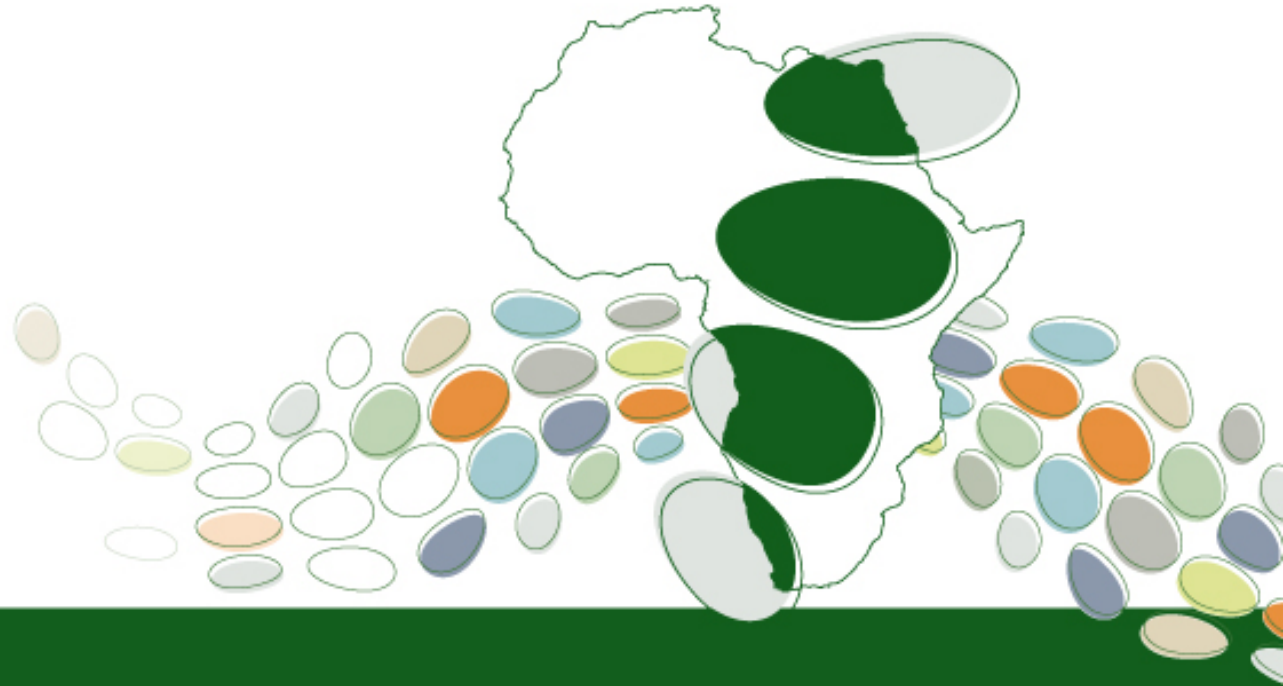


OpenMRS

Pascal Brandt



Agenda

- Overview
- Implementations
- Community
- Localization
- Metadata
- Interoperability
- Setup

Open Medical Record System (OpenMRS) – www.openmrs.org



- Open source patient-centric Electronic Medical Record Application
- Community-driven
- Started in 2004 in Eldoret, Kenya
- Currently implemented in more than 80 countries
- Data model based on the successful system developed at the Regenstrief Institute
- Focused on low resource setting
- Based on structured medical record forms



Atlas of known OpenMRS Implementations




OpenMRS Community

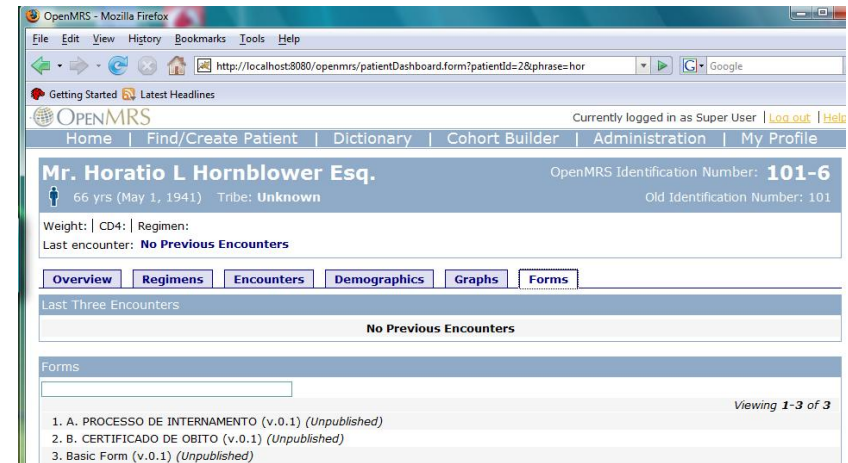


LOCALIZATION (MOZAMBIQUE)



