

Using Contact History Instrument Paradata to Explore Changes in Field Survey Data Collection during COVID-19

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Background – Federal Surveys and COVID-19

- Census Bureau suspended in-person interviews for all surveys on March 20th, 2020
 - Field Representatives (FRs) instructed to call participants where feasible and seek to collect necessary information over the phone
- Largest of impacted surveys was American Community Survey (ACS)
 - n = 3.54 million housing units (HUs)
 - HUs contacted by mail, invited to respond by mail or Internet
 - Nonresponding HUs, those with unmailable addresses assigned to Computer Assisted Personal Interview (CAPI) followup
 - Most contact attempts by personal visit, remainder telephone
 - Telephone interviews only during suspension of in-person interviews

Background – Changes to 2020 ACS CAPI

Quarter	Month	Changes
Q1	January	No changes
	February	No changes
	March	In-person interviewing stopped on 3/20 – telephone only
Q2	April	Telephone only
	May	Telephone only – increased workload
	June	Telephone only – increased workload
Q3	July	In-person allowed for 30% of areas
	August	In-person allowed for 40% of areas
	September	In-person allowed in all areas
Q4	October	In-person allowed in all areas
	November	In-person allowed for 95% of areas
	December	In-person allowed for 87% of areas

Research Question

- What changes to data collection can we identify that took place in 2020?
- Can we link any of these changes to the shifts in data collection mode?

Contact History Instrument (CHI)

- CHI used by FRs to record paradata about each contact attempt in select surveys with a field interview component
 - Launched in 2004
 - Adapted for ACS CAPI in 2011
- FRs using CHI adapted to different conditions each month of 2020
 - COVID-19
 - Contact modes permitted
 - Workload size
- CHI records may inform related (or unrelated) changes in data collection during shift from in-person to telephone interviews

Data

- What is contained in CHI paradata, and how can we use this to identify and understand changes that took place in 2020?
 - Changes by Design
 - Number of CHI records and households
 - Contact mode distribution
 - Changes by FRs or Respondents
 - Final outcomes
 - Contact strategies used by FRs
 - Respondent concern/reluctance/behavior types
 - Other FR action types besides contact attempts

Methods

- Compare ACS CHI record distributions from 2019-2020, based on unweighted data recorded by FRs
- Baseline: October-December 2019 (Q4)
- Comparative periods: 2020
 - Q1: In-person interviewing stopped on 3/20/2020
 - Q2: Telephone only, increased workload
 - Q3: In-person resumed in limited areas, then all
 - Q4: In-person continued in all or most areas

Limitations

- Confounding factors for analyzing changes over time
 - Modes permitted varied by month
 - Increased CAPI workload in May-June
 - No. and types of initial ACS mailings varied by month
 - Overlap with 2020 Census
 - Lifestyle changes during COVID-19
- Completeness of CHI records in all periods
 - FRs may not record all contact attempts or information
 - Respondents may not always be explicit about their concerns

Total ACS CAPI Contact Attempts and HUs, by Quarter (2019-2020)

