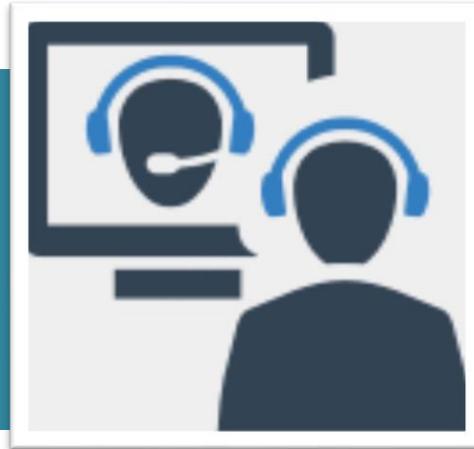


# National Core Indicators<sup>®</sup>

## Remote Survey Pilot Study

### Summary Results

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*The National Core Indicators<sup>®</sup> (NCI<sup>®</sup>) is a joint project between the National Association of State Directors of Developmental Disabilities Services, the Human Services Research Institute, and state-level developmental disabilities authorities. Launched in 1997, NCI gives states valid and reliable tools to help improve system performance and better serve people with intellectual and developmental disabilities and their families.*

## Summary

Due to the COVID-19 global pandemic, declaration of a national public health emergency, and need to avoid in-person contact, NCI states had to prematurely end the 2019-2020 data collection cycle for the NCI In-Person Survey. Anticipating continued challenges to direct-contact data collection in future cycles, NCI expanded an ongoing pilot study to assess the feasibility of administering the survey through videoconference. Study results summarized in this brief report are based on 226 remote surveys conducted from May through July 2020 in seven states that volunteered to participate. For comparison, these states also contributed data from a total of 1,806 direct-contact surveys conducted prior to the public health emergency.

To determine whether remote surveying results are comparable to those from direct-contact surveys, we compared characteristics and responses of participants who took part in the remote survey to those who participated in the direct-contact surveys. The analysis revealed few differences between the two groups: they were similar in demographic characteristics, extent of disability, capacity for verbal communication, proxy use, and type of community (i.e., level of rurality). The few statistically significant differences indicate that remote participants were more likely to be physically active, to have a legal guardian, and to have higher scores on a scale that measures the level of personal choice, and they were less likely to have a behavioral challenge. Even among the factors that showed statistically significant differences between the two groups, the differences were relatively small; their effects on the comparability of the two modes do not pose serious threats to the reliability of remote surveys.

The similarity between the participants of remote and direct-contact surveys and their responses to the survey questions suggest that, with continued care and attention to surveyor training, revised protocols,

and working to ensure access to remote technology for all those who want to participate, remote surveys are feasible and reliable. We recommend moving forward with the use of the videoconference survey option for the 2020-21 cycle.

## Introduction

An NCI Remote Survey Pilot began in Alaska at the beginning of the 2019-20 In-Person Survey (IPS) cycle. Due to the state's low population density, it was anticipated that some people selected into the sample had such isolated residences that videoconference would be the only available option for them to participate in the survey. NCI worked with Alaska to develop protocols and revise surveyor training to guide the use of videoconference technology for remote surveying. The goal of the Alaska pilot was to examine the results of surveys conducted remotely to assess their comparability to direct-contact survey results. Similarity between the results of these two survey modes would demonstrate the feasibility and reliability of the remote mode for future NCI IPS cycles.

Due to the COVID-19 global pandemic, the declaration of a public health emergency, and the need to avoid in-person contact, NCI state members were compelled to prematurely end the 2019-2020 Data Collection Cycle for the NCI IPS. At that time, there was little information about the future course of the pandemic; however, there was a real chance that states would continue to experience challenges with direct-contact surveying during future IPS cycles. To enable states to continue collecting information from those receiving services, NCI expanded the remote survey pilot to further test the feasibility of this mode, as part of an NCI quality improvement initiative. The results of the expanded pilot summarized in this brief are currently being used to refine the protocol and identify best practices for future remote surveying.

