



INDEPTH Network

INDEPTH Core Micro Data Set

Tathagata Bhattacharjee

iSHARE2 Support Team

IDMP – INDEPTH Data Management Programme

INDEPTH Data Repository

iSHARE 2 
an **INDEPTH** project

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Published by Oxford University Press on behalf of the International Epidemiological Association

International Journal of Epidemiology 2012;41:579–588

© The Author 2012; all rights reserved.

doi:10.1093/ije/dys081

EDITORIAL

The INDEPTH Network: filling vital gaps in global epidemiology

Osman Sankoh^{1,2*} and Peter Byass^{3,4}

¹INDEPTH Network, PO Box KD213, Kanda, Accra, Ghana, ²School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa, ³Umeå Centre for Global Health Research, Department of Public Health and Clinical Medicine, Umeå University, Umeå 90187, Sweden and ⁴MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt), School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

*Corresponding author. Email: osman.sankoh@indepth-network.org

Table 1 Common event attributes for the INDEPTH data specification

Attribute	Variable name	Description
Record number	RecNr	A sequential number uniquely identifying each record in the data file
Centre identifier	CentreId	An identifier issued by INDEPTH to each member centre of the format CCCSS, where CCC is a sequential centre identifier and SS is a sequential identifier of the site within the centre in the case of multiple site centres
Individual identifier	IndividualId	A number uniquely identifying all the records belonging to a specific individual in the data file. For data anonymization purposes, this number should not be the same as the identifier used by a contributing centre to identify the individual, but the contributing centre should retain a mapping from this identifier to their identifier
Country identifier	CountryId	ISO 3166-1 numeric code of the country in which the surveillance site is situated
Location identifier	LocationId	Unique identifier associated with a residential unit within the site and is the location where the individual was or became resident when the event occurred. For data anonymization purposes, this identifier should not be the same as the identifier used internally by the contributing centre, but the contributing centre should retain a mapping of this identifier to their internal location identifier
Date of birth	DoB	The date of birth of the individual
Event	EventCode	A code identifying the type of event that has occurred (Table 2)
Event date	EventDate	The date on which the event occurred
Observation date	ObservationDate	Date on which the event was observed (recorded), also known as surveillance visit date
Event count	EventCount	The total number of events associated with this individual in this data set
Event number	EventNr	A number increasing from 1 to EventCount for each event record in order of event occurrence

What's missing here?

Sex

- 1 = Male
- 2 = Female

Event	Code	Definition	Attributes	Attribute Description
Birth	BTH	The birth of an individual to a resident female.	MotherId DeliveryEventId	The IndividualId of the mother The RecNr of the delivery event associated with this birth
Enumeration	ENU	Starting event for all individuals present at the baseline census of the surveillance area. It is the date on which the individual was first observed to be present in the surveillance area during the baseline census.		
In-migration	IMG	The event of migrating into the surveillance area	Origin	Classification scheme to be developed by MADIMAH
Out-migration	OMG	The event of migrating out of the surveillance area	Destination	Classification scheme to be developed by MADIMAH
Location exit	EXT	The event of leaving a residential location within the surveillance area to take up residence in another residential location within the surveillance area	Destination	The LocationId of the location within the surveillance area to which the individual relocated
Location entry	ENT	The event of taking up residence in a residential location within the surveillance area following a location exit event. Note that location exit and entry are actually two parts of the same action of changing residential location and as such happens on the same event date	Origin	The LocationId of the residential location from which the individual moved.