PROCESSO DE INTERNAMENTO			
 REPÚBLICA DE MOÇAMBIQUE SERVIÇO NACIONAL DE SAÚDE HOSPITAL CENTRAL DE MAPUTO	Nome Given Name:	Middle Name:	Family Name:
	Horatio L Hornblower		
Nome e n.º Da Unidade Sanitária	B. I. (N.º, Arq. Data)		
	Data de Birthdate	Sex:	
	nasc./Estado/Sexo/R aga 19410501	Select...	
	Profissão		
	Local de Trabalho		
	Naturalidade		
	Residência/Telef.		
	Filiação		
1 PESSOA A CONTRACTAR EM CASO DE NECESSIDADE Nome Grau de parentesco Morada/Telef. Local de trabalho/Telef.	SERVICO	DIA DE ENTRADA	Nº DA CAMA
	BENS PESSOAIS GUARDADOS SOB N.º		
REGISTO CLÍNICO DE ADMISÃO			

HISTÓRIA CLÍNICA
Sintomas que determinarem o internamento - doença actual - antecedentes pessoais -



OpenMRS Concepts

Concept Form

[Previous](#) | [Edit](#) | [Next](#) | [New](#)

Search:

Id	1293
Locale	English French
Name	FUNCTIONAL REVIEW OF SYMPTOMS
Short Name	
Description	Review of symptoms on presentation by different systems
Synonyms	
Class	Question
Datatype	Coded
Answers	WEIGHT LOSS GREATER THAN TEN PERCENT (1352) COUGH LASTING MORE THAN THREE WEEKS (1430) DIARRHEA CHRONIC (GREATER THAN OR EQUAL TO 1 MONTH) (1431) SEIZURE (206) JAUNDICE (215) RASH (512) FEVER (5945) FATIGUE (5949) VISION DIFFICULTIES (5953) SHORTNESS OF BREATH (5960) NAUSEA (5978) VOMITING (5980) PARESTHESIA (6004) CONFUSION (6006) NIGHT SWEATS (6029) HEADACHE (620) PRURITIS (879) DYSPHAGIA (881) HEMOPTYSIS (970)



Terminology Mappings

Firefox | OpenMRS - Viewing Concept Gravida | +

localhost:8081/openmrs-standalone/dictionary/concept.htm?conceptId=5624

[Previous](#) | [Edit](#) | [Stats](#) | [Next](#) | [New](#)