The results summarized in this brief are based on data from the seven states that participated in the expanded pilot: Alaska, Colorado, Minnesota, Oregon, Pennsylvania, Utah, and Vermont.<sup>a</sup> The remote pilot survey tool included selected questions from the standard IPS tool, context-building questions, questions to surveyors and participants about their experiences with the remote mode, and questions about the specific technologies used to administer and participate in the survey and challenges encountered.

This pilot study was guided by the following questions:

- What were the experiences of surveyors and survey participants with the remote mode?
- What were the technical challenges encountered and in what ways were they dependent on the technologies utilized?
- Did the participants in the remote survey differ significantly from in-person survey respondents in factors that are likely to impact the representativeness of the data?
- Were there mode differences in the responses to survey questions beyond what would be expected from the surveys' margins of error? For example, did people responding via videoconference respond differently to specific questions when compared to those who responded via direct contact?
- In what ways can the mode differences be minimized by refining the protocols (e.g., advance system check sessions to ensure that both the surveyor and person being surveyed have functioning devices; the implementation of standard troubleshooting protocols when internet connection is interrupted) and surveyor trainings (e.g.,

<sup>a</sup> Kentucky participated in the initial phase of protocol development and training although they did not conduct remote surveys during this cycle.

strategies for setting up and controlling the survey environment, establishing rapport, and maintaining focus during videoconferencing).

One factor that inevitably affected the results of this study is the pandemic itself: all direct-contact IPS data were collected prior to it and all pilot remote surveys were administered in the midst of it (May through July 2020). Given the pandemic's impact on all aspects of daily life for everyone, there is likely to be a "pandemic effect" in the observed differences between the two modes. For example, the surveys collected using videoconference during the pandemic would be expected to report heightened feelings of isolation and higher need for mental health supports due to the pandemic.

It is impossible to fully distinguish between the "mode effect" (the effect of administering remote vs. direct-contact surveys) from the "pandemic effect" in the differences that may be observed between the results of the two samples, given the timing of the two survey efforts. However, a few questions about the impact of the pandemic on the participant were added to the remote survey instrument to gauge whether any of the observed differences in responses between the surveys collected remotely and those collected via direct contact could be explained by the extent to which the participant's life was impacted by the pandemic. The responses to one of these questions varied the most across participants and provided the clearest insight into the nature of the "pandemic effect": *Since the coronavirus, have there been times when there weren't enough people to support and help you? (this could be staff and/or family)*. The analysis included investigating how responses to this question lined up with the factors that differed between the two modes; this shed some light on the "pandemic effect."

## Methods

### Remote Survey Administration

The NCI team developed detailed protocols for survey administration. The team also developed detailed training content, a *Remote Survey Guidebook*, a user-friendly communication explaining the survey to participants (a "What to Expect" document), templates for surveyors to use for email and text communication with potential survey participants, a flier for proxies/interpreters, and suggested scripts. The team also developed technical assistance documents such as videoconference (Zoom) FAQs and troubleshooting recommendations for surveyors.

To the extent possible, participating states selected remote survey participants using a process comparable to the one they used for their 2019-20 direct-contact IPS prior to the pandemic. In most cases, this involved using the sample that was pulled prior to the public health emergency and contacting sampled individuals who had not yet been surveyed. The *Remote Survey Guidebook* recommended a three-step contact with participants: (1) an initial telephone call to obtain informed consent (consent process varied by state); (2) a brief system check session to test the remote technology to be used for the survey; and (3) the actual survey. The initial guidance was for these three steps to occur on different days; however, NCI revised this requirement based on surveyor and participant feedback to allow the survey to immediately follow the system check. The Guidebook also recommended that the surveyor, participant, and the participant's proxy/assistant(s) (if any) remain visible to each other throughout the survey. Most states used HIPAA-compliant Zoom as their virtual meeting platform, though a few states opted to use other platforms such as HIPAA-compliant WebEx or their own proprietary platforms. Data collected during the system check and the actual survey were entered into NCI's online data-entry portal, ODESA. For individuals who were contacted but not surveyed, the reason for non-participation was also entered into ODESA and analyzed to assess the extent to

which lack of participation was due to technical barriers. Wherever possible, mode differences in reasons for non-participation were also compared.

