

*DATA QUALITY AND COST IMPLICATIONS OF
FREQUENCY OF HDSS VISITATION ROUNDS:*

THE NAVRONGO EXPERIENCE

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Presentation outline

- Introduction
- Objective of study
- Methodology
- Analysis
- Results
- Discussion/Conclusion



Introduction

- Various HDSS sites visit households at different time intervals.
- These different visitation periods depend on set objectives of the particular site.
- However, the common objectives of all these sites is the collection of timely and quality data.
- The question then is how many visitation rounds would result in the achievement of these objectives at a minimal cost.



Objectives

- To assess the feasible number number of HDSS rounds of data collection
- To assess whether frequency of households visits affect data quality.
- To examine cost implications of various update rounds.
- To make recommendations on the ideal number of update rounds.



Data source

- Data from the Navrongo HDSS are used
- The Navrongo HDSS was set up in 1992 when the baseline data was collected with updates commencing in July 1993.
- Data used for this analysis is from 1996 to 2009.
- 4 rounds/year was done between 1993-2005
- 3 rounds/year was between 2006-2008
- 2 rounds/year was in 2009



Analysis

- We basically used births, deaths and migrations data for the analysis.
- We first looked at average coverage of events within the year.
- We also looked at the timeliness of events capturing, that is period between event date and registration date
- The accuracy of dates is also examined by looking at the proportion of default dates per period



Analysis-cont.

- We then looked at core staff and the running cost associated with each system.
- We finally show the capital cost for the various rounds



Coverage of events

- At the time of doing 4 rounds, about 16 % of births that occurred in a particular year were captured in following year.
- The proportion was 25.3 and 27 % for 3 and 2 rounds respectively.
- The CKI system being operated has possibly reduced these proportions.

Number of rounds	Proportion of events captured the following year.		
	Births	Deaths	Migrations
4 Rounds	15.9	15.0	35.1/22.1
3 Rounds	23.2	21.0	39.5/26.5
2 Rounds	27.0	25.3	42.1/29.1



Timeliness of event capture

- We next looked at how timely events are captured in the different systems. This is arrived at by computing the difference between the event dates and the dates of interview.



Time interval between birth date and date of registration

No. of rounds	Median (Weeks)	Inter-quartile range
4	7	3-11
3	10	5-15
2	14	6-23



Time interval between death date and date of registration

No. of rounds	Median (Weeks)	Inter-quartile range
4	7	3-11
3	8	4-13
2	12	6-19



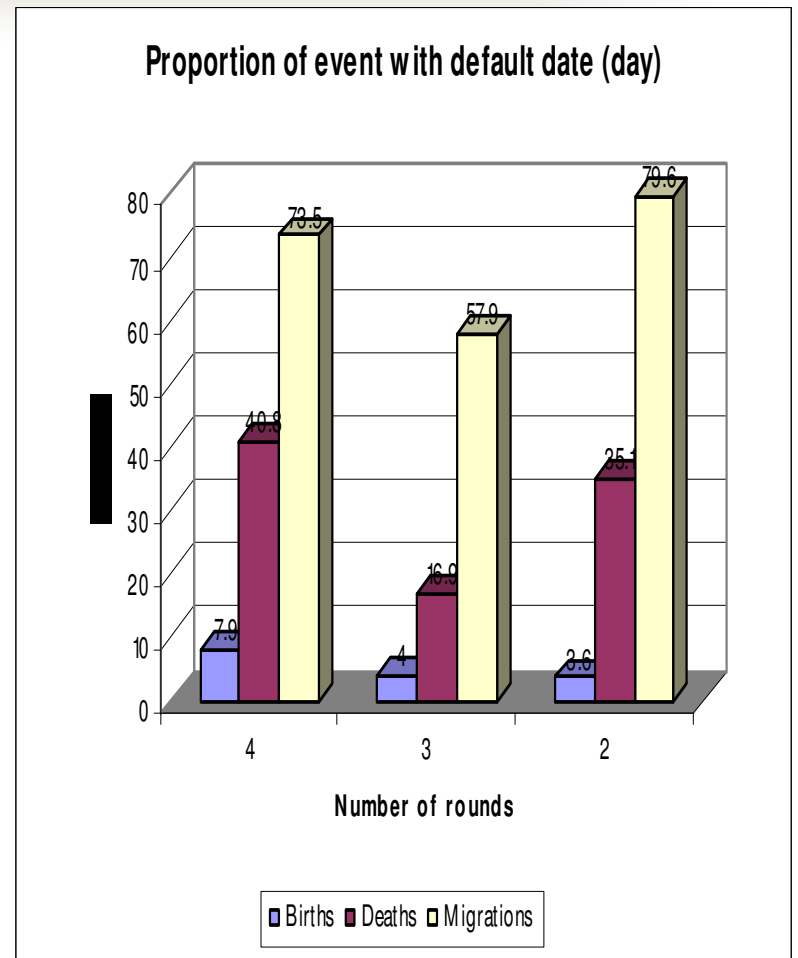
Time interval between migration date and date of registration

No. of rounds	Median (Weeks)	Inter-quartile range
4	21	17-26
3	24	19-29
2	29	22-38



Accurate dating

- It is expected that when visits are made more frequently, dates are likely to be more accurate.
- However, the reverse is true between 4 and 3 rounds. This could be due to improvement in date reporting and data collection technique by fieldworkers.
- This assertion is seen to be true when we moved from 3 to 2 rounds per year.



Core Staff

Staff	No. of rounds/No. of staff		
	4 rounds	3 rounds	2 rounds
HDSS field coordinator	1	1	1
Fieldworkers	26	17	10
Supervisors	12	8	8
Research Assistants	2	1	1
Filing clerks	2	2	1
Data management team	8	6	4
Driver	1	1	1



Annual running cost for each system

	No. of rounds/Annual cost		
	4 rounds Cost (\$)	3 rounds Cost (\$)	2 rounds Cost (\$)
Personnel	337,200	249,000	156,600
Other (Consumables)	54,047	47,400	25,500
Total	391,247	296,400	182,100



Capital Cost

- Transport
 - Vehicle, Motorbikes, Bicycles
- Computers & accessories
- Office space
- Furniture
- Utilities



Discussion and conclusion

- Data quality for all three systems vary
- Generally, 4 rounds per year is the best
- Late registration of events is associated with 2 rounds systems
- It is found that with time, dating gets improved as prospective respondents keep in mind or record dates of events and data collectors also get experience in the assessment of dates.
- However, dating gets poorer when doing 2 rounds as respondents may not remember exact dates of some events.
- As expected, cost of running 2 rounds is lowest, but events are likely to be missed.



THANKS FOR YOUR ATTENTION