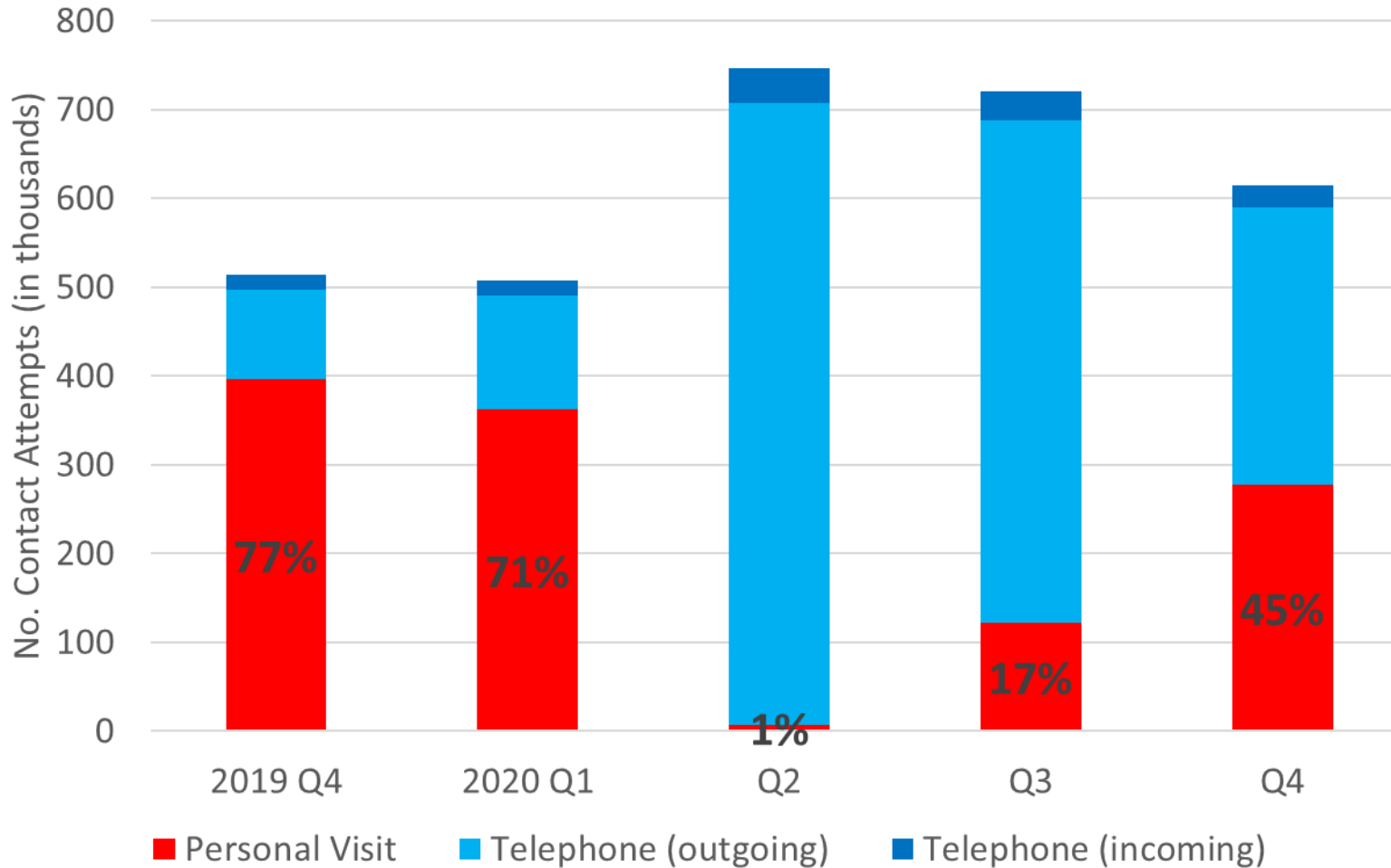
Quarter	2019 Q4	2020 Q1	Q2	Q3	Q4
No. Contact Attempts	513,991	507,897	747,022	720,965	614,246
No. HUs	201,479	198,278	226,542	200,145	198,893
Avg Contact Attempts per HU	2.5	2.6	3.3	3.6	3.1

Q1: Similar to baseline in avg. contact attempts per HU

Q2-Q3: More contact attempts per HU while personal visits (PVs) suspended or limited

Q4: Fewer contact attempts per HU but higher than baseline while PVs allowed in all or most areas

ACS CAPI Contact Attempt Mode Distribution & Percent Personal Visit, by Quarter (2019-2020)



