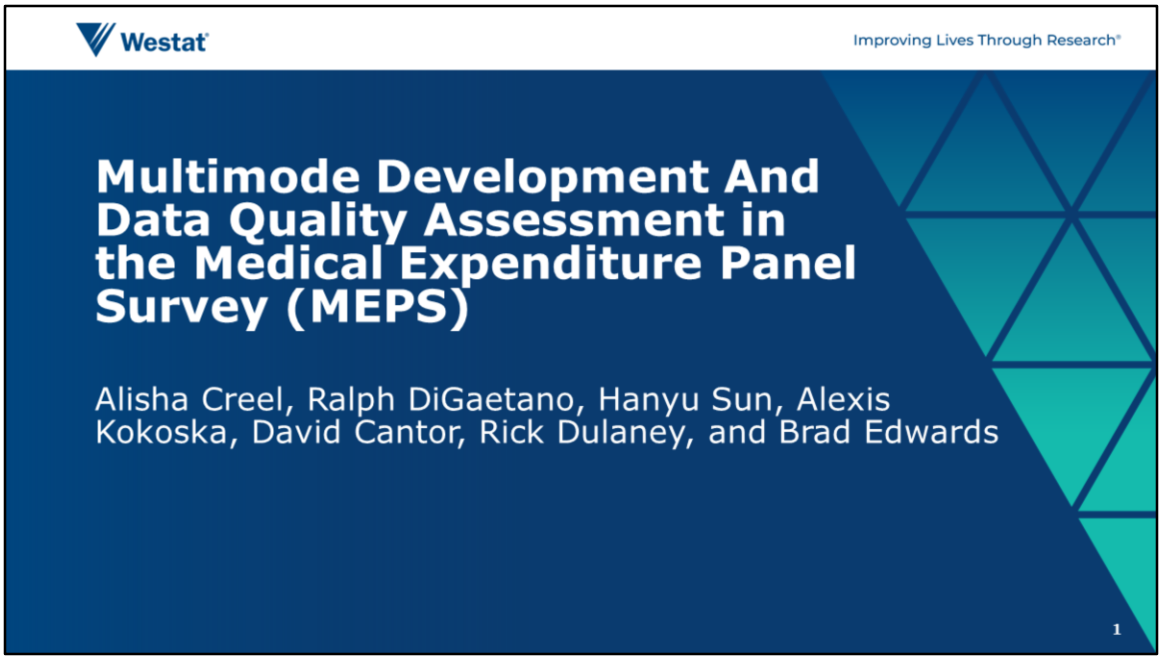
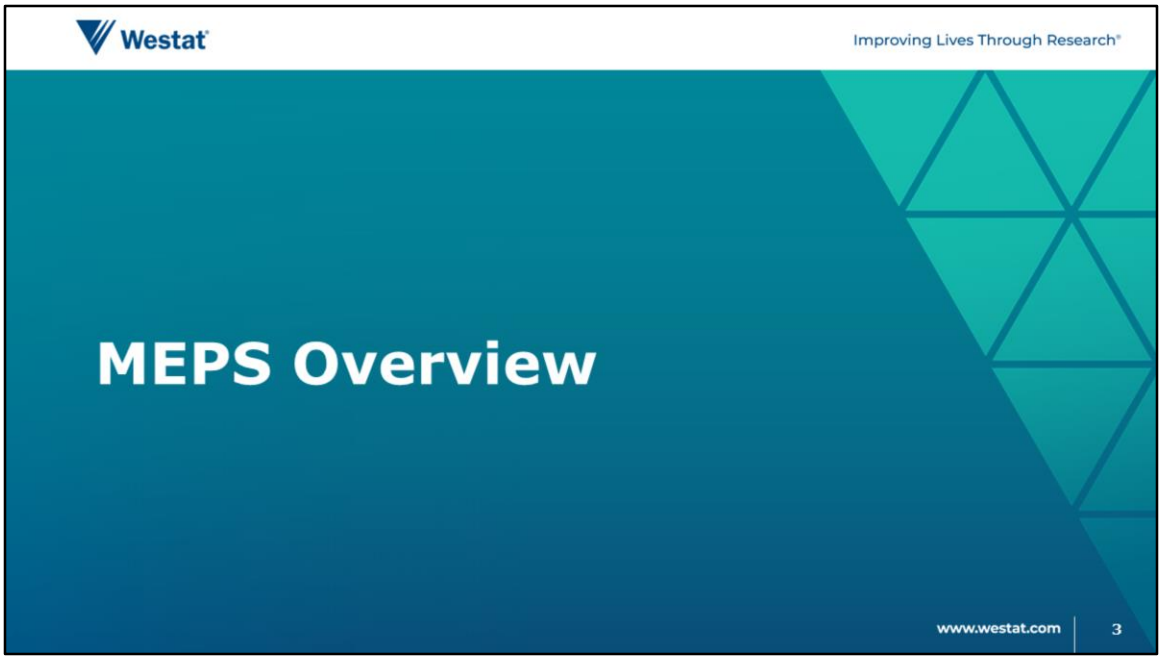


Hello everyone. Today I'm going to talk about multimode development and data quality assessment in the household component of the Medical Expenditure Panel Survey, or MEPS. Thanks to my co-authors Ralph, Hanyu, Alexis, and David, and the project directors Rick and Brad.

Disclaimer

The statements in this presentation are those of the presenter and do not necessarily represent the views of the Agency for Healthcare Research and Quality (AHRQ) or the Department of Health and Human Services (DHHS).

Our standard disclaimer that the statements in this presentation are our own and do not represent the views of AHRQ or DHHS.



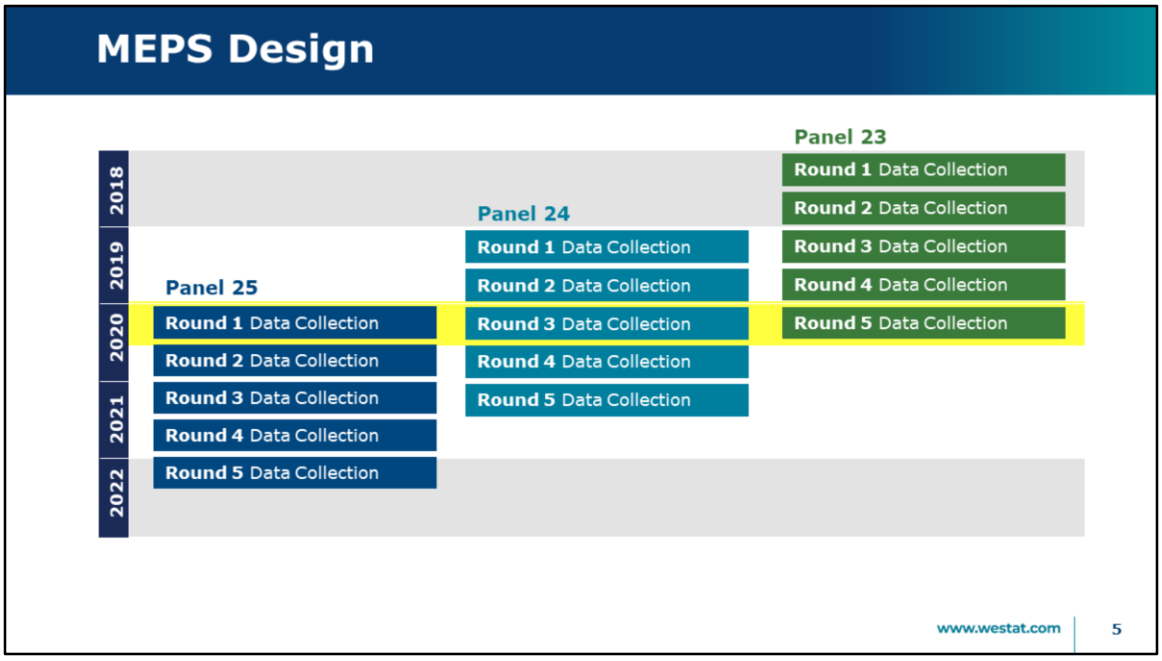
First let me give you an overview of MEPS.

Introduction to MEPS

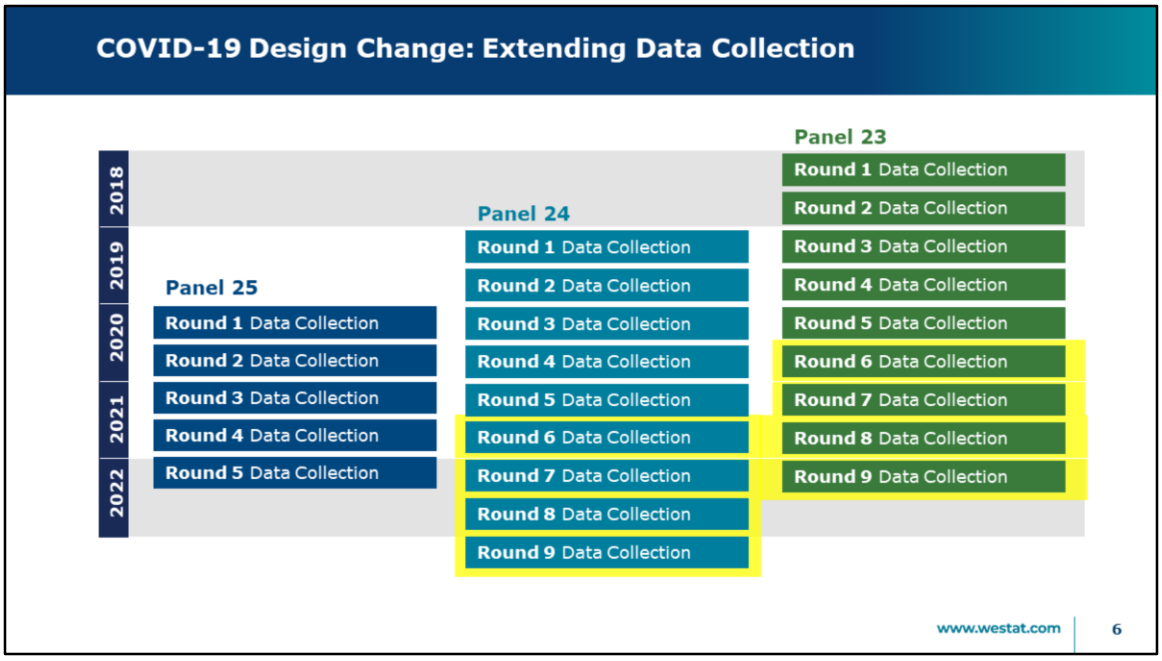
Sponsored by Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services

- The primary source for annual estimates of health care use and costs, health insurance coverage for civilian U.S. population
- Data inform Congress and other Federal agencies within and outside of HHS, and thousands of health services researchers have used MEPS to understand the evolving healthcare landscape
- Continuous data collection since 1996

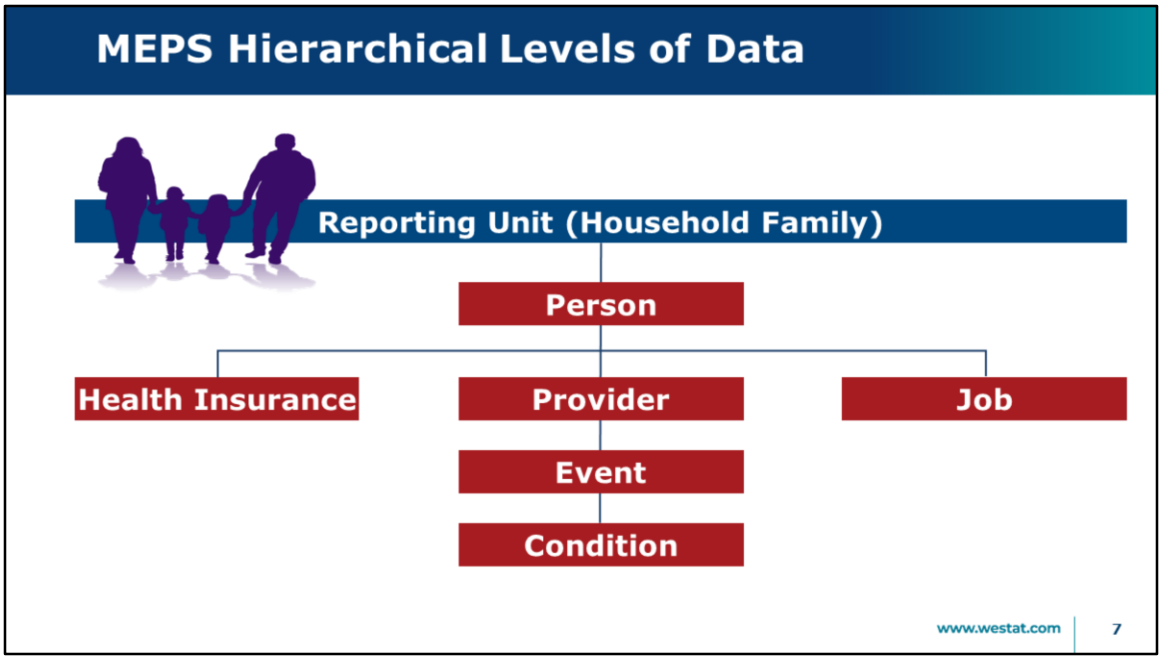
MEPS is the gold standard for data on health care use and costs and health insurance coverage in the United States. Westat has worked with the client, the Agency for Healthcare Research and Quality or AHRQ, since 1996 to conduct MEPS. The data help inform Congress, HHS and other agencies; and thousands of researchers use MEPS public use files to answer a wide variety of research questions.



MEPS has a unique overlapping panel design. MEPS fields a new panel of approximately 10,000 households each year, and in normal times interviews those households over two and a half years to capture two calendar years of data. We conduct interviews, primarily in person, in the spring and fall of each year, so Rounds 1 and 2 of each panel are in the first year, Rounds 3 and 4 in the second year, and then we have a fifth interview the following spring that collects the remaining information about the end of that second year.



Because we foresaw that the COVID-19 pandemic might impact our response rates, we asked Panels 23 and 24 to continue on for two additional years so we could ensure a good sample size in the data files for 2020 and beyond. This was a huge change for MEPS: we had never had more than 5 rounds for any panel and now we have 9 for these two panels.

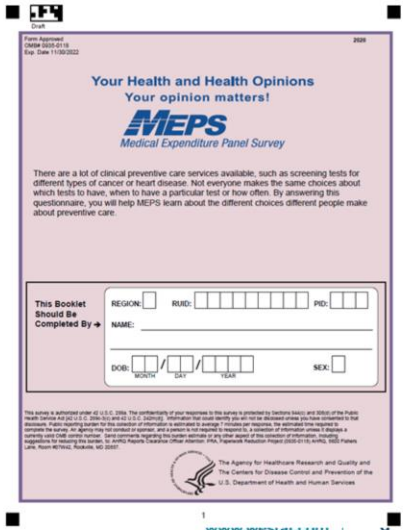


The interview itself is complex and comprehensive, with data existing at many different levels as you see here. Within the household reporting unit there can be multiple people and each can report multiple jobs, health insurance plans, medical providers, medical events, and health conditions. Some of these are nested, but there are also many-to-many relationships, such as between conditions, events and providers.

That was a super high level overview of MEPS. Now I'll talk about multimode development on MEPS, which has been accelerated by the COVID-19 pandemic. I'll intersperse some findings of a data quality assessment we did of the COVID-related changes we made to MEPS in 2020.

MEPS Modes Pre-COVID-19 Pandemic

- Mostly in person survey with some telephone interviews (5-8%)
- Paper self-administered questionnaires (SAQs) and medical provider authorization forms
- Started planning for a multimode web/paper SAQ on social determinants of health in early 2020 to be fielded in 2021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2020

Your Health and Health Opinions
Your opinion matters!

MEPS
Medical Expenditure Panel Survey

There are a lot of clinical preventive care services available, such as screening tests for different types of cancer or heart disease. Not everyone makes the same choices about which tests to have, when to have a particular test or how often. By answering this questionnaire, you will help MEPS learn about the different choices different people make about preventive care.

This Booklet Should Be Completed By →

REGION: RUID: PID:

NAME:

DOB: / / SEX:
MONTH DAY YEAR

This survey is authorized under 42 U.S.C. 299a. The confidentiality of your responses to this survey is protected by Sections 944(c) and 308(d) of the Public Health Service Act [42 U.S.C. 299c-3(c) and 42 U.S.C. 242m(d)]. Information that could identify you will not be disclosed unless you have consented to that disclosure. Public reporting burden for this collection of information is estimated to average 7 minutes per response, the estimated time required to complete this CAPI survey. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to AHRQ Reports Clearance Officer Attention: PRA, Paperwork Reduction Project (0935-0110), AHRQ, 5600 Fishers Lane, Room 06D34A2, Rockville, MD 20857.

The Agency for Healthcare Research and Quality and The Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services

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Before the COVID-19 pandemic, the core MEPS interview was done almost entirely in person. Every year we did some telephone interviews, mostly with students off at college and for Round 5 interviews where the reference period is pretty short and we have experienced respondents. The percent of interviews done by phone ranged from about 5-8% depending on the round.

MEPS also uses paper in two main ways. Generally a single household respondent reports for the whole household in the core interview. MEPS has regular self administered questionnaires or SAQs to capture additional health related information from every individual adult in the household. These have been paper forms that the interviewer distributes while they are in the home for the in person interview. We also ask MEPS respondents to give permission to contact their medical providers to get more detailed and accurate information about their medical expenditures. These authorization forms have been entirely on paper through 2021.

Just before the COVID-19 pandemic, we started planning for a multimode SAQ on social determinants of health to be fielded in 2021. Because some of the questions were sensitive, we felt a web option would give respondents the most privacy when completing the questionnaire. So we planned for the first push-to-web SAQ in the history of MEPS.

Switch to Telephone During COVID-19

- Rapid shift from face-to-face to telephone in March 2020, followed by mix of both modes depending on course of pandemic
  - Spring: 48.7% of R1, 35.4% of R3, 27.0% of R5 by phone
  - Fall: 98%+ of R2/R4 done by phone
  - Adjustments
    - —Website for show cards
    - —Interviewer training
    - —Tailored outreach
    - —Authorization forms

And then the pandemic hit! All face-to-face interviewing ceased on March 17, 2020, and all data collection switched to the telephone mode. A fair bit of data collection had already occurred, so at the end of the spring interview we did by telephone almost half of of Round 1, about a third of Round 3, and about a quarter of the exiting panel's Round 5.

We had high hopes that COVID would go away and we could get back to in person data collection by the fall. To prepare we developed and distributed COVID-19 in-person mitigation protocols and PPE to interviewers. We had a dashboard for monitoring conditions for safe in-person interviewing. In then end, we were only able to resume in person data collection very briefly in a small geographic area in fall 2020, and we ended up doing almost all the fall interviews by telephone.

We made a number of adjustments to ensure we could collect the highest quality data possible over the telephone.

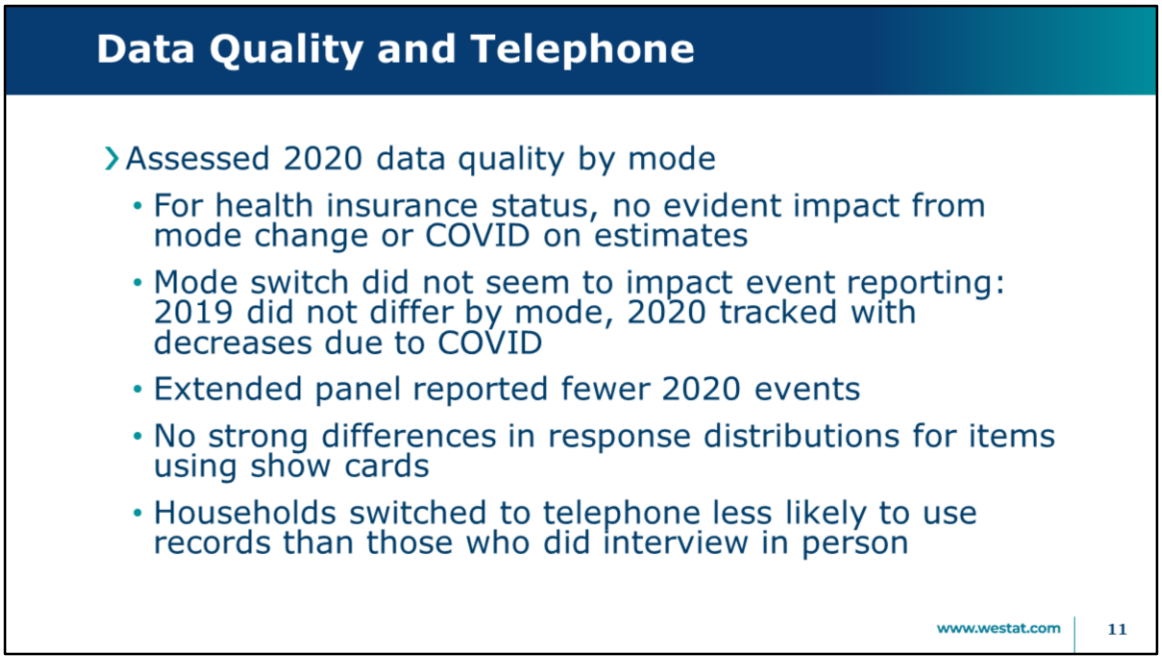
Like most in person studies, we rely on show cards to provide respondents with a visual list of the response options or examples for more complex items. We repurposed an existing web site to provide respondents access to the show cards and other documents the interviewers normally handed out in person. Interviewers asked respondents to refer to the online show cards for answering each item, or if the respondent wouldn't do that, the interviewer read the show cards out loud, mirroring what happens in-person.

Interviewers received remote training and continuous guidance on how to shift to telephone data collection. Topics included recording telehealth visits, use of show cards, and other feedback about data quality specific to telephone interviewing.

The project developed and sent COVID-specific letters and postcards tailored for each panel and round to notify

households that the study was ongoing and to expect us to call them.

The project also added efforts to increase return of hard-copy materials, particularly medical provider authorization forms.



This shift to a lot of telephone was a big change, and we did some assessment in early 2021 of how the shift may have impacted the 2020 data. I gave a more detailed talk about this at FCSM in the fall and can provide more information if you are interested, but the bottom line was that for our core survey estimates, we did not see anything concerning.

We did not find any impact of either mode or the COVID pandemic on health insurance status

Furthermore, the mode switch did not seem to impact event reporting, but we did see decreases in health care events that we believe were related to the COVID pandemic.

This doesn't relate to the mode switch, but for Panel 23, we asked them to extend their participation after they had already completed what was supposed to be their exit round covering the rest of 2019. So when we came back to them in the fall, the reference period extended all the way back to the start of the year instead of the date of their spring interview. This panel reported fewer 2020 health care events in that fall interview than the other panels did for their spring and fall interviews combined.

We found no strong differences between modes in the response distributions for items where we use show cards. Alexis will talk more about show cards on MEPS in her presentation.

We did, however, find that households that switched to having their spring 2020 interview done by phone were less likely to use records than those who did the spring 2020 interview in person. I'll go into more detail on this last finding.

Use of Records

- Encourage respondents to use records to get most accurate information about health events
  - Calendar, bills, insurance statements, prescription bottles, etc.
- Data quality concerns: In-person vs. telephone
- Mode: Compared respondents with in person interviews in both fall 2019 and spring 2020 with those who switched to phone in spring 2020

Group	Fall 2019	Spring 2020
In Person Group	In Person Interview	In Person Interview
Mode Switch Group	In Person Interview	Phone Interview

The MEPS Household Component is primarily focused on collecting information about health care events from respondents. To make sure we get the best data, we encourage respondents to use records as they respond to our questions. These records can include their calendar, bills, insurance statements, prescription bottles, scraps of paper, anything that will provide information about the dates of events, the providers, and so on. During in person interviews, interviewers can encourage respondents to gather up their records and even help respondents organize and extract information from the records. So records are important for data quality, and we lead off the section that collects health care events by asking respondents what records they have available and collecting the events from those first.

The shift to telephone interviewing was of concern for records use, because we no longer had the interviewer there to encourage records use or help the respondent sift through them. We talked to interviewers about data quality, and they reported that some respondents were reluctant to gather records for telephone interviews, particularly if they were multi-tasking or responding to the interview outside their home, such as in their car or on a lunch break from work. This points to two ways in which a telephone interview may differ from an in-person interview: (1) rapport between the interviewer and respondent may be lower, making it more awkward to disrupt the flow of the conversation for the respondent to gather records; and (2) some respondents may perceive a telephone interview as requiring less time and attention than an in-person interview.

So to look at records use by mode, we looked at the two panels that had a fall 2019 interview and a spring 2020 interview. We used a quasi-experimental design to compare the change in records use for respondents who had in-person in both fall 2019 and spring 2020 with those who switched to phone in spring 2020, the mode switch group. We used a difference-in-differences analysis to control for the baseline differences between respondents. So we're looking at the change over time within households and comparing that change across these two groups.

Use of Records by Mode Groups

Variable	In-Person Percent (SE)	Mode Switch Percent (SE)	Test Statistics
Panel 23			
Records in fall 2019, No records in spring 2020	13.6	23.8	$\chi 2\ (2) = 120.568$
No change between fall 2019 and spring 2020	77.4	66.1	p-value = **0.002**
No records in fall 2019, Records in spring 2020	9.0	10.2	
Panel 24			
Records in fall 2019, No records in spring 2020	10.6	17.6	$\chi 2\ (2) = 81.542$
No change between fall 2019 and spring 2020	74.3	68.9	p-value = **0.002**
No records in fall 2019, Records in spring 2020	15.0	13.5	

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This table shows the results for the two panels that had interviews at both time points.

We will focus on the change from having records in fall 2019 to not having records in spring 2020. For panel 23, 13.6% of in person respondents went from having records to not, compared to 23.8% of mode switch respondents. Likewise, for panel 24, 10.6% of in person respondents went from having records to not, compared to 17.6% of mode switch respondents. This would seem to indicate the possibility that the switch to telephone has a negative impact on records use. Mode switch respondents were by definition later respondents in the spring 2020 round, so it's also possible these were less cooperative respondents than the folks who had already completed an in person interview earlier in the spring. But they had used records in the fall. We have recently started monitoring records use by mode, and while we are not controlling for differences between the groups like we are here, there is some indication that records use is a bit lower on the telephone than in face-to-face interviews.

MEPS Modes During the COVID-19 Pandemic

- Starting to replace telephone with computer assisted video interviewing (**CAVI**) in spring 2022
- Successful fielding of SDoH multimode SAQ in 2021, consideration of adding web to future SAQs
- Adoption of electronic authorization forms in spring 2022

PANEL 25
Form Approved
OMB No. 0935-0118
Exp. Date 11/30/2022

AUTHORIZATION TO OBTAIN INFORMATION FROM MEDICAL AND BILLING RECORDS
MEDICAL EXPENDITURE PANEL SURVEY –
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

A. Provider Name:
Street Address:
City: State: Zip:
Telephone: ( ) - Area Code

B. I am voluntarily participating in the Medical Expenditure Panel Survey (MEPS), a study of health care use and expenses being conducted by the U.S. Department of Health and Human Services. I authorize and request that you provide the U.S. Department of Health and Human Services and its contractors with medical and financial information they request about all health services provided to me during the period January 1, 2020 to December 31, 2021. This authorization form covers any care I received at your facility during this period, including treatment for mental health, alcohol, drug abuse, STD, HIV, AIDS, or Sickle Cell Anemia. It also covers care I received during this period from any medical provider associated with your facility or who provided care to me in your facility.

I understand that the Health Insurance Portability and Accountability Act of 1996 (HIPAA)[1] prohibits you from releasing any information without my authorization. This form (or a photocopy of this form) gives you my authorization. I have signed this form voluntarily, with the understanding that my decision to sign or not to sign the form will have no effect on my eligibility for treatment, payment, enrollment, or eligibility for any benefits to which I am entitled.

I understand that the Department of Health and Human Services and its contractors will use this information to supplement the information I have already given for MEPS research on health care use and expenditures. I also understand that once my information is released to the study, it is no longer covered by HIPAA but is protected by Sections 944(c) and 308(d) of the Public Health Service Act [42 U.S.C. 299c-3(c) and 42 U.S.C. 242m(d)], which provide that information that could identify me will not be disclosed unless I have consented to that disclosure.

I authorize the study to use information I have given in the survey to help you identify my records. I also understand that I can revoke this authorization at any time by contacting a study representative in writing or by telephone, but that my revocation will not affect disclosures already made by a provider relying on my authorization. Otherwise, this authorization expires 30 months from the date of signature.

C. 1. Patient Name:
2. Date of Birth: ___/___/___ (Month Day Year)
3. Other Names Under Which Records May be Filed

D. 4. Patient's Signature - 14 and over sign
5. Date Signed
IF PATIENT IS 14-17, BOTH PATIENT AND PARENT/GUARDIAN MUST SIGN AND DATE.

E. 6. Parent, Guardian, Witness or Proxy's Signature
7. Date Signed
8. Signer's Relationship to Patient
9. Reason for Parent, Guardian, Witness or Proxy's Signature:
☐ Patient 13 or Younger ☐ Patient Disabled
☐ Patient 14-17 Years Old ☐ Patient Deceased

FIELD USE ONLY: RU ID: RECORN: PROVID: HID:

(1) Health Insurance Portability and Accountability Act: 42 U.S.C. 1320d-2 and 1320d-4 and the implementing regulation, 45 CFR 164.508, require a detailed authorization for your health care provider to disclose health information from your records for research purposes.

Public reporting burden for this collection of information is estimated to average 5 minutes per response, the estimated time required to complete the survey. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: AHRQ Reports Clearance Officer Attention: PRA, Paperwork Reduction Project (0935-0110) AHRQ, 5600 Fishers Lane Room 07W42, Rockville, MD 20857.

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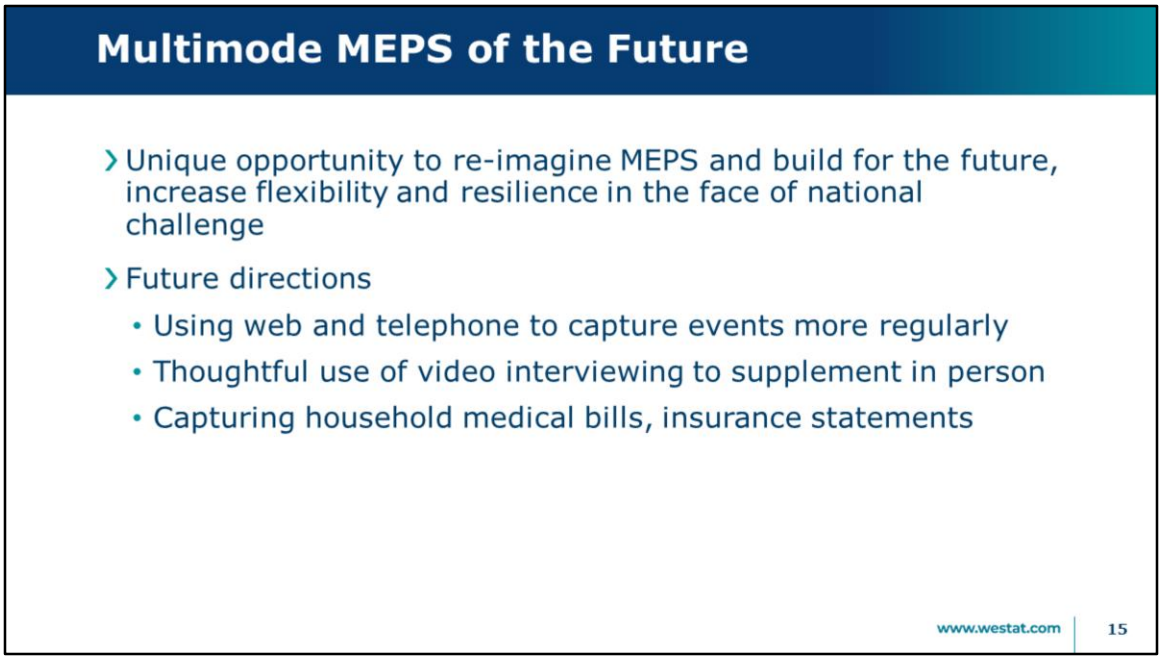
Given those results and as the pandemic wore on and on and on, AHRQ started to feel like replacing in person interviewing with telephone was not totally satisfying. As a result, this spring MEPS has begun offering a video interview option that we affectionately call CAVI. We are hoping that CAVI will provide an experience that is closer to an in person interview in terms of gaining rapport and eliciting respondent cooperation on things like records use. We could spend a whole session on just this topic. My Westat colleagues are presenting tomorrow in Session 7, Track C about how we developed CAVI for MEPS and if you are attending AAPOR, Westat will be presenting on this topic there as well.

