

Lessons Learned from the National Electronic Health Records Survey (NEHRS)



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Disclosure

- None of the authors have any conflicts of interest to disclose.
- The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the National Center for Health Statistics, Centers for Disease Control and Prevention, Department of Health and Human Services, or Reli Group, Inc.

Overview

- Background
- Research Objective
- Methods
- Results
- Lessons Learned
- Data Availability

Background

Background

- Information gained from surveys on physician experiences are important for health policy.
- Clinician and physician survey response rates have declined.^{1,2}
- Understanding preferred response can provide valuable information for future survey design.^{2,3}

1. McLeod CC, Klabunde CN, Willis GB, Stark D. Health care provider surveys in the United States, 2000-2010: a review. *Eval Health Prof.* 2013 Mar;36(1):106-26. <https://doi.org/10.1177/0163278712474001>

2. Cho YI, Johnson TP, Vangeest JB. Enhancing surveys of health care professionals: a meta-analysis of techniques to improve response. *Eval Health Prof.* 2013 Sep;36(3):382-407. <https://doi.org/10.1177/0163278713496425>

3. Brtnikova M, Crane LA, Allison MA, Hurley LP, Beaty BL, Kempe A. A method for achieving high response rates in national surveys of U.S. primary care physicians. *PLoS ONE* 2018 Aug;13(8):e0202755. <https://doi.org/10.1371/journal.pone.0202755>

History of the National Electronic Health Record Survey (NEHRS)

- National Ambulatory Medical Care Survey Electronic Medical Records Supplement ran 2008—2011.
- In 2012, the survey became independent and was renamed NEHRS.
- NEHRS is conducted by the National Center for Health Statistics and sponsored by the Office of the National Coordinator for Health Information Technology (ONC).

Research Objective

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- To discuss the lessons we have learned about changes in response by mode, who responded, and how they responded over time.

Methods

Methods

- Nationally representative, mixed-mode 2018, 2019 and 2021 NEHRS
- Office-based physicians are the primary target
 - NEHRS allowed proxy respondents
 - Office manager, knowledgeable staff member
- Mixed modes
 - Self administered paper questionnaire (mail)
 - Self administered online questionnaire (online)
 - Interviewer administered computer assisted telephone interview (phone)

Methods (continued)

- 2018 (n=2,000), 2019 (n=10,302) email invitation to online* survey, online, mail, phone
 - 8-page survey
 - Email tracing
- 2021 (n=10,302) email invitation to online* survey, online, mail
 - 4-page survey
 - Email tracing

*Emails were only sent to physicians for whom working email addresses were found.

Results

Table 1. Weighted physician characteristics - National Electronic Health Records Survey, 2018, 2019, and 2021

	2018		2019		2021	
	Estimate	SE	Estimate	SE	Estimate	SE
<u>Physician Specialty</u>						
Primary care	47.1	1.9	47.6	2.1	45.7	1.9
Surgical	16.2	1.4	22.5	1.7	21.1	1.5
Medical	36.7	2.5	29.9	1.9	33.2	1.8
<u>Wave of completion</u>						
1st mailing	32.8	3.4	38.4	2.0	41.1	1.9
2nd mailing	19.3	3.0	18.3	1.5	25.0	1.6
3rd mailing	10.1	1.9	9.2	1.1	11.9	1.3
Phone	20.7	3.1	7.5	1.1	0.0	0.0
Online	17.1	2.5	26.5	2.0	22.0	1.5