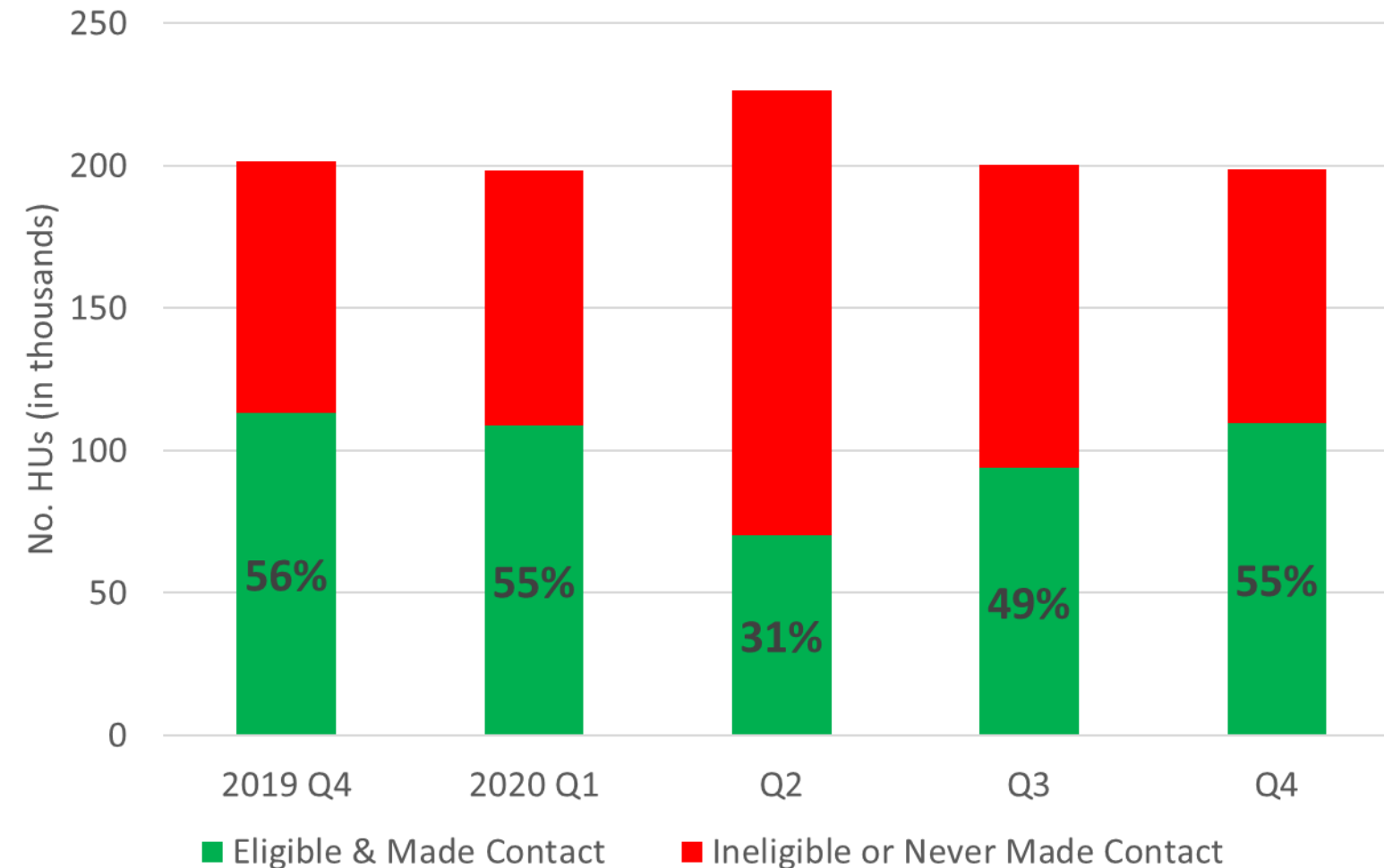
Q1: Similar no. contact attempts as baseline, slight drop in PVs due to “telephone only” in final days

Q2: Highest no. attempts between “telephone only”/higher workload

Q3: Decrease in attempts between resuming PVs/normal workload

Q4: Decrease in attempts as PVs allowed in most areas

ACS CAPI HU Eligibility & Contact Success, by Quarter (2019-2020)*



Q1: Similar no. HUs eligible and reached by FRs as baseline

Q2: Lowest point for eligible HUs reached during “telephone only”

