Rapid Mortality Mobile Phone Surveys (RaMMPS) during COVID-19: Insights from Burkina Faso

Bruno Lankoandé, Kassoum Dianou, Herve Bassinga, Abdramane Soura

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Objectives: use RAMMPS for estimating (excess) mortality during the COVID-19 pandemic in five LLMICs

Specific objectives:
- Develop and validate RAMMPS instruments and methods
- Generate mortality estimates by age, sex and locality (and compare them to a pre-COVID-19 baseline).
- Nested validation studies

RaMMPS studies differ in terms of:
- Sampling approaches
- QQN instruments used
Burkina Faso RAMMPS - Sampling design

**Sampling** (two arms):

1. Re-contact ~6,000 households from the 2018-’19 living conditions surveys (EHCVM): → RAMMPS interview with HH head + 1 woman of reproductive age (15-49)
   - Mortality QQN: HH deaths, sibling histories & parental survival

2. 9,000 completed interviews with numbers generated through RDD:
   - Pre-screening of functional phone numbers ([https://viamo.io/](https://viamo.io/))
   - Quota per trimester with oversampling in women of reproductive age

<table>
<thead>
<tr>
<th>Place of residence</th>
<th>18-49</th>
<th>50-64</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men + Women</td>
</tr>
<tr>
<td>Ouagadougou</td>
<td>87</td>
<td>174</td>
<td>29</td>
</tr>
<tr>
<td>Bobo-Dioulasso</td>
<td>30</td>
<td>60</td>
<td>17</td>
</tr>
<tr>
<td>Other cities</td>
<td>70</td>
<td>140</td>
<td>31</td>
</tr>
<tr>
<td>Rural areas</td>
<td>448</td>
<td>896</td>
<td>268</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>635</td>
<td>1270</td>
<td>345</td>
</tr>
</tbody>
</table>

- Mortality QQN modules: HH deaths, parental survival, sibling histories, truncated birth histories
Burkina Faso RAMMPS - Adult mortality

• Summary sibling histories - men and women (15-64 yrs)

SSH6 Now I would like to ask you some questions about your brothers who are born to your biological mother. Can you please tell me how many brothers you have or ever had? Please include brothers who are living with you, sisters who not living with you, and those who have died?

INSTRUCTION: assist the respondent enumerating brothers by listing their (first) names

0 NUMBER DK

SSH7 How many of these brothers are no longer with us today (have passed away) ?

0 NUMBER DK

SSH8 How many of your brothers have passed away in the last three years ?

0 NUMBER:

SSH9 In which year/month did (NAME) die ?

B Year: B Month: D LOOP

• Detailed parental survival

PS1 I would now like to ask you about your biological father and mother. Is your biological mother (father) still alive?

YES NO DK

PS2 How old is s/he?

INSTRUCTION: record age in completed years

YEARS DK

PS3 How old was your biological mother (father) when s/he died?

AGE (COMPLETED YEARS) DK

PS4 In what year did she die?

YEAR

• Ages of the surviving population are imputed by random sampling from DHS surveys according to age group of the respondent (15-49)

• Difficulties to make imputation in old age respondents that are likely to report old age mortality
Comparing the 2 arms: LSS and RDD

• Close estimates between the 2 arms over the period 2019-2021

• Larger CIs in LSS arm because of sample size
45q15 - Comparing RaMMPS and UN estimates

Men

Women

Discrepancies between the two sources

Underestimation of mortality in the RAMMPS?
➢ Underreporting of deaths?
➢ Displacement of deaths in time?
➢ Overreporting of surviving siblings (inclusion of other relatives that are not siblings)?

Similar results with the RDD sample
Conclusions

**Keys points:**
- Encouraging estimates of under 5 mortality;
- Mixed results on adult mortality (to investigate more).

**Next steps:**
- Routine data collection (2 months);
- Validation studies;
- Estimation of (Covid excess) mortality;
- Dissemination.