NOTES: SE is standard error of the estimate

SOURCE: NCHS, National Electronic Health Records Survey, 2018, 2019, 2021

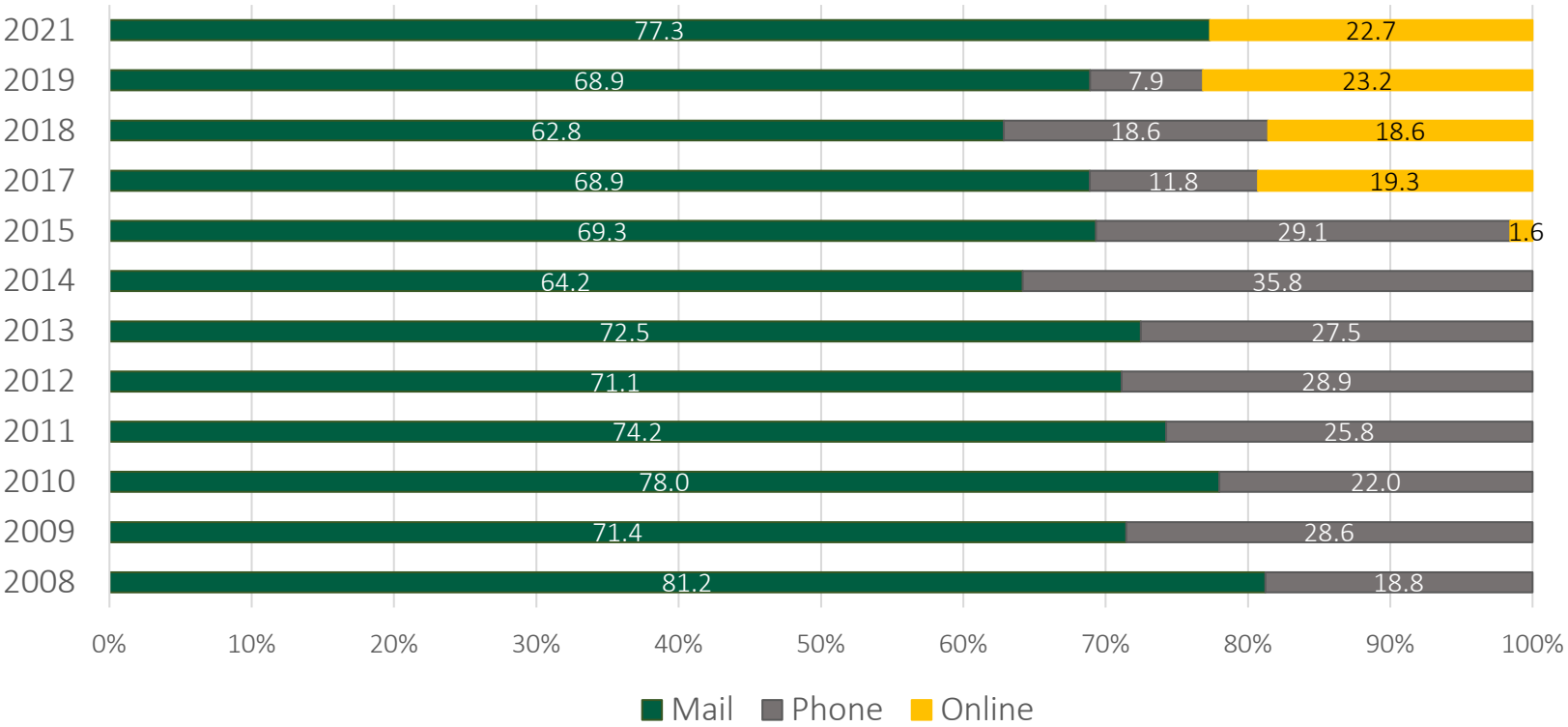
Table 2. Weighted practice characteristics - National Electronic Health Records Survey, 2018, 2019, 2021

	2018		2019		2021	
	Estimate	SE	Estimate	SE	Estimate	SE
<u>Practice setting</u>						
Private solo or group practice	75.2	3.0	77.0	1.7	74.5	1.6
Other setting	24.8	3.0	23.0	1.7	25.5	1.6
<u>Practice size</u>						
1 physician	25.1	3.0	24.9	1.8	27.0	1.7
2-3 physicians	19.9	2.8	19.5	1.8	19.7	1.5
4-10 physicians	32.1	3.2	30.6	1.9	28.0	1.7
11-50 physicians	9.5	1.6	13.9	1.3	12.8	1.1
More than 50 physicians	13.5	2.6	11.1	1.3	12.5	1.3