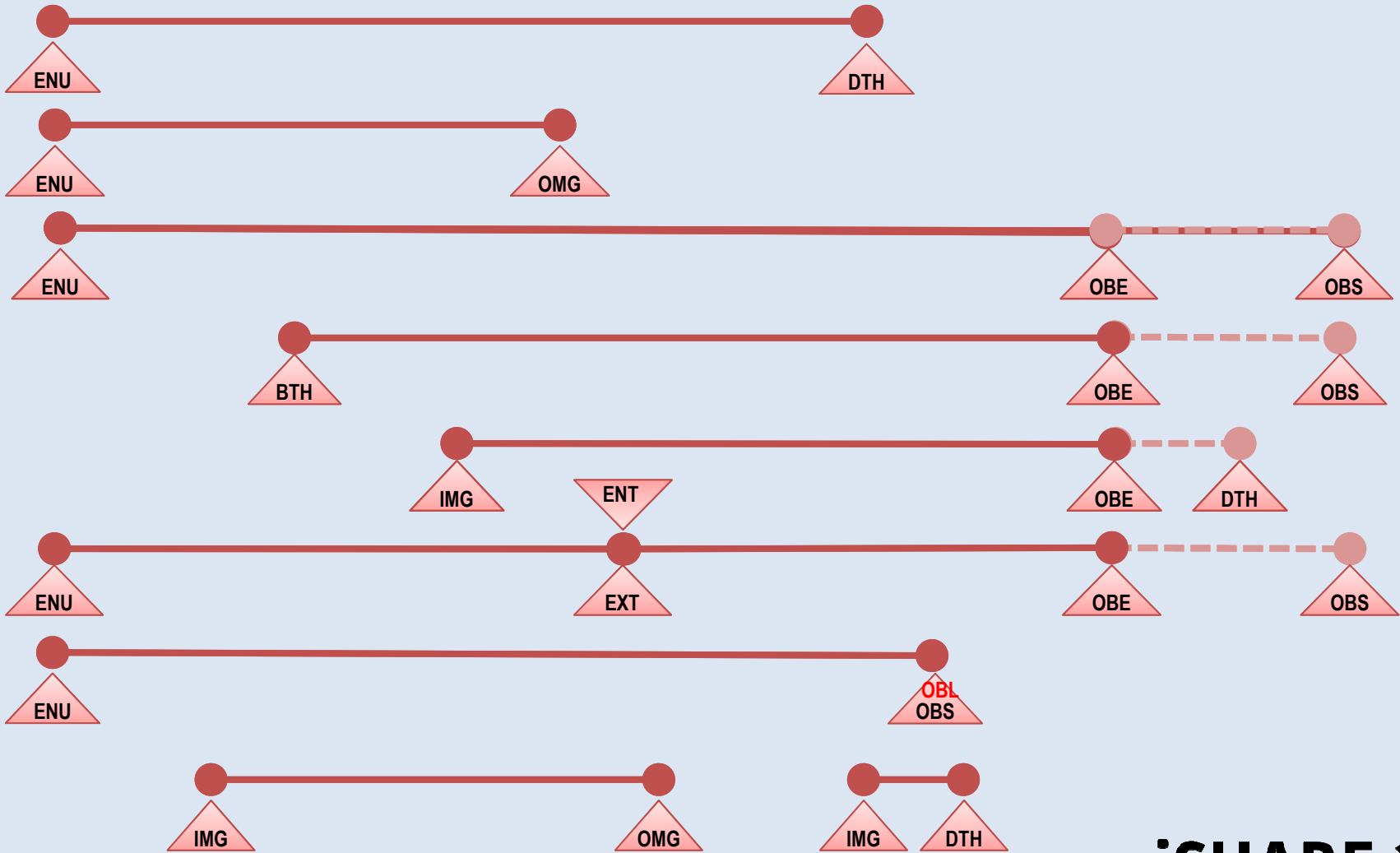
Event	Code	Definition	Attributes	Attribute Description
Delivery	DLV	The event of a pregnancy end after 28 weeks of gestation, which may or may not result in the birth of one or more individuals (represented in this dataset by a BTH event linked to this delivery event)	LBCnt SBCnt Parity	Live birth count Stillbirth count The number of live births to this women prior to this delivery
Observation end	OBE	An event inserted when a dataset is right censored at an arbitrary date and this individual remained under surveillance beyond this date. The right censor date is the date of this event		
Last Observation	OBL	An event indicating the last point in time on which this individual was observed to be present and under surveillance. Event date equals observation date in this instance. Normally there should be no individuals with this event as their last event if the right censoring date is prior to the start of the last complete census round.		
Observation	OBS	Used to record characteristics of individuals under surveillance valid at the time of the observation. Could be used to record aspects such as educational attainment, employment status or anthropometry measures. Specific examples of this event is not part of the minimum core individual dataset, but is specified to allow for site or working group needs.		