Q3-Q4: More eligible HUs reached as PVs resumed, neared baseline

ACS CAPI Final Outcome Distribution, by Quarter (2019-2020)*

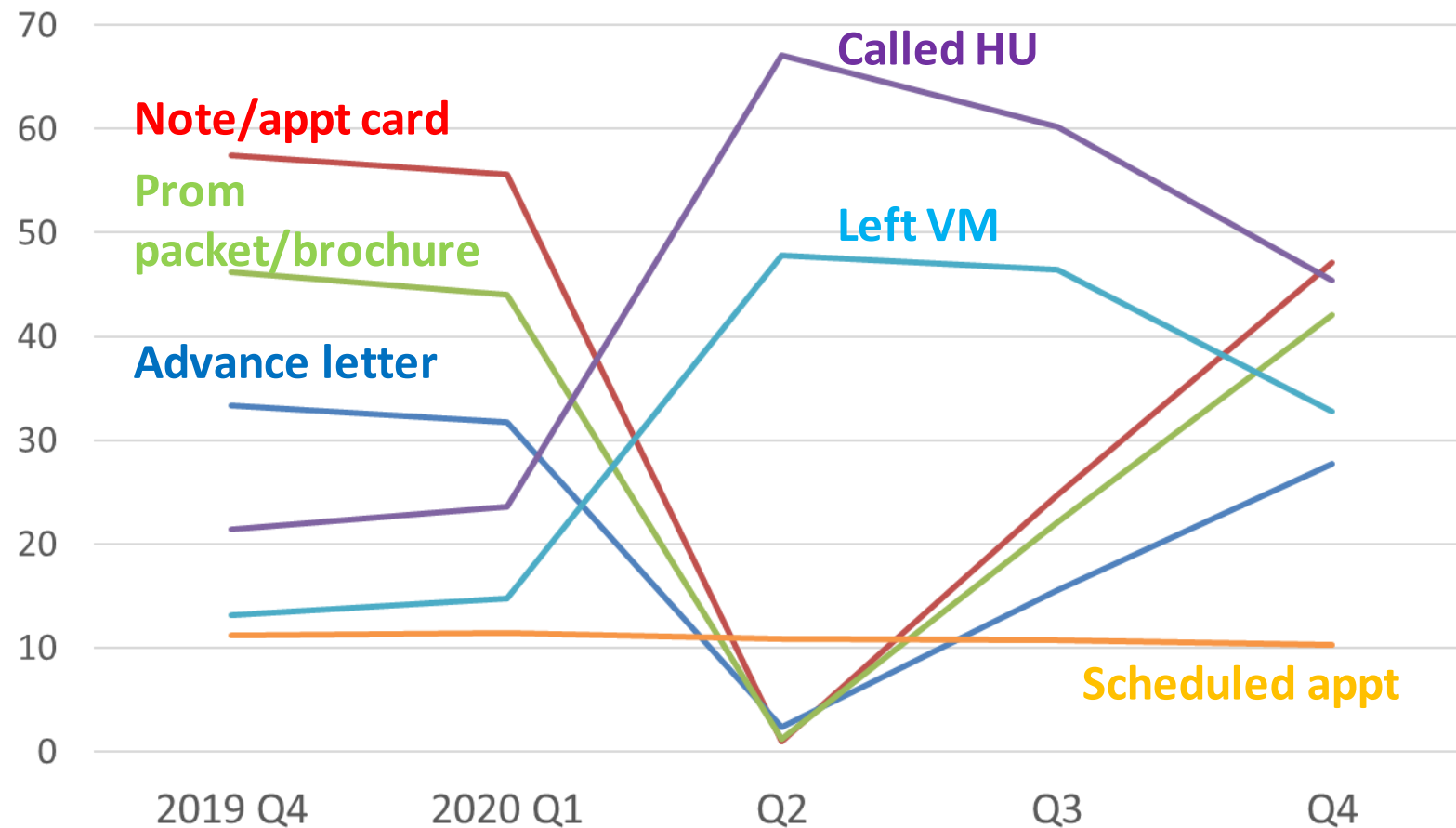
Quarter	2019 Q4	2020 Q1	Q2	Q3	Q4
Complete	71.7%	68.8%	63.6%	62.7%	60.5%
Late Return	14.5%	15.9%	15.5%	19.1%	19.6%
Non-Interview	13.8%	15.3%	20.9%	18.2%	19.9%