## Data Analysis

The remote survey data extracted from ODESA were cleaned and processed with the same protocols used in preparing direct-contact IPS data for analysis. Each participating state's remote survey data were then merged with the IPS data collected prior to the shutdown to allow for comparison between the two modes (direct-contact vs. remote). State-specific data were then merged into a single analytic dataset.

For measures that were only included in the remote surveys, such as those related to technical factors and feedback from participants and surveyors, distributional analysis was conducted to investigate overall averages and the minimum and maximum state-level values. We then compared these numbers between the remote and direct-contact samples.

Measures that were present in both the remote and direct-contact surveys, such as participant characteristics and responses to survey questions, were compared and the observed differences between the two modes were tested for statistical significance with either Chi-Square tests or t-tests, depending on the measurement type. These tests determine whether the differences were within the normal margins of error to be expected in all surveys, or whether they indicated mode differences beyond those margins. Differences with an associated p-value smaller than 0.05 were considered significant (i.e., beyond what would normally be expected in comparing two surveys from the same population).

Many of the measures compared between the two modes were correlated with each other. Regression-based multivariate models were used to isolate the net effects of correlated measures.

## Analysis Results

### The Sample

In total, 810 individuals were contacted for the remote survey and 226 surveys were conducted from May through July 2020, yielding an overall response rate of 27.9% (minimum: one state had a 17.0% response rate; maximum: one state had a 35.4% response rate). The most frequently reported reason for nonparticipation was inability to establish contact with the person (49.7%), either due to incorrect contact information or some other reason. Technology-related barriers (e.g., no access to the internet, no access to a computer or smartphone, etc.) were cited as the reason in 7.8% of the nonresponse cases, and participant or guardian refusal was the reported reason in 7.2% of the cases.

A total of 1,806 direct-contact surveys collected in the participating states before the public health emergency were available for analysis; all were included as potential comparison data. It should be noted, however, that based on the results of data validation/cleaning, some remote and direct-contact cases had to be excluded from some of the analyses. A typical reason for a response being eliminated during data validation was a surveyor note indicating that the respondent could not provide valid responses or that only demographic information was collected.

## Technical and System-Related Factors

Surveyors were required to use a computer, laptop or tablet; they were instructed to avoid conducting the videoconference on a smartphone. Participants, however, could use any device they had available, including smartphones. Participants used either a desktop or laptop computer in 53% of the remote surveys; 33% used a tablet; and 14% responded via smartphone with a video component. In 47% of the cases, the internet access was established through the participant's own or family home; in 40% of the cases, internet access was through an account owned by a provider or managed home. In the remaining 6% of the surveys, a paid support worker's data plan was used for the internet connection. A total of 78% of participants had assistance to log on to the videoconference—such as through a support person or family member who was able to follow the steps to log in to the videoconference on the participant's behalf. In 87% of the surveys, the internet was stable throughout. Audio functioned without interruption in 94% of surveys. A total of 89% of the surveyors reported being able to see the participant clearly throughout the survey.

## Participant and Surveyor Feedback

More than half of the participants (61%) indicated they had prior experience with videoconferencing. A total of 81% said that it was “easy” to get on to the videoconferencing platform, but 68% reported that they needed support in logging on. Over three-quarters of participants (78%) were able to both see and hear the surveyor throughout. Few participants reported trouble seeing (9%) or hearing (18%) the surveyor, and 12% reported distractions during at least some of the questions. Only 7% indicated that some things could have been done to make the survey better.