While the shift to phone and adding video was the major mode shift for MEPS during the pandemic, there have been other developments to increase the modes used for MEPS in the past two years.

We successfully fielded that social determinants of health SAQ in spring 2021. As a result of this positive experience, we are talking about converting future SAQs to push-to-web with paper backup.

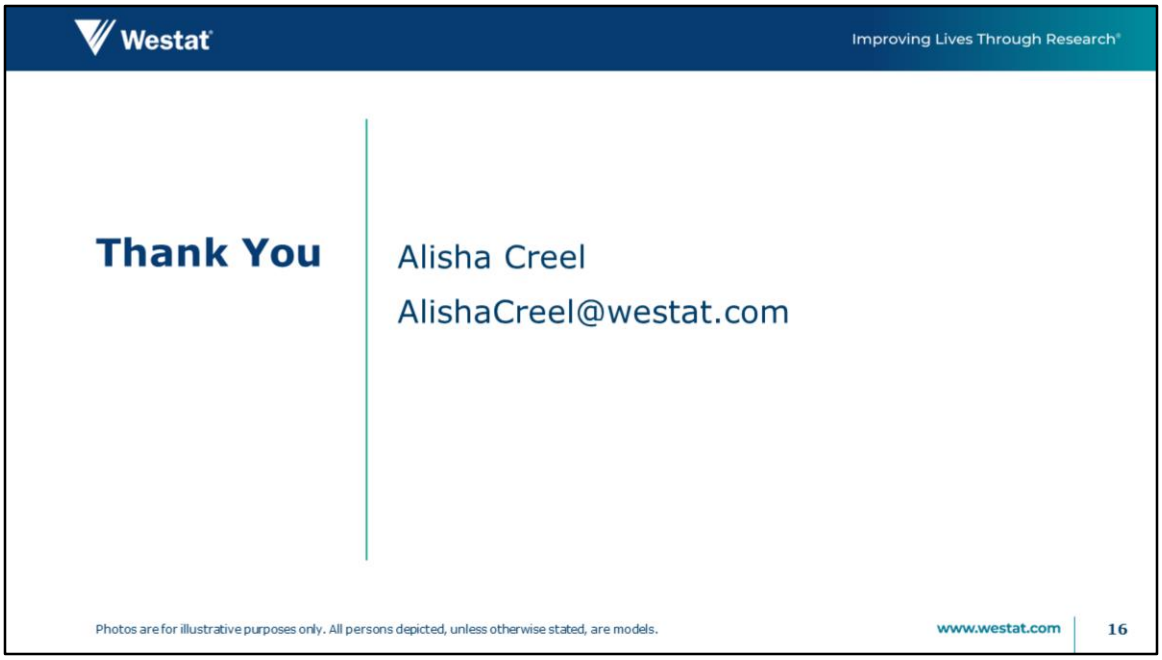
Finally, a major challenge for telephone interviewing was collecting hard copy authorization forms. Early in the pandemic, we were relying entirely on respondents' mailing them back to us, which hurt return rates, as you might imagine. As we got further into the pandemic and had a better sense of what was more or less safe, we allowed interviewers to go pick up authorization forms from households, which helped increase return rates. But to try to increase return rates further, we accelerated development of an electronic option for these forms, which we have rolled out this spring. There is an option for in-person interviews for the household members who are present to sign on the interviewer laptop. And then for household members who are not present at the in person interview and for household members associated with telephone and video interviews, we are using Docusign to send and collect electronic signatures. A paper option remains available. Not only do we hope to see increased return rates from using these technologies, but we are also already seeing that it makes the interview shorter.

In the image you can see there are many lines and boxes on the form. Interviewers have to fill out the paper forms by hand from information presented by the CAPI instrument from the interview, and for households with many providers, there can be many forms. Imagine the difference in the experience for the respondent and the interviewer between sitting there hand filling out even one form before the respondent can sign it, versus the interviewer simply clicking into the e-signature section and immediately being able to hand over the laptop to the respondent to sign. It's a huge improvement in the experience. My AHRQ and Westat colleagues will present more about electronic AFs tomorrow afternoon in Session 7, Track C.



COVID-19 gave MEPS a unique opportunity to re-imagine MEPS and build a multimode future where we could have more flexibility and less reliance on a single mode like in person or paper in the face of a challenge like a pandemic.

In addition to the developments I have mentioned, we are looking for ways to use web and telephone to allow respondents to capture their health care events more regularly than the main interview every six months, we are looking at extending the application of video interviewing to supplement in person work in the post-pandemic era, such as in geographic areas where we currently have to travel interviewers in, and we are thinking about ways to capture and use information from household medical bills and insurance statements rather than make respondents and interviewers decipher them to answer the interview questions.



Thanks so much for coming today, and I look forward to answering any of your questions at the end.