Start of HDSS

Right censor

Last surv. round

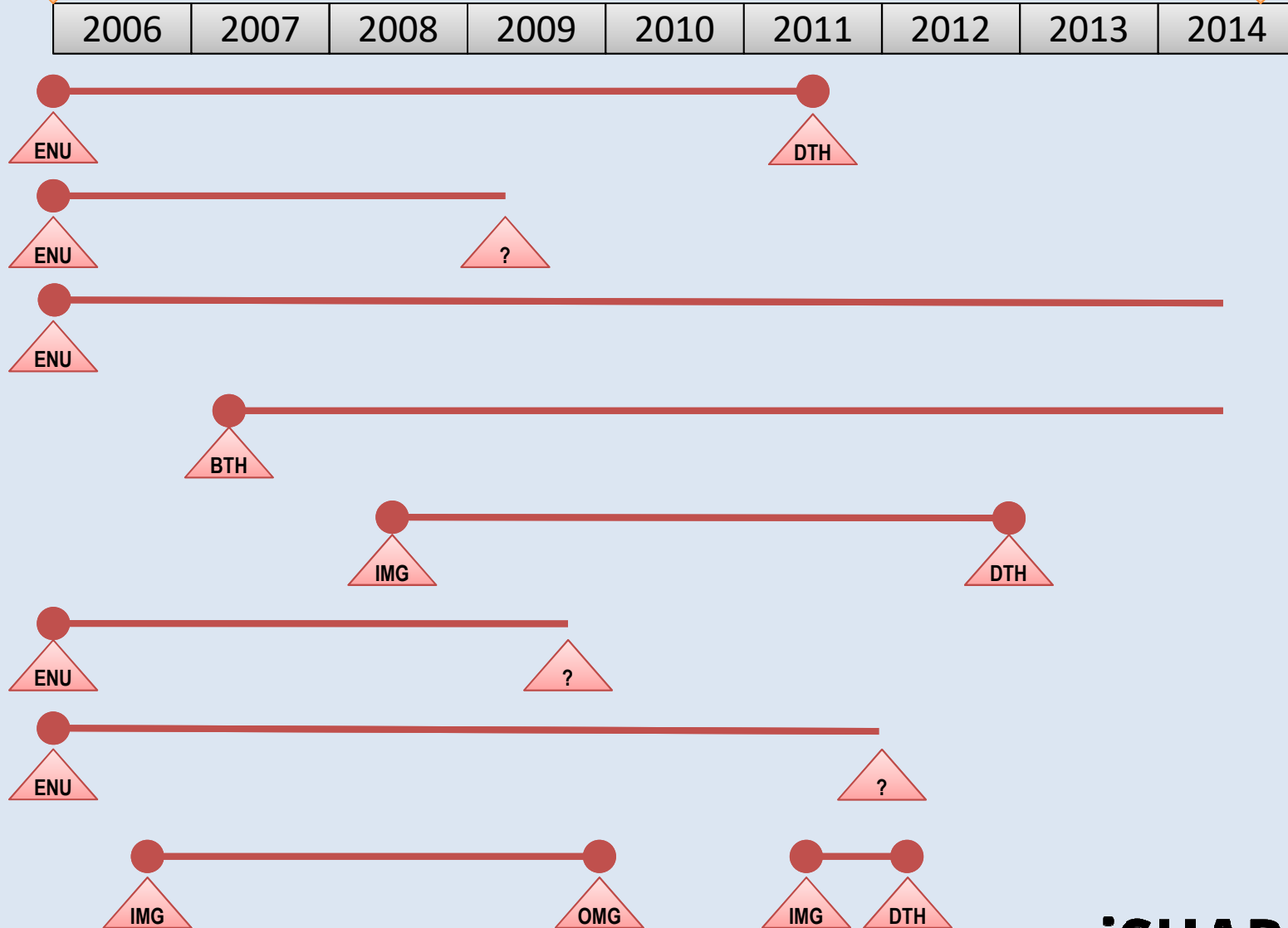
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
------	------	------	------	------	------	------	------	------	------	------