NOTES: SE is standard error of the estimate

SOURCE: NCHS, National Electronic Health Records Survey, 2018, 2019, 2021

Figure 1. Unweighted percentage of response, by survey mode - National Electronic Health Records Survey, 2008—2015, 2017—2019, 2021



SOURCE: NCHS, National Electronic Health Records Survey, 2008—2015, 2017—2019, 2021

Figure 2. Weighted percentage of response, by survey mode - National Electronic Health Records Survey, 2018, 2019, 2021

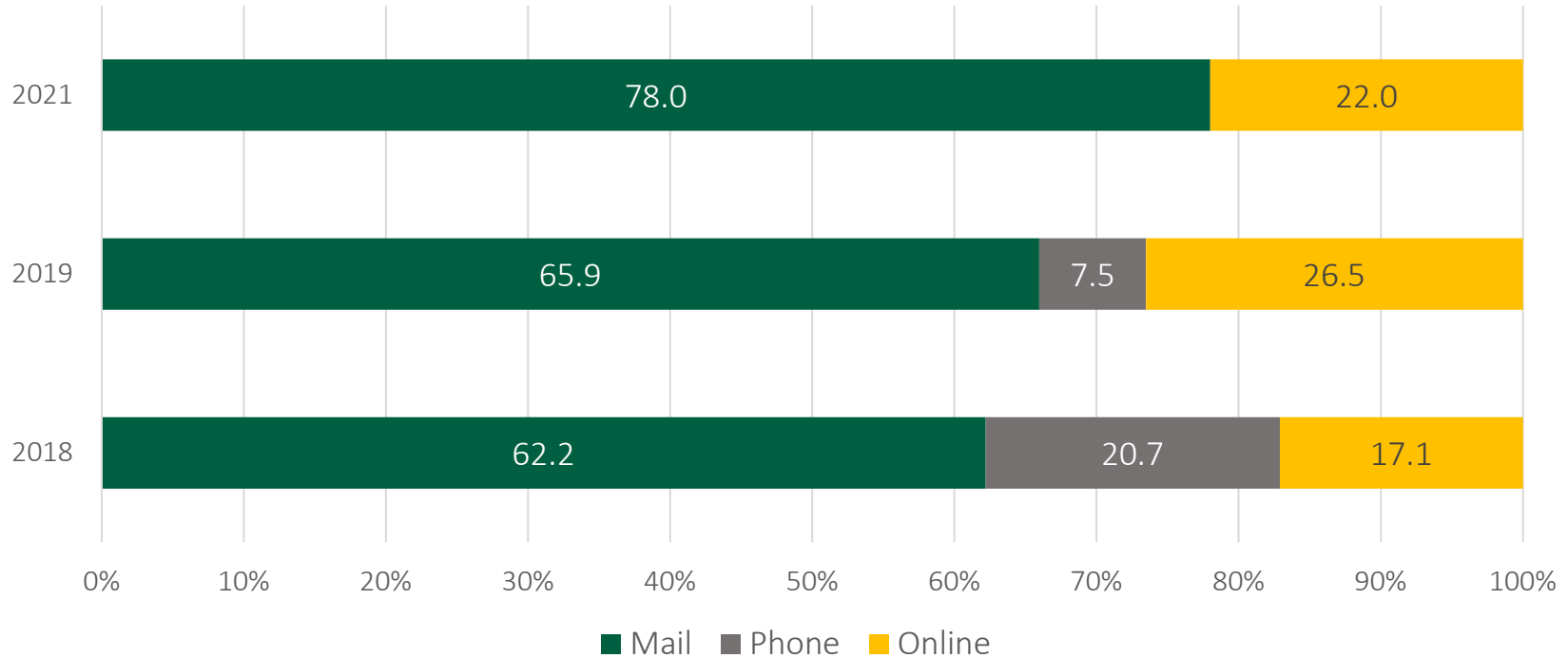


Figure 3. Weighted percentage of response, by respondent - National Electronic Health Records Survey, 2018, 2019, 2021

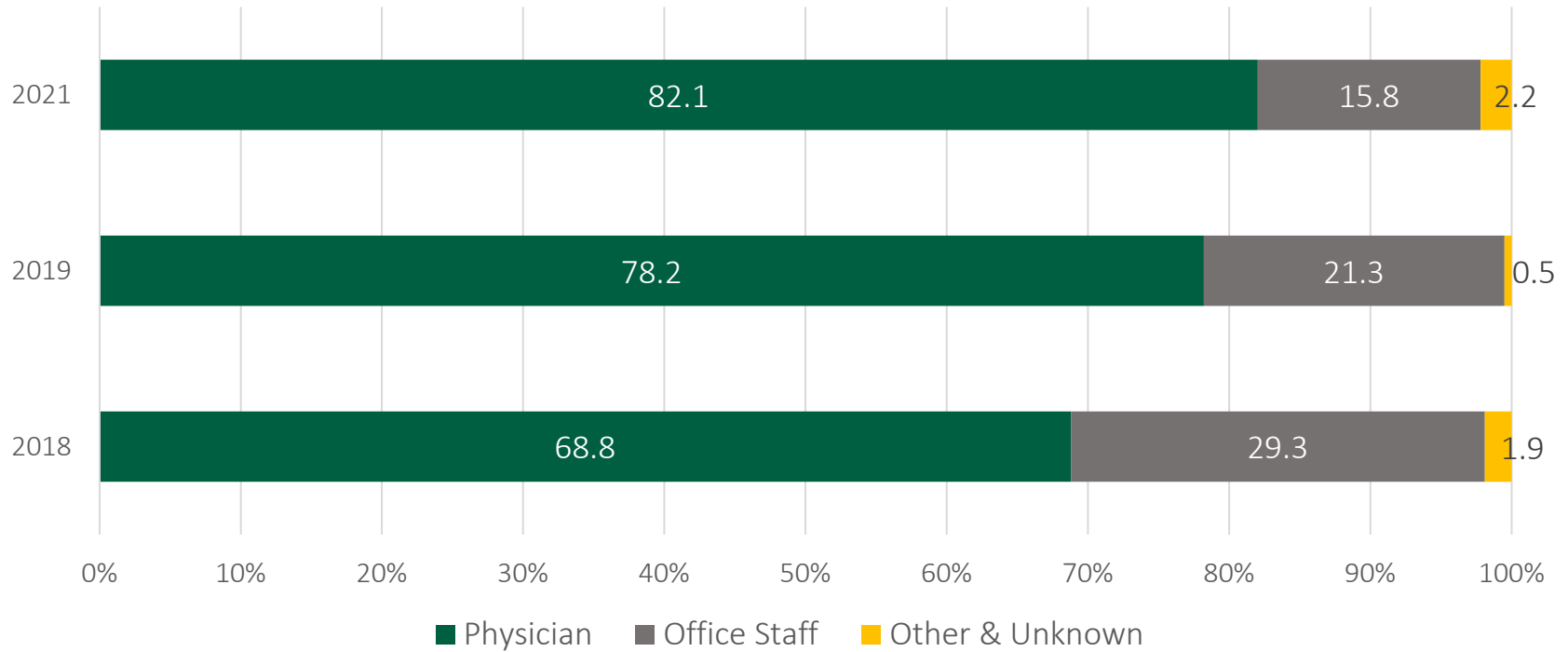


Figure 4. Weighted percentage of physician response, by mode - National Electronic Health Records Survey, 2018, 2019, 2021

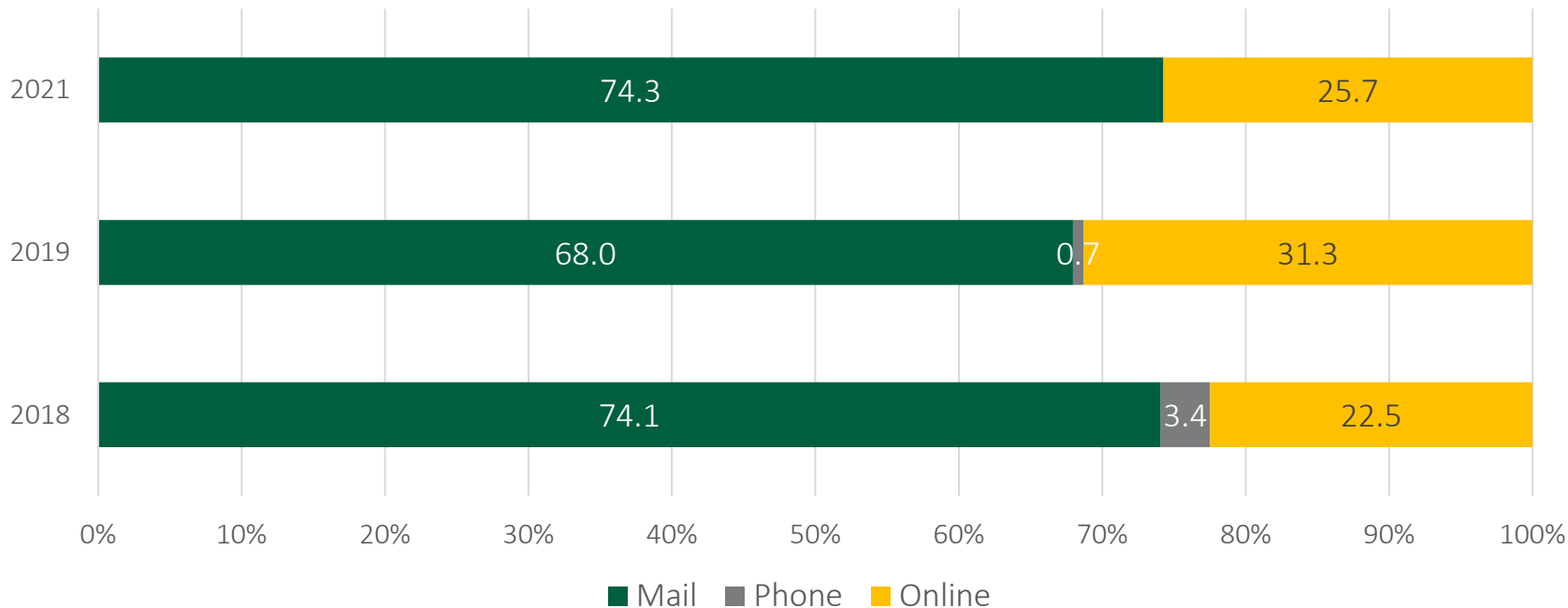


Figure 5. Weighted percentage of office staff response, by mode - National Electronic Health Records Survey, 2018, 2019, 2021

