

African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Methodology

The ADESBPM extends both the UNECE Generic Statistical Business Process Model (GSBPM) and DDI's Generic Longitudinal Business Process Model (GLBPM).

The extensions make the subject matter of each business process or step more domain specific by introducing as applicable and chronicling the entities of the Health and Demographic Surveillance System (HDSS) reference data model. In line with the HDSS, ADESBPM tells a story about the production of demographic and epidemiological events and episodes.

Design

The design of the ADESBPM is proceeding bottom up based on two use cases. The first use case is a demographic surveillance one. INDEPTH has defined a set of business processes and transformations using the Pentaho Integration platform to perform demographic surveillance. ALPHA in turn has leveraged INDEPTH. It is in the process of defining a set of business processes and transformations using the Pentaho Integration platform to perform successively first demographic surveillance and then epidemiological surveillance.

There is the possibility that INDEPTH demographic surveillance will have to be tweaked to support ALPHA epidemiological surveillance. This is what we are in the process of discovering.

01_Site_Specific_ETL_for_6.1

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.1 Integrate data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Transform centre's operational data into relevant entities of the HDSS reference data model

02_Core_ETL_for_Raw_6.1

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.1 Integrate data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Transform relevant entities of the HDSS reference data model into harmonised data (ALPHA Spec 6.1)

03_Core_ETL_Raw_6.1_Dataset_Quality_Metrics

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Validate sex, dob, events order and events dates

04_Core_ETL_to_Clean_6.1_Dataset

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Clean Event Dates and Event ordering

05_Core_ETL_Clean_6.1_Dataset_Quality_Metrics

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Validate sex, dob, events order and events dates

06_CORE_ETL_to_Anonymise_Dataset

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.8 Anonymise data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Anonymise individuals' IDs, Physical Locations IDs and Mothers' IDs

07_CORE_Consolidate_Start_and_End_Events

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step:

08_CORE_Verify_Temporal_Integrity

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Validate and clean event histories

09_CORE_Update_Event_Timing

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.3 Explore, validate and clean data

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Smooth event histories

10_CORE_Produce_Final_Core_MicroData_Files

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step: 5.9 Finalize data outputs

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: Create calendar of events

11_CORE_Prepere_Data_Quality_Feedback

Canonical Model: Generic Longitudinal Business Process Model

Canonical Step:

Extension Model: African Demographic and Epidemiological Surveillance Business Process Model (ADESBPM)

Extended Step: