United Kingdom Humanitarian Innovation Hub

DESIGNING AND IMPLEMENTING LONGITUDINAL PHONE-BASED PANEL SURVEYS: GUIDANCE NOTE AND LESSONS LEARNT

EXECUTIVE SUMMARY

This guidance notes documents lessons learned from piloting a longitudinal phone-based survey among internally displaced households (IDPs) across seven governorates in Syria. The pilot was designed to assess whether repeated phone follow-ups can reliably track how stated displacement intentions evolve over time and whether, and under what conditions, those intentions translate into actual movement behaviour.

The assessment served two complementary purposes. First, it generated longitudinal evidence on displacement intentions and subsequent movement to inform humanitarian analysis, with detailed findings reported separately. Second, and more central to this document, it functioned as a proof of concept to assess the feasibility, added value, and limitations of longitudinal phone-based intention monitoring, including the testing of sentiment analysis within the Syrian displacement context.

Drawing on six rounds of follow-up, this guidance highlights key design decisions, implementation trade-offs, and methodological lessons relevant to humanitarian actors considering similar approaches. The pilot demonstrates that longitudinal phone-based panels are operationally feasible and analytically valuable for understanding intention–action dynamics in volatile displacement settings, if sampling, tracking, and retention are carefully managed.

ToC

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1. What This Guidance Covers and Does Not Cover

1.1 What This Guidance Covers

This guidance provides experience-based advice on designing and implementing longitudinal phone-based panel surveys among displaced populations. It focuses on research design, operational feasibility and lessons learnt from implementing a multi-wave survey in a volatile displacement setting. Specifically, the guidance covers sampling and panel construction, questionnaire design for repeated phone follow-ups, field implementation and enumerator protocols, data quality and tracking systems, attrition management, and the testing of optional analytical modules such as sentiment analysis.

1.2 What This Guidance Does Not Cover

This document does not present substantive analytical findings on displacement intentions or movement trends, which are reported separately, in the link shared above. It is not intended to provide a comprehensive methodological framework on how to carry out longitudinal survey methods. Rather, it outlines how longitudinal panels can complement existing systems such as CCCM assessments or other coordination tools in place.

- What this guidance is: practical, operational, experience-based
- What it is not: a statistically exhaustive methodological textbook

2. Research Design Rationale

Internally displaced households frequently reassess their movement plans in response to changing security conditions, access to services, livelihood opportunities, and social or family considerations. While cross-sectional intention surveys provide valuable insights at a single point in time, they are unable to observe whether stated intentions persist, change, or translate into actual movement.

A longitudinal panel design was therefore adopted to follow the same households over time and observe how decisions unfold in practice. Repeated follow-up makes it possible to examine when and why stated intentions translate into action, when they do not, and how households move between different decision states. By focusing on change and trajectories rather than static estimates, this approach more closely reflects the realities of displacement decision-making in volatile contexts.

Phone-based data collection was selected as the most feasible way to conduct repeated follow-up in Syria, given security constraints, the wide geographic dispersion of displaced populations, and the operational challenges of repeated in-person visits. While phone surveys inevitably exclude households without reliable access to mobile communication, they provide a practical balance between feasibility, cost, and safety in settings where sustained face-to-face engagement is not possible.

Building on this design rationale, the assessment aimed to understand whether what households say they plan to do is reflected in what they are ultimately able to do. It explored the conditions under which stated intentions lead to movement, as well as situations in which plans change or do not materialize. The pilot also tested whether asking households about how they feel about these decisions, such as their sense of urgency, confidence, or acceptance adds meaningful insight beyond reported intentions and observable contextual factors.

3. When Longitudinal Panels Are Appropriate (and When They Are Not)

3.1 Appropriate Use Cases

Longitudinal phone-based panels are most useful when the goal is to understand how situations change over time, rather than to produce a snapshot of conditions at a single moment. They are particularly well suited to exploring whether decisions remain stable, shift gradually, or turn into action, and to examining the gap between what households say they plan to do and what happens.

These panels are most feasible when there is already reliable contact information from a previous assessment, and when households can realistically be reached again for follow-up. They work best when the analysis depends on repeated conversations with the same households, especially in cases where intention data already exist and can be built upon through ongoing follow-up.

3.2 When Longitudinal Panels Are Not Appropriate

Longitudinal panels are not a good fit in situations where immediate, population-wide estimates are needed, such as during rapid-onset emergencies. They are also unlikely to work well when no baseline contact information exists, when mobile or internet connectivity is highly unreliable, or when the main objective is to produce statistically representative estimates for a broad population.

In these contexts, cross-sectional surveys or other rapid assessment approaches are usually better suited to providing timely and actionable evidence.

4. Methodology

The longitudinal panel was constructed by building directly on an existing face-to-face baseline survey. Using a prior in-person assessment as the sampling frame was a deliberate design choice, as it allowed the team to collect verified contact information, strengthen data quality, support reliable re-contact over time, and reduce the operational risks associated with initiating a panel from scratch.

4.1 Baseline Sampling Frame

The baseline survey was conducted as part of the REACH/CCCM/UNHCR Assessing Movement Intentions in IDP Sites in Syria assessment, covering internally displaced households across Whole of Syria and Northeastern Syria. This assessment collected detailed information on household demographics, stated movement intentions, perceived barriers and enabling factors, and immediate support needs.

Households interviewed at baseline were asked for consent to be re-contacted and to provide phone contact details. This baseline therefore served not only as an analytical reference point, but also as a practical platform for constructing the longitudinal panel. Leveraging an existing face-to-face baseline prioritized feasibility and continuity, while acknowledging that the panel would be limited to households that were reachable by phone.

4.2 Panel Selection and Stratification

Households eligible for inclusion in the longitudinal panel were randomly selected from the baseline survey, subject to three criteria:

(1) consent to participate in future follow-up interviews,
(2) a stated intention either to remain in their current location or to return to their area of origin, and

(3) provision of a functioning phone number.

To support comparative analysis, the panel was stratified by stated movement intention at baseline, distinguishing between households intending to stay and those intending to return to their area of origin. This stratification enabled focused analysis of intention–action pathways, while also anticipating higher mobility and attrition among households intending to move.

4.3 Attrition and Adaptive Sampling

In displacement settings, households may change location, lose phone access, decline continued participation, or otherwise become unavailable for reasons beyond the control of the study team, leading to inevitable attrition. The panel was therefore designed with attrition in mind from the outset. The initial target sample size was 600 households, split evenly between households intending to stay and those intending to move, and both groups were oversampled to reduce the risk of sample erosion over time.

At the start of data collection, the definition of the "move" group was kept broad and included households intending to move out of Syria, move elsewhere within Syria, or return to their area of origin. As the study progressed and the analytical focus was clarified, the scope was narrowed to concentrate specifically on households intending to return to their place of origin. This required adjusting the sample and drawing additional households from the baseline survey to replace those that no longer fell within the refined scope.

These changes were made early in the process and did not interrupt follow-up with households already participating in the panel. Instead, they highlight the importance of clearly defining scope in longitudinal work and allowing room for early adjustments during pilot implementation.

Follow-up was organised around household-level intervals rather than a strict, synchronised wave schedule. Households therefore moved through their follow-up cycles at different times, depending on when they entered the panel and when they could be reached. While this added some complexity to data management, it better reflected the realities of working with mobile populations and helped maintain continuity of engagement over time.

Overall, the experience underscored a simple lesson: when working with displaced populations, longitudinal studies need to be built with attrition and flexibility in mind from the start. Panels that can adapt early and absorb drop-out are far more likely to remain useful as the study progresses.

5. Questionnaire Design for Longitudinal Phone Panels

In longitudinal studies, households are contacted repeatedly, thus the tool must balance the need for consistent measurement over time with the realities of respondent fatigue, limited attention spans, and changing circumstances.

A key principle in this pilot was keeping the questionnaire short, focused, and largely stable across waves. Phone interviews were designed to be brief and predictable, allowing respondents to quickly understand what was being asked of them each time. This consistency helped build familiarity and trust, which in turn supported continued participation over multiple rounds.

Core questions related to movement intentions, recent movement behaviour, and key contextual changes were repeated in each wave to enable meaningful comparison over time. Maintaining a stable core was essential for tracking changes and identifying intention–action patterns.

Open-ended questions were used sparingly and with clear purpose. While qualitative responses can add valuable context, their use in phone-based longitudinal surveys must be carefully weighed against respondent burden and interview length. In this pilot, open-ended questions were primarily used to clarify reasons behind key decisions, rather than to collect extensive narratives.

To reduce complexity for both respondents and enumerators, the questionnaire avoided logic that depended heavily on wave numbers or previous responses wherever possible. Instead, the tool was designed so that essential questions could be asked consistently at each contact, regardless of the household's position in the follow-up cycle. This approach reduced errors, simplified training, and made it easier to manage follow-up when households entered or progressed through the panel at different times

Managing respondent fatigue was a constant consideration. Question wording was kept simple, repetitive questions were reviewed critically, and interview length was closely monitored. Feedback from enumerators was used to identify questions that felt unnecessary or confusing over time, informing minor refinements to the tool while preserving comparability across waves.

Overall, the experience reinforced that in longitudinal phone-based panels, questionnaire discipline is critical. Tools that are concise, predictable, and focused on a small number of priority indicators are more likely to sustain respondent engagement and produce reliable data over time than longer or overly complex instruments.

6. Field Implementation and Enumerator Protocols

Effective field implementation was central to the success of the longitudinal phone-based panel. Repeated contact with the same households requires not only a well-designed questionnaire, but also clear protocols, well-prepared enumerators, and flexibility in how interviews are conducted.

Enumerator training went beyond familiarisation with the questionnaire. Enumerators were trained on the purpose of longitudinal follow-up, the importance of building rapport over repeated calls, and how to explain the study clearly and consistently at each contact. Emphasis was placed on respectful communication, managing respondent expectations, and recognising when a household preferred not to continue participating.

Clear call attempt protocols guided follow-up. Enumerators were instructed to make multiple call attempts at different times of day before classifying a household as unreachable, while also respecting respondents' availability and stated preferences. Recording preferred contact times and days proved important for improving response rates and reducing repeated missed calls.

Refusals and partial interviews were treated as a normal part of implementation rather than as exceptions. Enumerators were trained to accept refusals without pressure, to pause or stop interviews when respondents expressed discomfort or fatigue, and to record outcomes accurately. This approach reinforced the voluntary nature of participation and helped maintain trust across follow-up rounds.

To support coordination and avoid duplicate contact, an online tracking tool was used throughout data collection. The tracker recorded each household's unique ID, assigned stratum, and follow-up status. After each call attempt, enumerators updated the household's status, ensuring that households were not contacted more than intended and that follow-up was coordinated across the team. This system was essential for managing repeated contact over time and maintaining an orderly and respondent-respectful field process.

7. Data Quality & Tracking Systems

Maintaining data quality across multiple rounds required careful tracking and close coordination between the assessment and data teams. Because the same households were followed over time, systematic follow-up was essential to ensure continuity and accuracy.

At the end of each round, households that successfully completed an interview were carried forward into the next follow-up cycle and scheduled for re-contact at regular two-week intervals. This ensured continuity and maintained the integrity of the longitudinal design.

Drop-out and response patterns were monitored throughout the process. The data team tracked participation rates, refusals, and unreachable households in real time, allowing early identification of potential issues. A limited adjustment to the sample was made during the second round of data collection to maintain sufficient coverage of the target strata. Beyond this early refinement, the core principle remained consistent follow-up of participating households.

A central tracking system supported this process. Each household was assigned a unique identifier linked to its stratum and follow-up status. After every call attempt, enumerators updated the household's status, which prevented duplicate contact and ensured that households were not called more often than intended. This system was essential in maintaining an organised and respondent-respectful follow-up process.

Routine data checks were conducted after each round to review completeness, consistency, and logical coherence across responses. These checks allowed timely cleaning and ensured that data from different rounds could be reliably linked for analysis.

Overall, the experience showed that in longitudinal surveys, data quality relies on disciplined tracking, consistent follow-up, and strong coordination between field and data teams.

8. Retention, Attrition & Panel Stability

Maintaining participation over multiple rounds was a central focus of this longitudinal study. In displacement settings, households may move, lose phone access, decline continued participation, or become unreachable for reasons beyond the control of the study team. Some level of attrition was therefore expected from the outset and monitored closely throughout implementation.

The table below presents the number of households reached at each call wave and the corresponding retention rates between rounds.

Stratum	Wave	Households	Retention	Attrition
Return group	1	317		
Return group	2	289	91%	9%
Return group	3	273	94%	6%
Return group	4	246	90%	10%
Return group	5	246	100%	0%

Return group	6	138	56%	44%
Stay Group	1	404		
Stay Group	2	300	74%	26%
Stay Group	3	291	97%	3%
Stay Group	4	291	100%	0%
Stay Group	5	261	90%	10%
Stay Group	6	250	96%	4%

In the move stratum, retention remained high during the early rounds, with over 90% of households successfully followed up between Waves 1 and 4. By Wave 5, approximately 80% of the original Wave 1 households were still active in the panel. The apparent decline in Wave 6 reflects incomplete data collection rather than full attrition and should therefore be interpreted with caution.

In the stay stratum, the largest drop occurred between Waves 1 and 2, which is typical in longitudinal panels as initial non-response stabilizes. After this early adjustment, participation levels remained relatively steady, with retention rates above 89% in subsequent rounds. By Wave 5, 261 of the original 404 households remained active, representing roughly 65% cumulative retention.

Attrition patterns were not uniform across groups. As anticipated, households intending to move were more likely to exit the panel over time. This reflects the realities of displacement: households planning to relocate are inherently more mobile and harder to track. Rather than viewing this differential attrition as a weakness, it was recognized as an expected feature of studying movement intentions among displaced populations and was accounted for in both the sampling strategy and interpretation of findings.

In the move group, some households that entered the cohort during Round 2 of data collection were not consistently followed up in Wave 6 due to a coordination gap. As a result, a small number of households did not complete the full sequence of planned follow-up interviews. Data from households that participated in earlier rounds but later dropped out were retained. This allowed the study to capture partial trajectories and reduced the risk of bias that can arise when analysis focuses only on the most stable participants.

Several practical measures contributed to panel stability. These included collecting preferred contact times, making repeated call attempts at different times of day, keeping interviews concise, and clearly communicating the purpose of repeated follow-up. A central tracking system ensured coordinated contact and reduced unnecessary duplication.

Overall, the experience confirms that while attrition cannot be eliminated in longitudinal research with displaced populations, it can be anticipated and managed. Findings from this pilot suggest that panels designed with realistic retention expectations, built-in buffers, and flexible follow-up procedures can remain analytically robust, even in dynamic contexts.

9. Testing Additional Modules: Sentiment Analysis

9.1 Rationale for Including Sentiment

The sentiment module was introduced to explore whether asking households how they felt about their decisions would provide additional insight beyond simply asking what they intended to do. While intention questions capture stated plans, they do not necessarily reflect how firmly those plans are held or how households interpret their own circumstances.

To better understand this dimension, open-ended questions were included to capture how households framed their decisions in their own words. The objective was to assess whether emotional tone, perceived urgency, or level of confidence could help explain why some households acted on their intentions while others did not.

Four dimensions were explored:

(1) Confidence in the stated decision
(2) Urgency associated with the movement decision
(3) Satisfaction with the decision made
(4) Forward-looking perception of the decision

9.2 Implementation

Open-ended responses were collected alongside structured questions during each phone interview. Responses were cleaned and thematically coded in R using a structured keyword-based approach. Themes were developed gradually and refined as patterns became clearer.

The final themes included:

- Security and safety
- Housing and shelter conditions
- Livelihood and financial constraints
- Return aspiration
- Waiting or postponement
- Emotional distress
- Seasonal vulnerability (particularly winter-related hardship)
- Constraint framing (for example, “no choice” or “no alternative”)

9.3 Findings and Implications

Several clear patterns emerged from the sentiment analysis. To begin with, responses were far more practical than emotional. Households rarely spoke in terms of fear, anxiety, or emotional distress. Instead, they focused on housing conditions, financial constraints, and the feasibility of moving. The text analysis revealed that responses were largely framed around structural constraints and feasibility rather than emotional experience.

Return aspirations were widespread across both groups. Many households expressed a desire to return, regardless of whether they ultimately moved. This reinforces an important distinction between aspiration and feasibility: wanting to return does not necessarily mean being able to do so.

Across all waves and themes, housing consistently emerged as central. Shelter feasibility appeared to shape movement outcomes more strongly than emotional orientation. In this sense, the sentiment module reinforced the structural nature of displacement decision-making.

From an implementation perspective, open-ended sentiment questions were feasible to include in a longitudinal phone panel. Enumerators were able to administer them without significantly extending interview time, and respondents generally provided brief explanations. However, responses were often concise and pragmatic, requiring careful and iterative thematic coding. Language patterns also shifted across waves, influenced by seasonal pressures and contextual changes, highlighting the need for flexible coding approaches rather than fixed categories.

Overall, the module provided useful qualitative context, particularly in clarifying that immobility is largely constraint-driven rather than preference-driven. At the same time, findings from this pilot suggest that structural conditions weighed more heavily than emotional tone in shaping realised movement. These lessons suggest that qualitative probes can be valuable when carefully targeted.

10. Key Methodological Lessons

The following methodological lessons draw on the design and implementation of the assessment. They reflect both analytical findings and operational experience across successive data-collection rounds. Together, these lessons highlight the limits of intention-based indicators, the importance of anticipating mobility-related attrition, and the critical role of early design choices, tracking systems, and adaptive implementation in sustaining longitudinal integrity over time.

- Stated intentions only partially predict subsequent movement behaviour. Intentions are informative, but they are not deterministic.
- Structural and contextual constraints appear to shape movement decisions more strongly than attitudinal indicators captured through short phone interviews.
- Longitudinal phone-based panels are operationally feasible in displacement settings when strong contact management and tracking systems are in place.
- Early rounds typically experience the largest drop in participation. Retention stabilises once the panel adjusts.
- Differential attrition between mobile and stable groups should be expected and incorporated into sampling design from the outset.
- Oversampling higher-mobility groups helps preserve analytical capacity over time.
- Questionnaire discipline is critical. Short, repeatable tools sustain participation more effectively than complex or evolving instruments.
- Clear scope definition at the outset reduces the need for early sampling adjustments.
- Tracking systems are as important as questionnaire design in maintaining longitudinal integrity.
- Flexibility during early implementation is not a weakness; it is necessary in volatile contexts.

11. Limitations

The following limitations should be considered when interpreting the findings and lessons from this pilot:

- **Phone-based coverage only.** The panel included only households with functioning phone numbers and prior participation in a face-to-face baseline assessment. Households without reliable mobile access were excluded, which may limit generalisability.
- **Attrition over time.** Participation declined across waves, particularly among households intending to move. While anticipated and managed through oversampling and monitoring, differential dropout may influence later-wave comparisons.
- **Self-reported data.** Movement intentions, behaviour, and reasons for movement were self-reported. Although repeated follow-up reduces recall bias, responses remain subject to reporting bias and evolving personal circumstances.
- **Short observation window.** The follow-up period was relatively limited. Displacement decisions often unfold over longer time horizons, and longer-term tracking may produce different insights.
- **Incomplete final-wave follow-up.** In the move stratum, follow-up in Wave 6 was not fully completed, affecting final-wave participation counts. Findings from earlier waves are more stable and should be prioritised in interpretation.

These limitations do not negate the value of the pilot but should inform interpretation and future design decisions.

12. Recommendations & Next Steps

12.1 Recommendations for Future Longitudinal Surveys

Based on the experience of this pilot, the following recommendations are proposed for future longitudinal monitoring initiatives in displacement contexts:

- **Define analytical scope clearly at the outset.** Early clarity on target groups, definitions, and intended comparisons reduces the need for mid-course sampling adjustments and preserves analytical consistency.
- **Finalise operational definitions before sampling begins.** Key categories such as "intending to move" should be precisely defined prior to panel selection to avoid early reconfiguration of the cohort.
- **Design with attrition in mind from the beginning.** Oversample higher-mobility groups and build realistic retention expectations into sample size planning.
- **Establish clear entry and follow-up procedures.** Where households join the cohort at different stages, tracking systems must ensure consistent follow-up across subsequent waves.
- **Prioritise short, stable questionnaires.** Longitudinal phone panels benefit from concise tools with a consistent core module repeated across waves.

