THE INTER-SECRETARIAT
WORKING GROUP ON
HOUSEHOLD SURVEYS

Guidance Note on Assessing and Minimizing the COVID Impact on Survey Quality

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Outline

- ❑Why the Guidance Note?
- ❑Structure and key feature of the Guidance Note
- ❑What's covered?
- ❑What's next?

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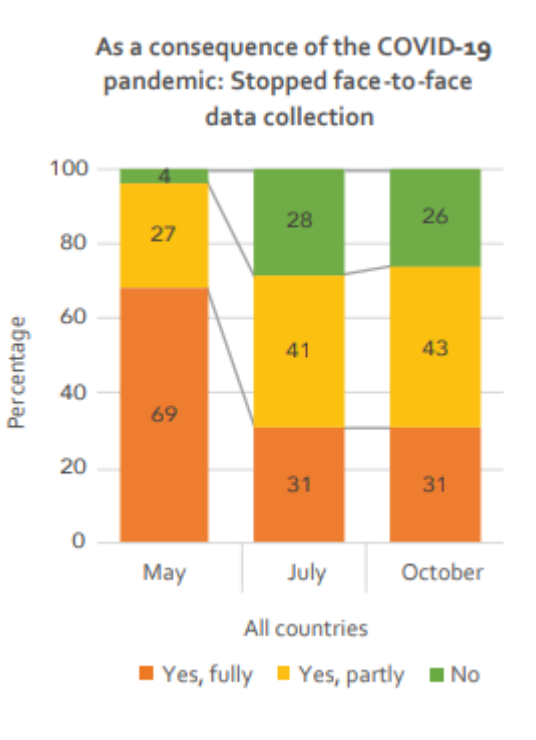
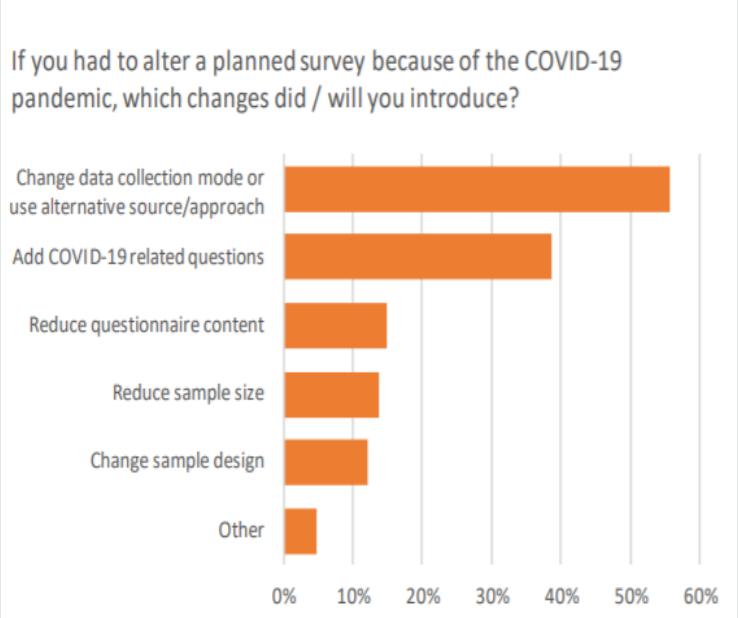
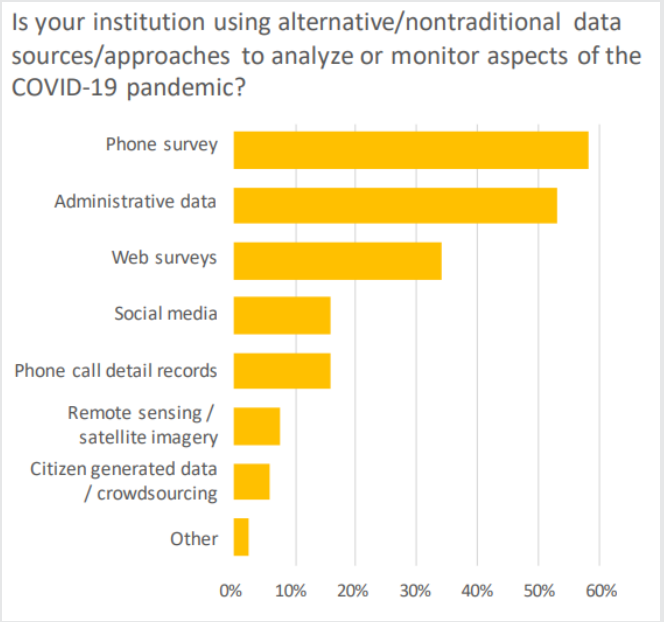
Why the guidance note?