On the whole, surveyor feedback was also favorable:

- 95% reported that no issues were revealed during the survey that they needed to follow up with.
- 79% said they had no trouble with Zoom and the same percentage (79%) said the participant required no technical assistance from them.
- Only a fifth of the surveyors (21%) reported technological issues that made it difficult to conduct the survey.
- 71% indicated they could both hear and see the participant throughout the survey.
- 92% felt comfortable asking questions and recording responses in the remote mode.
- 88% thought that the participant felt comfortable answering the questions.
- 63% felt that all things considered, remote surveying was as effective as meeting in person.
- 91% reported that they were able to build rapport with the participant.
- 80% said the participant had no difficulty paying attention to the survey.

One area where surveyors may have experienced barriers was in picking up nonverbal cues from participants. Only a third (32%) of surveyors said they noticed nonverbal cues for at least some questions. However, in the absence of comparison data on nonverbal cues in direct-contact surveys, it is not possible to gauge the extent to which this low percentage is attributable to the limitations of remote surveys.

Although some audio and/or video issues were reported by some participants and surveyors, surveyor feedback suggests that they were successfully resolved, and the survey resumed. All surveyors reported that either the audio functioned throughout, or issues were successfully fixed, and 92% of surveyors indicated that either the internet was stable throughout or the “dropped call procedure” outlined in the *Guidebook* was successfully implemented.

## “Simple” (Bivariate) Comparison of Participant Characteristics and Responses

The central question of this pilot study was whether the participants in the remote survey differ systematically from those who participated in the direct-contact survey. Stated differently, we investigated whether the remote survey mode would reach a different population and/or produce different results compared to direct-contact surveying? The NCI team tested the difference between direct-contact and remote modes for factors that would be expected to correlate with survey mode. Results of the statistical tests are summarized below. In interpreting these results, it is important to keep in mind that all direct-contact surveys were conducted prior to the pandemic and all remote surveys occurred during the pandemic. Although we made a best effort to identify some of this “pandemic effect,” it was not possible to fully distinguish mode differences from the impact of the pandemic on responses to the survey questions.

### Factors that *did not* differ by survey mode:

- Community type (metropolitan, micropolitan, small town, rural)
- Gender
- Race
- Preferred mode of communication (spoken vs. non-spoken)
- Level of ID (mild/moderate vs. severe/profound)
- Presence of a mental illness diagnosis (other than behavioral challenges)
- Mobility (full, with wheelchair/aid, none)
- Vision impairment
- Hearing impairment
- Extent of need for paid support (daily vs. less frequent than daily)
- Extent of proxy use in responding to questions

### Factors that differed by survey mode ( $p < 0.05$ )

	Direct contact	Remote
Average age	41.9	39.4
Has a legal guardian	44.1%	56.7%
Primary language is English	98.6%	94.6%
Has behavioral challenges (e.g., aggression, self-injury)	35.1%	23.7%
Average level of behavioral support needs, measured on a scale of 0 to 9*	1.3	1.6
Lives in own home/apartment	14.1%	8.0%
“Sometimes” or “often feels lonely	39.7%	47.8%
Average score on the Personal Choice Summary Measure†; range = 0 to 1	0.56	0.62
Self-reported health is “very good” or “excellent”	66.5%	72.3%
Engages in moderate physical activity for at least 10 min. 5+ times a week	32.8%	52.5%

\*Level of behavioral health needs scale: 0 = no support in any of the three areas; 9 = extensive support in all three areas; areas of support need included behaviors that are (a) self-injurious, (b) disruptive, (c) destructive or harmful to others.

†This measure was developed specifically for this pilot study and differs from the *Life Choices Scale* referenced in other NCI reports. Score for Personal Choice Summary Measure: 0 = did not provide the highest possible personal choice response on any of the 6 items; 1 = provided the highest possible personal choice response on all 6 items.

## Multivariate Comparisons to Identify Net Effects and “Driving Factors”

Some of the factors that significantly differ between remote and in-person modes are correlated with each other. Multivariate analysis was conducted to explore what happens to the mode difference in a given factor when we control for (i.e., hold constant) other factors that correlate with it. The results of this analysis sheds light on which of the intercorrelated factors is the “driving factor” in the difference observed between the two samples.