Start of HDSS

Quiz

Last surv. round



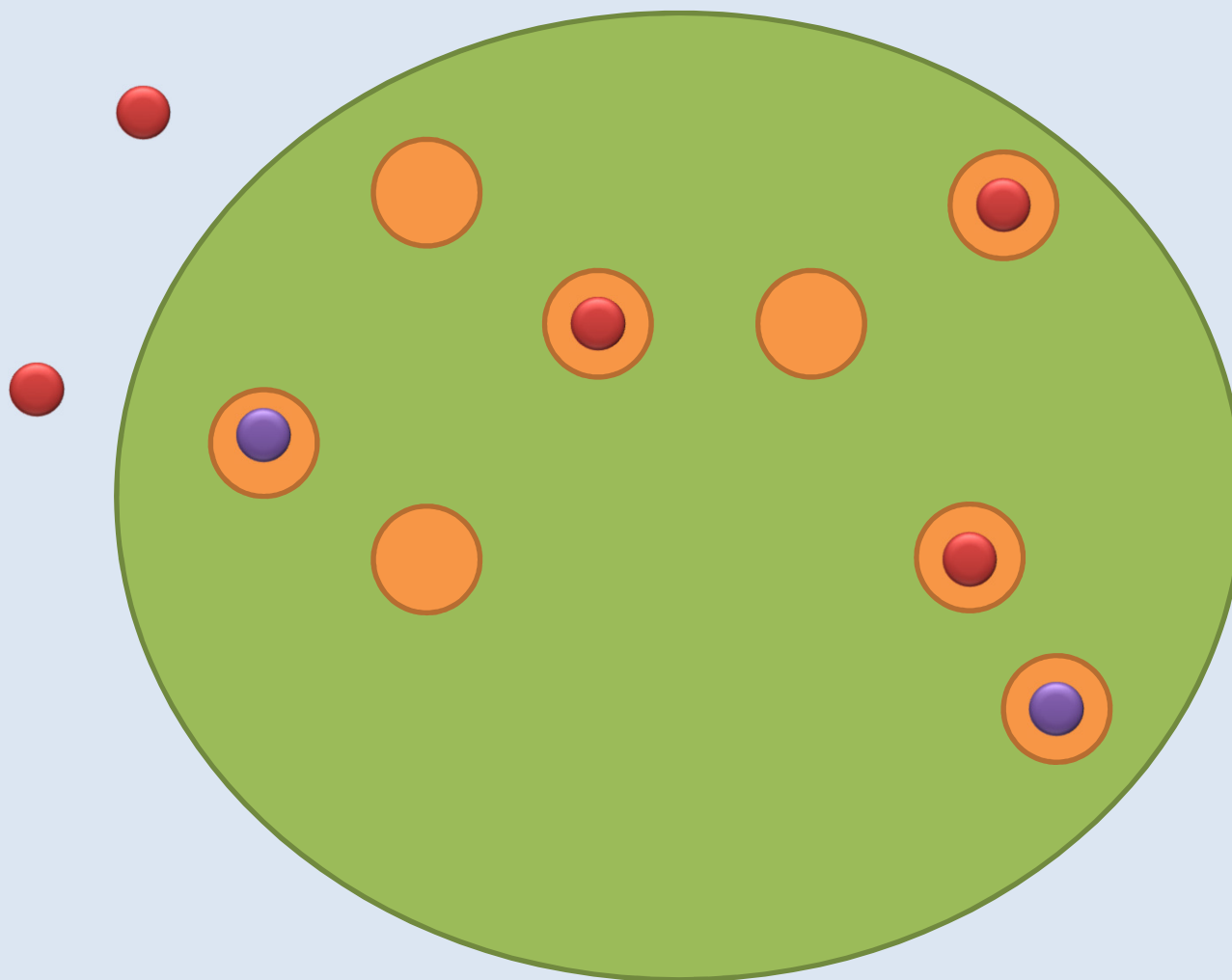
How does this happen?