Source: [Global COVID-19 Survey of National Statistical Offices (Rounds 1-3).]

Structure of the Guidance Note

1. Introduction/background
2. Household survey operations pre- and during COVID-19: potential impact of the pandemic on survey quality
   - Basic concepts and definitions
   - Data quality frameworks
   - Typology of changes in hh survey operations during COVID
   - Impact of changes introduced during COVID

❑Assessing and correcting potential errors
   - Mode-specific selection effect
   - Mode-specific measurement effect
   - Timeliness/punctuality
   - Coherence and comparability

❑Disseminating and communication

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Key feature of the Guidance Note

- Guidance is provided for broad typologies that reflect what have happened to surveys during COVID: countries can relate and find “solutions” that fit for their needs
- Discussions are supported by national examples (direct communication with countries or using materials from partner agencies ILO, ECLAC, WB)
- Go beyond just the mode effect but also other impact on quality: training, supervision, data collection, questionnaire changes, data input, quality control, dissemination)
- Use of examples and national survey microdata to illustrate “how-to”
- Data and programming code are provided so users can practice

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Six broad typologies of changes (only show partial table)

Experience with remote data collection	Type of survey (panel or cross-sectional)	Challenges	Changes introduced during COVID-19	Data quality issues
No experience in CATI, only F2F before COVID-19	Panel: contact information available from earlier panels	- Contact information only available for earlier panels; - No contact information for fresh sample; - Lower response rate/attrition; - Designing and testing a questionnaire for CATI - No experience with telephone interview - Setting up data management and quality control system for telephone operations	- Re-use an existing sample (already interviewed) - Supplement with additional phone numbers from other sources; - Face-to-face interviewing to telephone interviewing (or web); - Re-design survey questions	– Sample frame coverage – Non-response/high attrition rate – Mode-specific measurement effects – Questionnaire redesign (from CAPI/PAPI to CATI) – Data collection/processing/ quality control
	Cross-sectional: no contact information			

Changes implemented during COVID and potential impact on quality (1)

- Changing sample frame: area-based → telephone/web
  - Coverage of telephone/web:
    - Only 48 (55% of 88 countries in the world) reported 80 per cent or more of their population owning a mobile phone (data since 2014)
    - Only 1 out of 17 countries in sub-Saharan Africa had mobile phone ownership >= at 80%.
    - In 2019, 51 per cent of the world population use internet and the percentage is 18 per cent in sub-Saharan Africa
  - Availability of the frame:
    - Of more than 180 countries that implemented phone surveys to measure COVID-19 impacts, only 43 percent were able to use an updated sampling frame from a recent household survey

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Changes implemented during COVID and potential impact on quality (2)

- ❑Changing data collection mode
  - Respondents are different → bias?
  - How individual responds to the same question might be different → bias?
    - Sensitive topics, respondents may not feel comfortable sharing these responses with an interview in-person but might be more open on telephone?
    - Questions that allow respondent to select multiple responses might to different responses; whether they can see all choices or being read on the phone?
      - *"Which of the following …?"*
  - Questionnaire design
  - Training of enumerators
  - Data collection protocols
  - Supervision and quality control
  - Data entry

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Changes implemented during COVID and potential impact on quality (3)

- Changing questionnaire
  - Content of the questionnaire: shorter, different flows, with additional COVID-related Qs
  - How questions are asked has changed
    - Show cards no longer work for phone surveys
    - Questions with complicated vocabulary are difficult to follow on the phone
      - *"Sometimes questions are so long that when I finish reading them I don't understand what the beginning is. The respondent – without the written text – all the more" (Jablonski, 2014)*
  - The usual Q testing (cognitive and piloting) unlikely

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Other changes

- ❑Training
- ❑Supervision
- ❑Quality assurance
- ❑Data collection protocol
- ❑Data entry

Impacted on by:

- ❑COVID hampered the ability to follow good practices (remote vs in-person training)
- ❑Changing mode requires additional considerations: e.g., use of geospatial in CAPI to track enumerators no longer works!