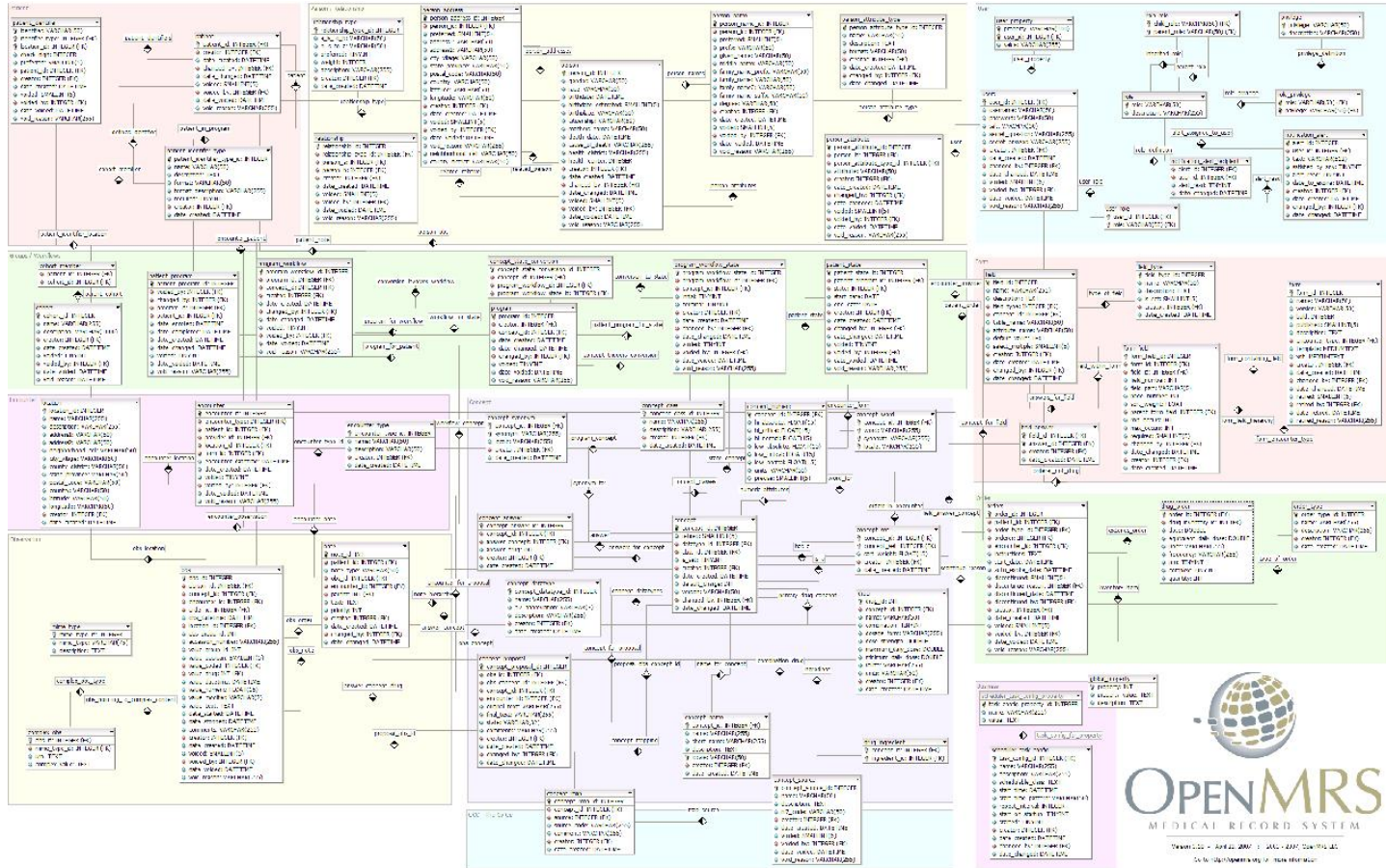
Id 5624
UUID 5624AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Locale [English](#) | [Spanish](#) | [French](#) | [Italian](#) | [Portuguese](#)
Fully Specified Name Gravida
Synonyms Number of previous pregnancies (including current if applicable)
 Number of times pregnant
Search Terms
Short Name
Description The number of times a woman has been pregnant
Class Question
Datatype Numeric
Numeric **Absolute High**
Critical High
Normal High
Normal Low
Critical Low
Absolute Low
(range values are inclusive)
Units
Precise? No

Mappings

Relationship	Source	Code	Name
SAME-AS	AMPATH	5624	
SAME-AS	SNOMED CT	161732006	
SAME-AS	PIH	1755	
SAME-AS	CIEL	5624	
SAME-AS	LOINC	11996-6	