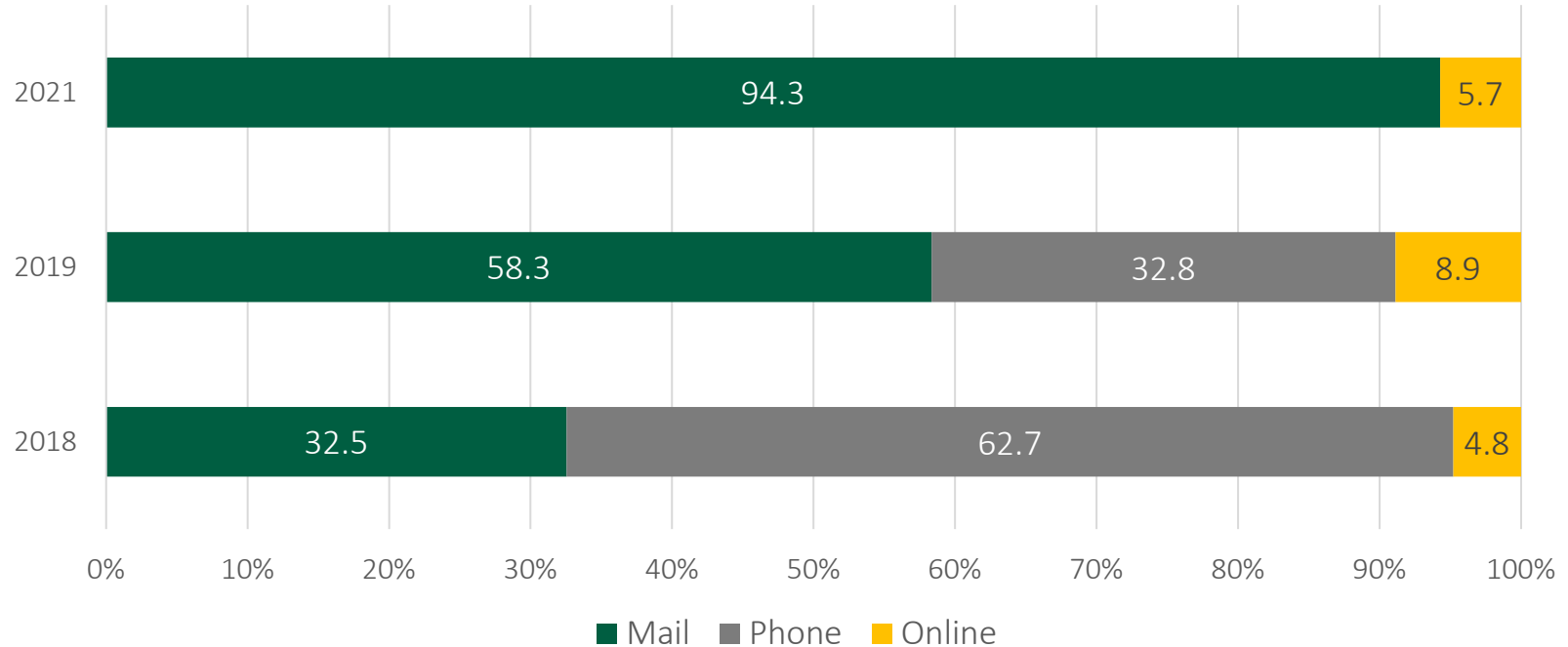
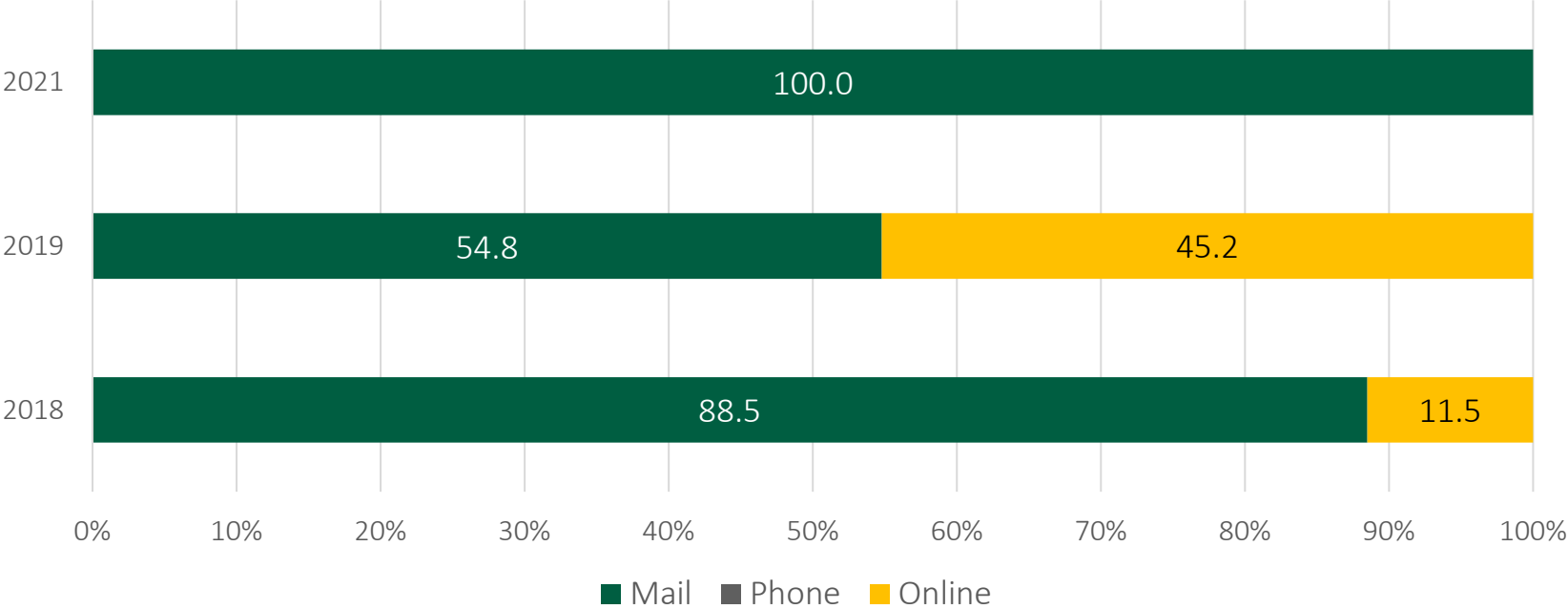


