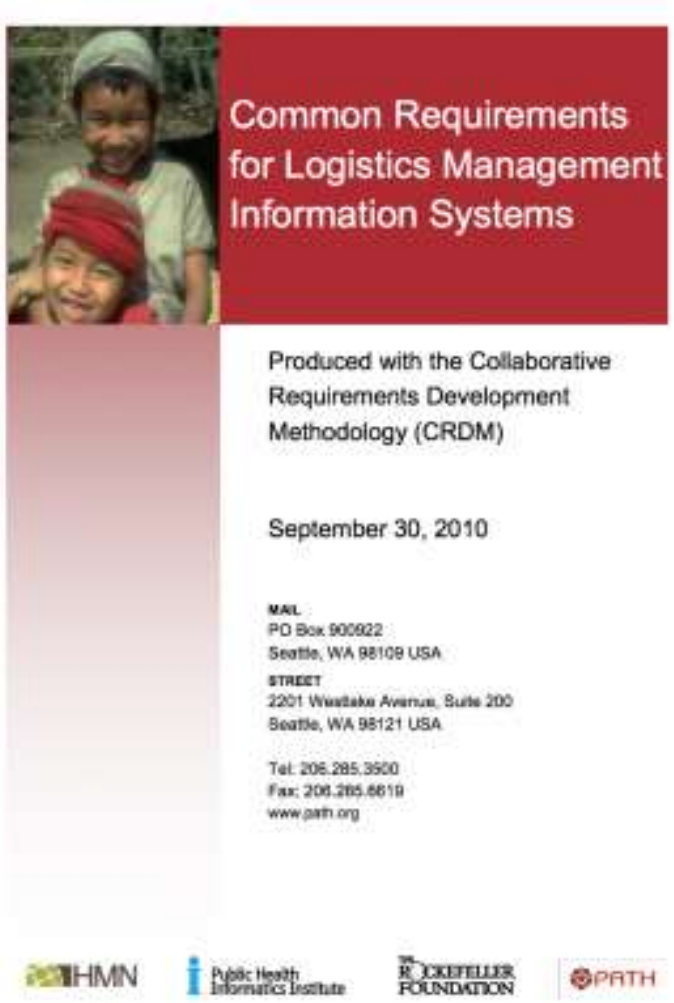
- For the WHO to understand the adaptation and implementation requirements for digitizing paper-based registers.
- This is useful in introducing a digital register system known as the Open Smart Registry Platform (OpenSRP).[2]

2. http://smartregister.org/

What Information Did We Want To Obtain?

Activity	What it does it contain	Possible methods
1. Roles and responsibilities	Cadre roles and responsibilities, and common user stories	-Desk review, guidelines -Interviews to validate?
2. Workflows	Standard flows for clinical and non-clinical encounters at different levels during the provision of FP services	-Desk review -Interviews -Observations -Consolidation of workflows across different settings
3. Data needs	Minimum data set required during the provision of FP	-Desk review of paper registers and global guidance (possibly align with adaptation guide)
4. Indicators/ Reporting requirements	Indicators from the program area or global (e.g.GSWCA that are relevant); performance metrics, quality metrics, etc and how these are aggregated	-Desk review of paper registers and global guidance (possibly align with adaptation guide)
5.Decision-support enhancements	-Scheduling triggers -Counselling support -Algorithms -Validation -Feedback loops	-Clinical algorithms from WHO guidelines -Already developed algorithms exist for some areas
6. Functional requirements	Basic requirements that would be needed for each workflow task	

The Methodology Used



- We used the collaborative requirements development methodology (CRDM) developed by PATH and the Public Health Informatics Institute.
- The CRDM is composed of three main sets of activities: planning and research, workshops and analysis, and documentation.