OpenMRS Data Model



Data Entry & Export

Data In

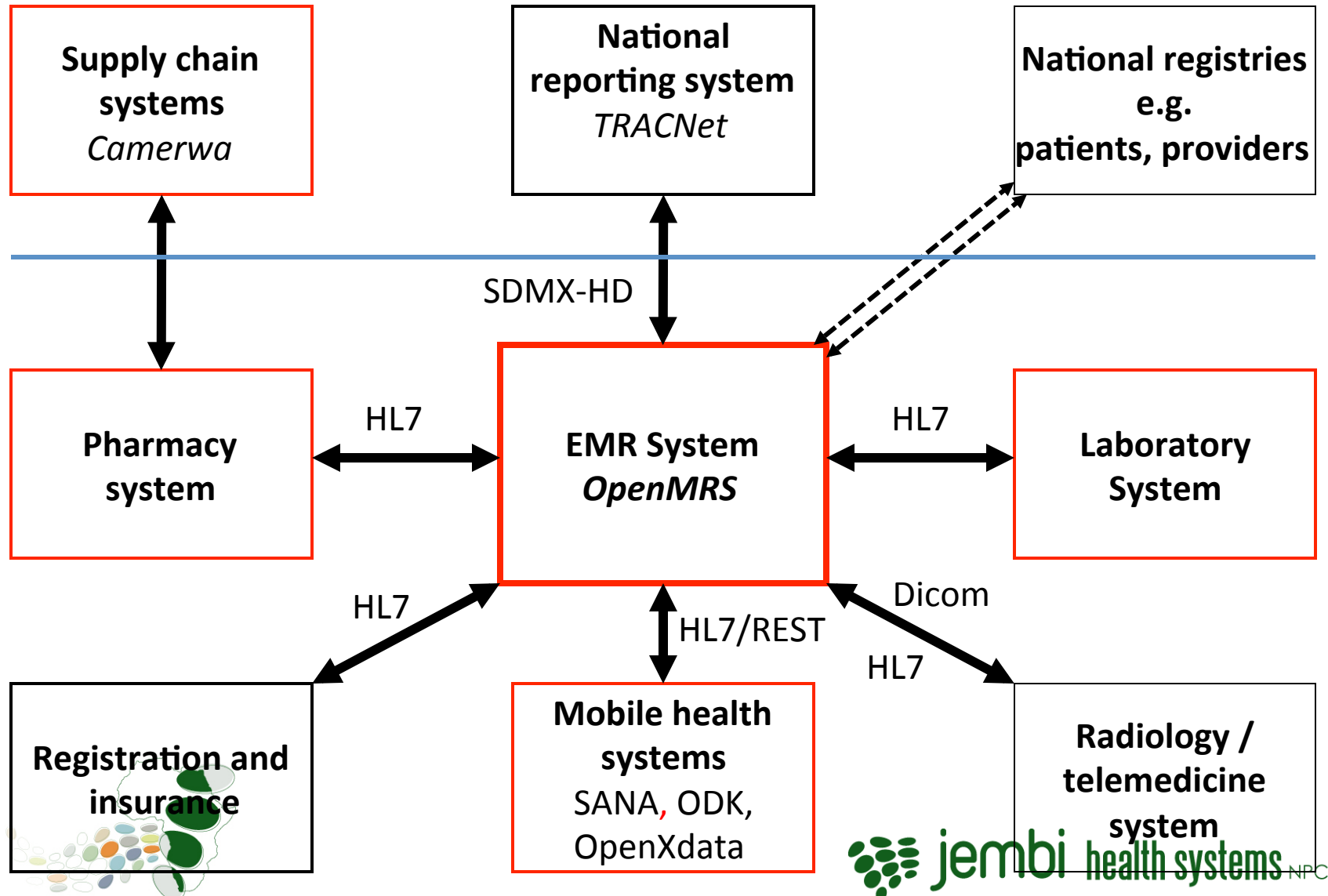
- HTML Forms
- Xforms
- Microsoft Infopath
- HL7 Messages
- REST API

Data Out

- Built-in Configurable Reports
- Data Exports
- REST API
- Integration Modules



Interoperability eHealth architecture in Rwanda



RegaDB Viral Genotype Storage

The screenshot shows a web browser window displaying the RegaDB HTLV-1 Database. The browser address bar shows 'localhost:8080/regadb/regadb#/my_account'. The page header includes the 'BAHIANA' logo, 'HTLV-1 Database', and 'mybioc KATHOLIEKE UNIVERSITEIT LEUVEN' logo. A navigation menu on the left lists options like 'Patients', 'Viral Isolates', and 'Events'. The main content area is titled 'View Viral Isolate' and contains a table with the following data:

Viral Isolate	Proteins	Resistance	Transmitted Resistance	Viral Isolate Re
Sample Date	20/07/2011			
Sample Id	ACRES308			
Organism	HIV-1			
Sequence Label	ACRES308			
Sequence Date	26/07/2011			
Subtype	HIV-1 Subtype C			
Number of base pairs	1197			
Nucleotides	cctcaaatcactctttggcagcgaccctgtcacaataagagtagggg ttgacacaggagcagatgatacagattagaagaaataattggcag atagggggaattggagggtttatcaaaagtaagacagtagtcaaat aaggctataggtaagtaactagtagggcctacacctgtcaacataatg ctgggtgtcactaaatttccaattagtccttgaactgtaccagtaa gacggcccaaagggttaacaatggccattgacagaagaaaaataaa gaaatggagaagggaaggaatacaaaaattgggctgaaaatcc ataaaaaagaaagacagtaactaggaggagaaaattagtagattcagg gactttgggaggccaattaggaataccgcaccagcaggattaaaaa ctggatgtgggggatgcataatctttagtctttagaagaaggctcagg atacctagtaaaaacaaatgaaacaccagggttagatatacagtaaatg ggatcaccagcaaatctcagagtagcatgacaaaaatcttagagccct atagtcactatcaaatcgtggatgacttatatgtggcatctgactaga aaaaaaagggttaagagaacacctctaaagtggggattcacca			