Figure 6. Weighted percentage of other & unknown response, by mode - National Electronic Health Records Survey, 2018, 2019, 2021



SOURCE: NCHS, National Electronic Health Records Survey, 2018, 2019, 2021

Lessons Learned

Lessons Learned

- Overall, the most used mode was self-administered mail questionnaire
 - Physician primary mode
- CATI or phone diminishing yield
 - Physicians used this mode least
- Physician percentage of response by self-administered online questionnaire increased from 2018 to 2019
 - Led to decision to eliminate phone mode in 2021 NEHRS
- Percentage of physician respondents increased over time
 - Tracing for email addresses, contact information
- Percentage of office staff respondents decreased over time

Data Availability

Data Availability: National Electronic Health Records Survey (NEHRS)

- 2018, 2019, and 2021 NEHRS have Public Use data files
 - SAS statements
 - SAS files
 - Stata files
- National Electronic Health Records Survey instruments, data sets, and documentation
 - <https://www.cdc.gov/nchs/nehrs/questionnaires.htm>

Research Data Centers (RDCs) have restricted data



National Center for Health Statistics
RDCs

<https://www.cdc.gov/rdc/index.htm>
rdca@cdc.gov

The RDCs will accept and review proposals and amendments via the Standard Application Process

<https://www.researchdatagov.org/>

Federal Statistical RDCs

<https://www.cdc.gov/rdc/b2accessmod/acs220.htm>

There are over 30 Federal Statistical RDCs. The RDCs partner with over 50 research organizations including universities, non-profit research institutions, and government agencies.

Thank You

Ambulatory Health Care Data Website

<https://www.cdc.gov/nchs/ahcd.htm>

Call the Ambulatory and Hospital Care Statistics Branch at
[301-458-4600](tel:301-458-4600)

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