- **Limit questionnaire evolution over time.** Frequent changes to the tool complicate longitudinal comparison and increase respondent fatigue.
- **Align follow-up intervals with realistic decision cycles.** The timing of repeated calls should reflect how quickly displacement intentions are likely to change, balancing responsiveness with respondent burden.
- **Invest early in tracking systems.** Unique household identifiers, real-time status updates, and coordinated call management are essential to maintaining panel integrity.
- **Monitor retention continuously.** Early waves typically experience the largest drop in participation. Close monitoring allows timely adjustments before analytical capacity is reduced.
- **Allocate sufficient operational resources.** Longitudinal panels require sustained coordination, supervision, and data management beyond what is typical for cross-sectional surveys.
- **Build flexibility into implementation.** In volatile settings, early refinements are often necessary. Flexibility should be planned for, while maintaining core methodological discipline.

12.2 Recommendations for Coordination and Monitoring Systems

At a broader level, longitudinal phone-based panels should be positioned strategically within displacement monitoring systems:

- **Use longitudinal panels as complements, not replacements.** They provide insight into intention–action dynamics but do not substitute for population-level prevalence estimates generated through cross-sectional surveys.
- **Leverage existing baseline datasets.** Longitudinal follow-up is most efficient and feasible when built on verified contact information collected through prior face-to-face assessments.
- **Deploy panels where behavioural insight is needed.** Longitudinal approaches are particularly valuable for understanding transitions, stability, and intention–action gaps over time.
- **Align panel outputs with operational decision-making cycles.** Findings are most useful when linked to return programming, protection monitoring, camp management planning, or anticipatory response strategies.
- **Treat longitudinal monitoring as a strategic investment.** When well-designed, panels provide deeper behavioural insight that strengthens adaptive programming and evidence-based planning.
- **Maintain realistic expectations.** Longitudinal panels enhance understanding of displacement dynamics but cannot fully predict movement or isolate all structural drivers.
- **Document and institutionalise lessons learned.** Future scale-up should incorporate documented operational refinements and methodological adjustments identified during pilot implementation.

13. Ethical Considerations

Ethical safeguards were integrated throughout the design and implementation of the longitudinal panel to ensure that participation remained voluntary, safe, and respectful.

- **Informed Consent:** Consent was obtained during the baseline assessment, with clear communication regarding the purpose of the study, the nature of repeated follow-up, and the voluntary nature of participation. At each subsequent contact, respondents were reminded that they could decline or discontinue participation at any time without consequence.
- **Safeguarding:** Enumerators received training on conducting interviews sensitively, recognising signs of discomfort, and responding appropriately to distress. Interviews were paused or terminated when necessary, and respondents were not pressured to answer any question.
- **Data Privacy and Security:** Personally identifiable information was stored separately from analytical datasets and protected through secure systems. Access to identifiable data was restricted to authorised personnel, and analysis was conducted using anonymised records.
- **Do No Harm:** The questionnaire was intentionally kept concise to minimise respondent burden. Calls were scheduled flexibly based on respondent availability, and follow-up protocols were designed to prevent excessive or unintended contact.

14. Conclusion

This pilot demonstrates that longitudinal phone-based panels are both operationally feasible and analytically valuable in displacement settings when designed and implemented with care. Repeated follow-up with the same households provides insight into intention–action dynamics that cannot be captured through cross-sectional surveys alone.

At the same time, longitudinal monitoring introduces complexity. Attrition, mobility, coordination demands, and contextual volatility must be anticipated and managed from the outset. Clear scope definition, disciplined tracking systems, and concise tools are essential to maintaining analytical integrity over time.

Longitudinal panels should not replace broader monitoring systems, but when strategically integrated, they offer a complementary layer of behavioural insight that can strengthen adaptive programming and planning in dynamic contexts.

The experience of this pilot underscores that while displacement decisions are shaped by uncertainty and structural constraints, systematic follow-up can meaningfully enhance understanding of how intentions evolve and translate into action.