Predicting Phenotype from Genotype (RegaDB)

Viral Isolate Resistance Evolution

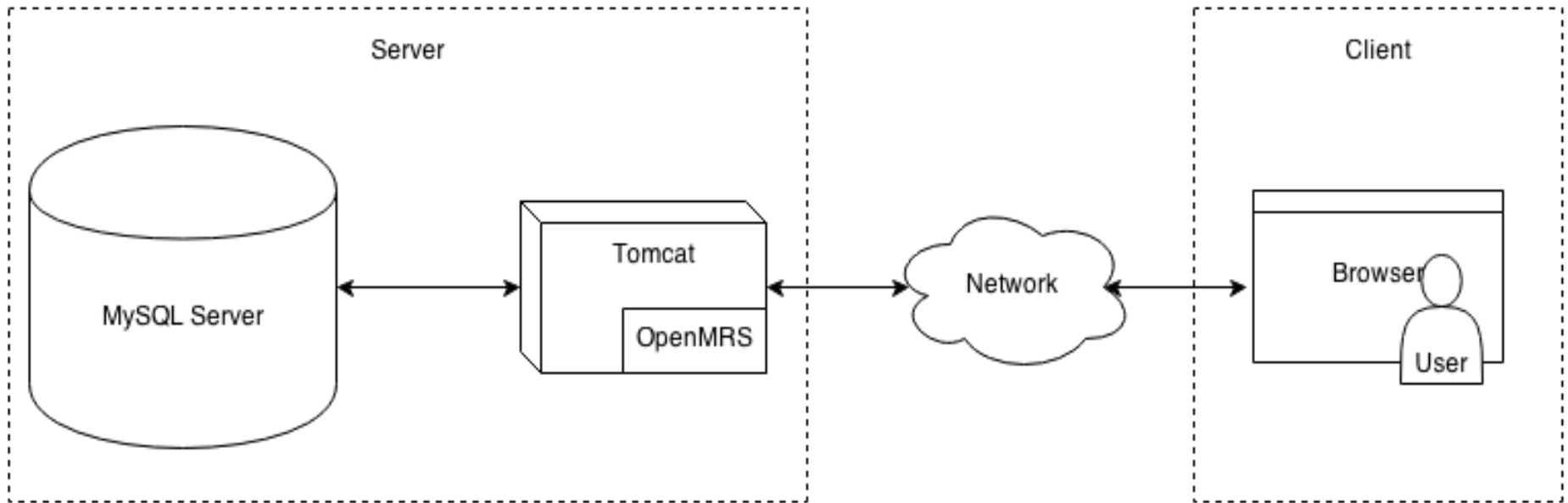
Algorithm

Show Mutations

		WC60064_visit2_2004/04/01 31/03/2004	WC60064_visit4_2004/04/28 27/04/2004	WC60064_visit8_2005/03/23 22/03/2005	WC60064_visit9_2005/09/28 27/09/2005	
NRTI:	AZT	S	R (215Y 41L)	R (215NSY)	R (215Y 41L)	
	DDC	NA	NA	NA	NA	
	DDI	S (184V)	S (215Y 184V 41L)	S (215Y 184V)	S (215Y 184V 41L)	
	3TC	R (184V)	R (184V)	R (184V)	R (184V)	
	D4T	S	R (215Y 41L)	R (215NSY)	R (215Y 41L)	
	ABC	S (184V)	S (215Y 184V 41L)	S (215Y 184V)	S (215Y 184V 41L)	
	FTC	R (184V)	R (184V)	R (184V)	R (184V)	
	TDF	S	S (215Y 41L)	S (215Y)	S (215Y 41L)	
	NNRTI:	NVP	R (103N)	R (103N)	R (103N)	R (103N)
		DLV	NA	NA	NA	NA
EFV		R (225H 103N)	R (225H 103N)	R (225H 103N)	R (225H 103N)	
ETV		S	S	S	S	



OpenMRS Components



Thank you



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Maputo

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