More information available online at:
https://path.azureedge.net/media/documents/TS_lmis_crdm.pdf

Summary of Steps in Deriving Requirements Using CRDM

Activity	What it does it contain	Methods
1. Roles and responsibilities	Cadre roles and responsibilities of frontline health workers involved in administering contraceptive care	Core group discussions
2. Workflows	Standard flows for clinical and non-clinical encounters at different levels during the provision of FP services	Core group discussions Consolidation of workflows across different settings
3. Functional requirements	Basic functional requirements that would be needed for each workflow task	Core group discussions

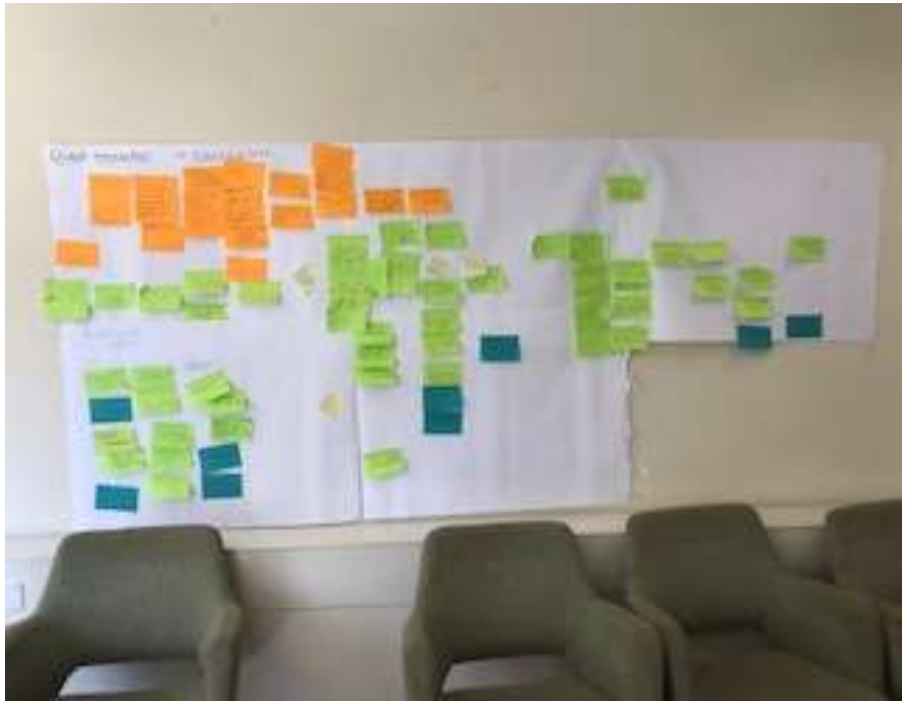
Planning & Research Phase

1. Literature Reviews
2. Then we invited a core group to participate in the CRDM process.
3. The core group was composed of a blend of global and local healthcare experts.