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Assessing the impact on quality

- Challenging because all impacts/factors are entangled

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Guidance offered – selection bias

- ❑Calculating response rate (think RDD and unknown eligibility!)
- ❑Nature of missingness: MCAR/MAR/NMAR and bias that can be corrected and cannot be corrected
- ❑Methods to detect selection bias
- ❑Selection of benchmarking data sources and auxiliary variables:
  - Advantage of sampling from a recent panel survey; the limitation in using a RDD?
- ❑Weighting and calibration methods (theory + example data + R codes)

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Guidance offered: an example

Table 14. Five methods of estimating response propensities within classes based on fitting a logistic model, Integrated Household Panel Survey, 2019-2020, Malawi

Adjustment class	Range	Number of households	Unweighted response propensity	Weighted response propensity	Unweighted response rate	Weighted response rate	Median of propensity score
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	[0.1434, 0.5106]	616	0.295	0.290	0.305	0.300	0.269
2	(0.5106, 0.5915]	615	0.567	0.568	0.585	0.561	0.553
3	(0.5915, 0.5923]	615	0.592	0.592	0.563	0.567	0.592
4	(0.5923, 0.8043]	615	0.766	0.760	0.756	0.727	0.803
5	(0.8043, 1.000]	616	0.884	0.885	0.896	0.872	0.887

Note:

- Column (1) is formed by classify households in the sample (respondents and nonrespondents) into 5 classes with the same number of households.
- Column (2) shows the number of households within each class
- Column (3) is the simple average of the estimated propensity scores within each class
- Column (4) is the weighted average of estimated propensity scores within each class, the weight used is the household base weights
- Column (5) is proportion of responding households within each class
- Column (6) is the weighted proportion of responding households within each class, the household-level base weight is used
- Column (7) is the median value of calculated propensity score within each class

The function pclass in the R PracTools package is used to fit logistic, probit or c-log-log binary regressions and divide the predicted propensities into classes. More information about the function is available at https://www.rdocumentation.org/packages/PracTools/versions/1.2.5/topics/pclass; an example of using pclass is available in Valliant et al., (2018). The R code and the underlying data for this exercise is available in Annex 1.

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Guidance offered – measurement bias

- ❑ Use of paradata
- ❑ Compare with a gold standard
- ❑ Experiment design
  - A bridge study
  - Re-interview

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Dissemination and communication

- ❑Differences in the estimates could be from:
  - The real COVID impact (think unemployment)
  - Data quality issues

The US BLS produces monthly estimates of unemployment based on both household and business surveys. During the pandemic there was a large spike in the estimated unemployment rate. While this change might reflect somewhat the ground truth, it appeared that they were biased downward (too low) because so many businesses were short on staff and were not able to respond to the survey in a timely manner. Those most affected by this delay in reporting were those with large numbers laid off.

- ❑How to disseminate and communicate our results with policymakers and the general public?

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What's next?

- ❑ Expand the session on measurement bias; dissemination and communication (call for national examples!)
- ❑ Add a section discussing quality issues linked to nonprobabilitic surveys
- ❑ Making better connections between typologies and solutions
- ❑ Key takeaway messages at the end of each chapter for quick reference
- ❑ Seek feedbacks from countries to make the Guidance Note useful
- ❑ Transitioning back to normal: mixed-mode data collection?
- ❑ Lessons learnt and implication for future data collections

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Recent and forthcoming outputs related to COVID-19

- ❑ COVID-19 Task Force (UNSD, WB, UIS)
  - COVID-impact survey dashboard (updated monthly)
  - Planning and Implementing Household Surveys under COVID-19: completed
  - Guidance Note on Assessing and Minimizing the COVID-19 Impact on Survey Quality: to be completed March/April 2022
  - Position paper: Submitted to UNSC (background doc for agenda item 3(a))

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Positioning Household Surveys for the Next Decade

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