For example, physical activity, health status, and age are correlated with each other and were all noted to be significantly different for the population reached with direct-contact surveying and that reached by remote surveying. This part of the analysis aimed to investigate which of these is the “driving factor” responsible for the differences between the two populations that we are observing. Is it the case that physically active people are more likely to participate in the remote survey *because they are physically active* and it just so happens that those are also the healthier people? Or is it that healthier people are more likely to participate in the remote survey *because they are healthier* and they also happen to be more physically active? Or, is it that younger people are more likely to participate and they also happen to be healthier and more physically active? Making this distinction is important for successful participant recruitment and effective protocol and training development in future survey cycles that include the remote surveying option.

In this group of three correlated factors, analysis results indicated that physical activity is the driving force behind the mode differences. That is, people who are physically more active were more likely to participate in the remote survey. The fact that they were also younger and healthier were secondary factors.

A similar analysis was conducted to further investigate why remote participants were more likely to have a legal guardian and less likely to live in their own home compared to direct-contact participants; as in the previous example, these two factors correlate with each other. The results of that analysis suggest that between those two factors, having a guardian is the driving force behind the mode difference. In fact, the guardian difference emerged from this analysis as a consistent driving factor. That is, having a legal guardian appears to facilitate participation in the remote survey. The level of personal choice (The Personal Choice Summary Measure described under the above table) is another mode difference that could not be explained away by other correlated factors and emerged as a consistent driving factor.

One seemingly counterintuitive result is that remote survey participants are less likely to have a behavioral challenge but at the same time have higher behavioral support needs. Further investigation revealed that the higher need for behavioral supports may be a pandemic effect. There is a high correlation between high need for these supports and an affirmative response to the question, *Since the coronavirus, have there been times when there weren't enough people to support and help you?* It is quite possible that the pandemic increased the need for behavioral supports, although the data do not allow a rigorous statistical test of this hypothesis.

Another factor that was highly correlated with the “pandemic effect” question described in the above paragraph is feelings of loneliness. Those who responded in the affirmative to this “pandemic question” were also significantly more likely to report feeling lonely. This suggests that the higher proportion of lonely respondents in the remote sample may be due to the fact that all remote surveys were conducted during the pandemic.

## Discussion

Results of the study indicate that relatively few technical challenges were experienced during the remote surveys, and the experiences of both the surveyors and participants were, on the whole, favorable.

Comparisons of the participants who responded to the remote vs. direct-contact surveys revealed few differences. The two samples were similar in demographic characteristics, extent of disability, capacity for verbal communication, proxy use, and type of community (i.e., level of rurality). The few statistically significant differences indicate that remote participants were more likely to be physically active; to have a legal guardian; to have higher scores in the Personal Choice Summary Measure; and were less likely to have a behavioral challenge. Even among the factors that showed significant mode differences, the differences were relatively small; their effects on the comparability of the two modes do not pose serious threats to the reliability of remote surveys.

The results of this pilot study suggest that—with continued attention to surveyor training, protocols, and working to ensure access to the technology for all those who want to participate—remote surveys are feasible and will provide useful information comparable to direct-contact surveys. We recommend moving forward with the use of the videoconference survey option for the 2020-21 cycle.

As further multi-mode survey data become available in the future, NCI will continue to conduct analyses comparing the two modes and to report on the results and will continue to revise protocols, training and resources according the results of ongoing analysis.

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## Questions? Comments? Contact Us

For additional information on the National Core Indicators (NCI) initiative please visit the [National Core Indicators website](#).

We welcome your feedback and questions. If you want to discuss this report or have questions about the NCI project, please contact Dorothy Hiersteiner, Assistant Director of NCI, at [dhiersteiner@hsri.org](mailto:dhiersteiner@hsri.org)