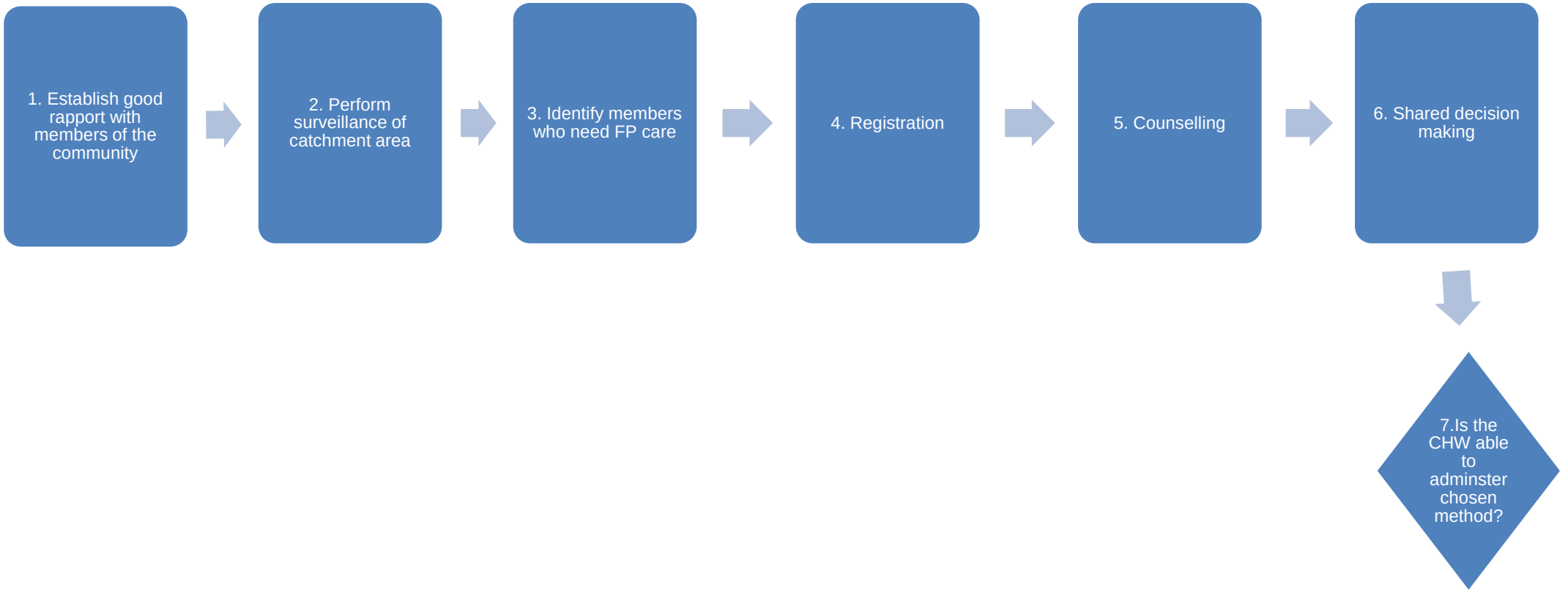
Available online at
https://path.azureedge.net/media/documents/VAD_bid_productvision.pdf and
https://path.azureedge.net/media/.../MCHN_mhis_crdm.pdf

Core Group Workshop in WHO- HQ

a mix of community health workers, midwives, nurses, doctors and gynecologists



We used Camunda to document the workflows…



Workflow: First Patient Encounter with the CHW
Workflow ID: 3

Task ID	Task	Requirement ID	Requirements
3.1	Establish good rapport with the community members		
3.2	Perform surveillance of the catchment area		
		3.2.1	Provide remote access to input, modify and view lists of women of reproductive age and their status
		3.2.2	Provide a way for the clinician to alert CHW of potential client
		3.2.3	Assist in the tracking and monitoring of potential clients by sorting and reporting on specific attributes such as date of last delivery or abortion among the target population

What were my experiences with this process?

Mapping out the workflows for each of the processes:

1. made it clear which activities were unnecessarily repeated across multiple workflows.
2. allowed easier visualization of the pain points and which activities can be automated electronically

and these then became the common functional user requirements of the supportive electronic registry.

3. Already documented processes were re-used e.g registration.

The Output Shows…

1. The CRDM is **reproducible** in developing eRegistries that support other domains in healthcare.
2. Some non-domain specific workflows are **reusable** in multiple domains e.g. registration, referral.
3. **Transparency** is a critical part of reproducibility in requirements gathering.
4. Involving frontline healthcare workers in requirements gathering for development of eRegistries and possibly eHealth tools in general is indeed a practical approach in ensuring their acceptability among users and applicability to clinical domains.

Acknowledgement

1. Prof. Chaltikyan- THD (Funders)

2. Reproductive Health Research- WHO-HQ

3. MILA- Dr. Atinkut and Prof. Waltemath- ***(Inau E, Waltemath D, Zeleke AA. An Introduction to Clinical Registries: Types, Uptake and Future Directions. In: Reference Module in Biomedical Sciences. Elsevier; 2020. doi:10.1016/B978-0-12-801238-3.11666-6)***

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GREIFSWALD

Thank you!

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