- Event Model
 - Last event not created or lost
- Episode Model
 - End Event left open

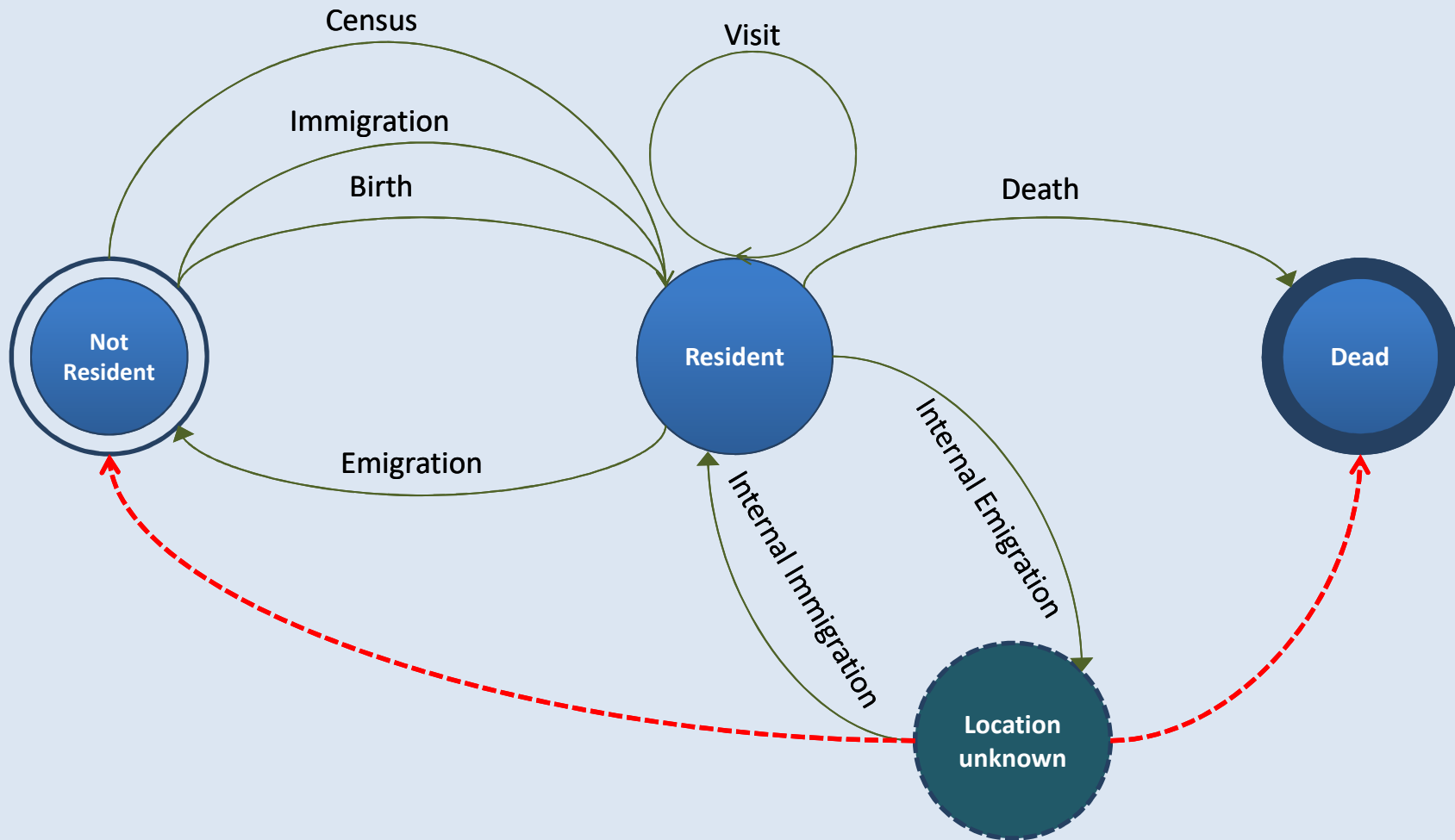
Implications



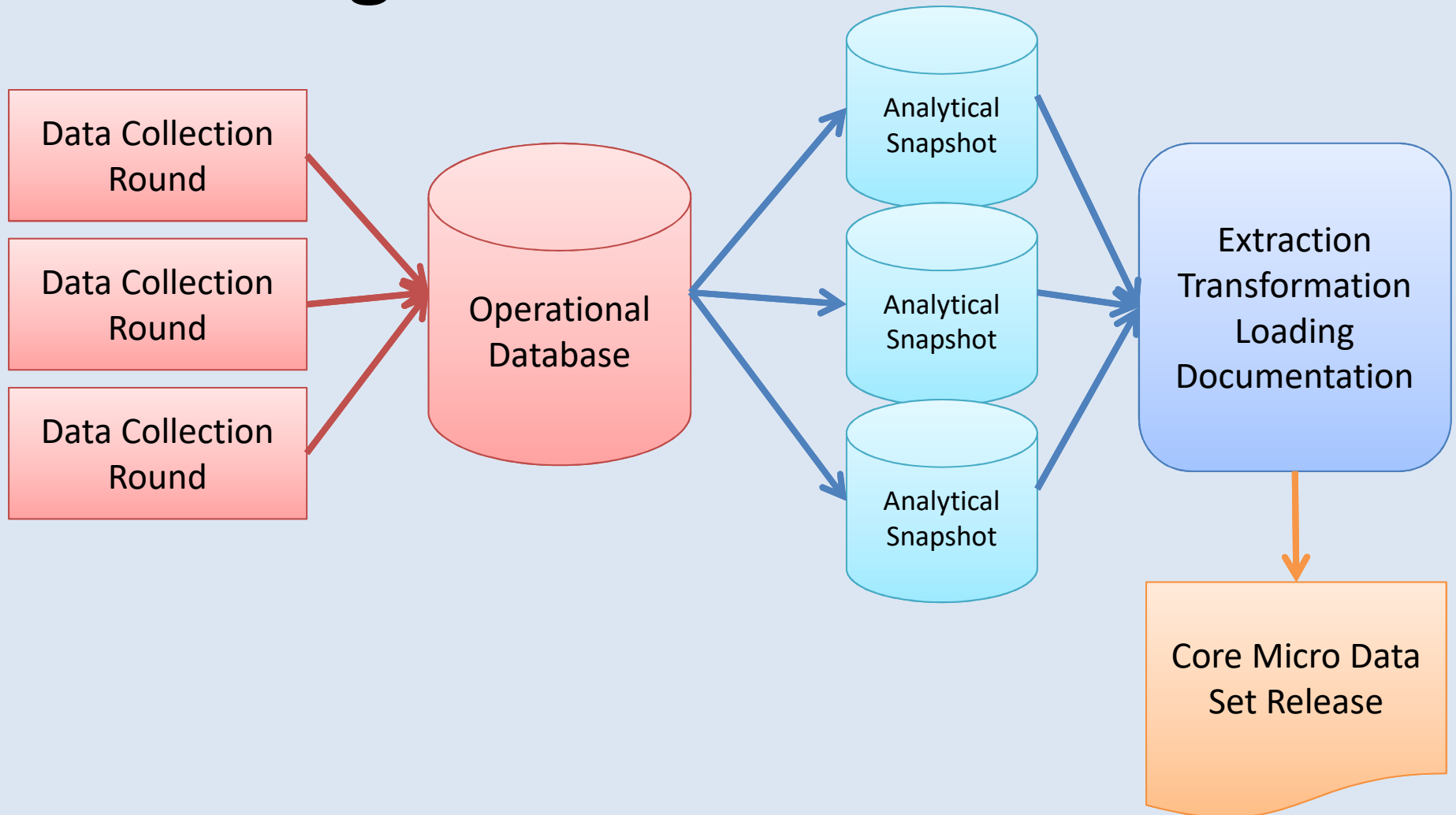
Migration Reconciliation



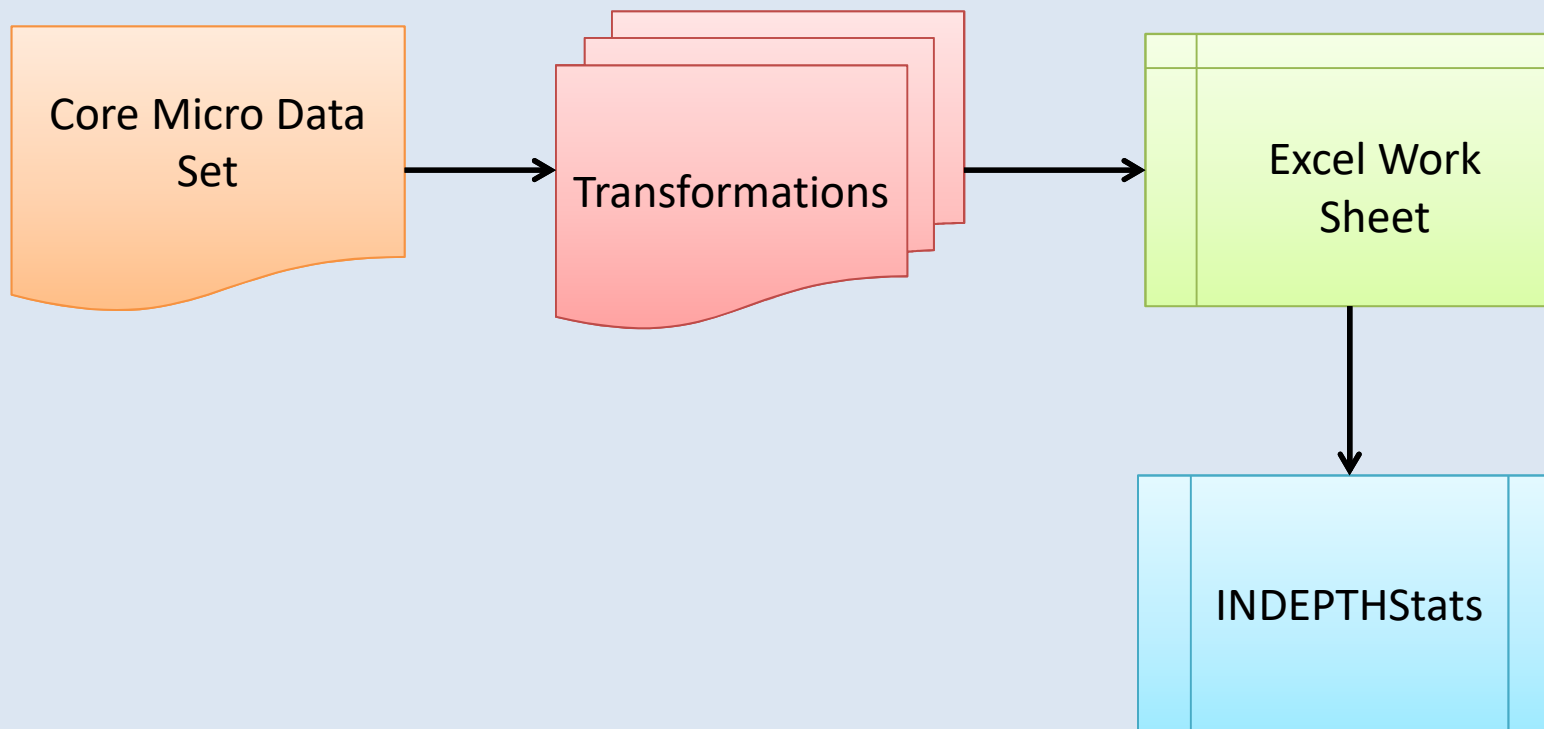
Residency State Transition



Creating the Core Micro Data Set



INDEPTH Indicators



Quality Assurance

- Core Micro Data
 - Valid Start Events
 - ENU
 - BTH
 - IMG
 - Valid End Events
 - DTH
 - OMG
 - OBE
 - Valid Transitions
 - Temporal Integrity
- INDEPTH Stats Indicators
 - Plausibility Checks



Thank
you