Interview completion rates dropped steadily in 2020

Largest drop from Q1 to Q2

Highest Non-Interview rate in Q2

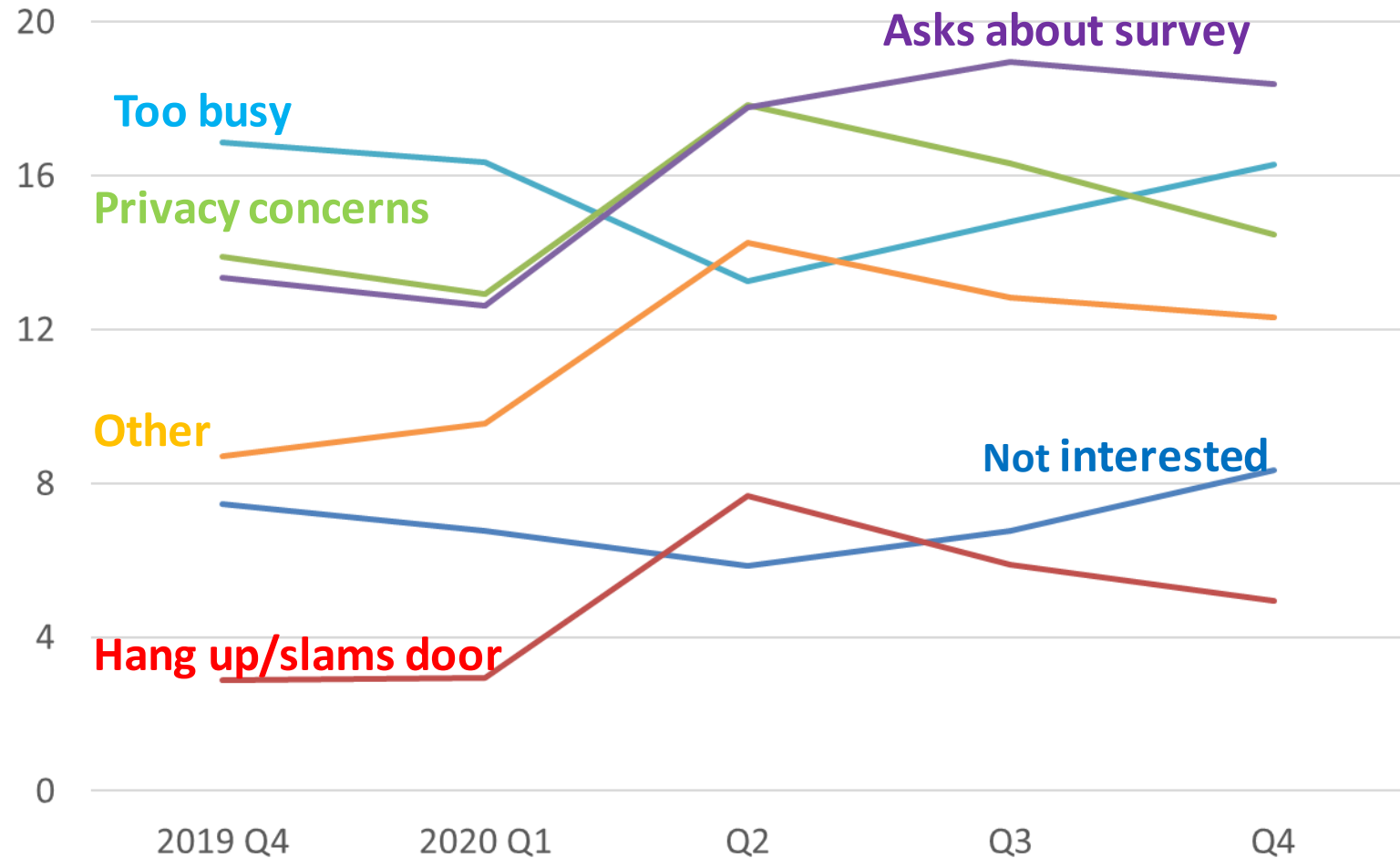
Percent ACS CAPI HUs where Contact Strategy Type Recorded, by Quarter (2019-2020)*



Shifts in contact strategies based on shifts in mode (PV=note, packet, letter; phone=call or VM)

Least change in FR usage of scheduling appts

Percent ACS CAPI HUs where Concern Type Recorded, by Quarter (2019-2020)*



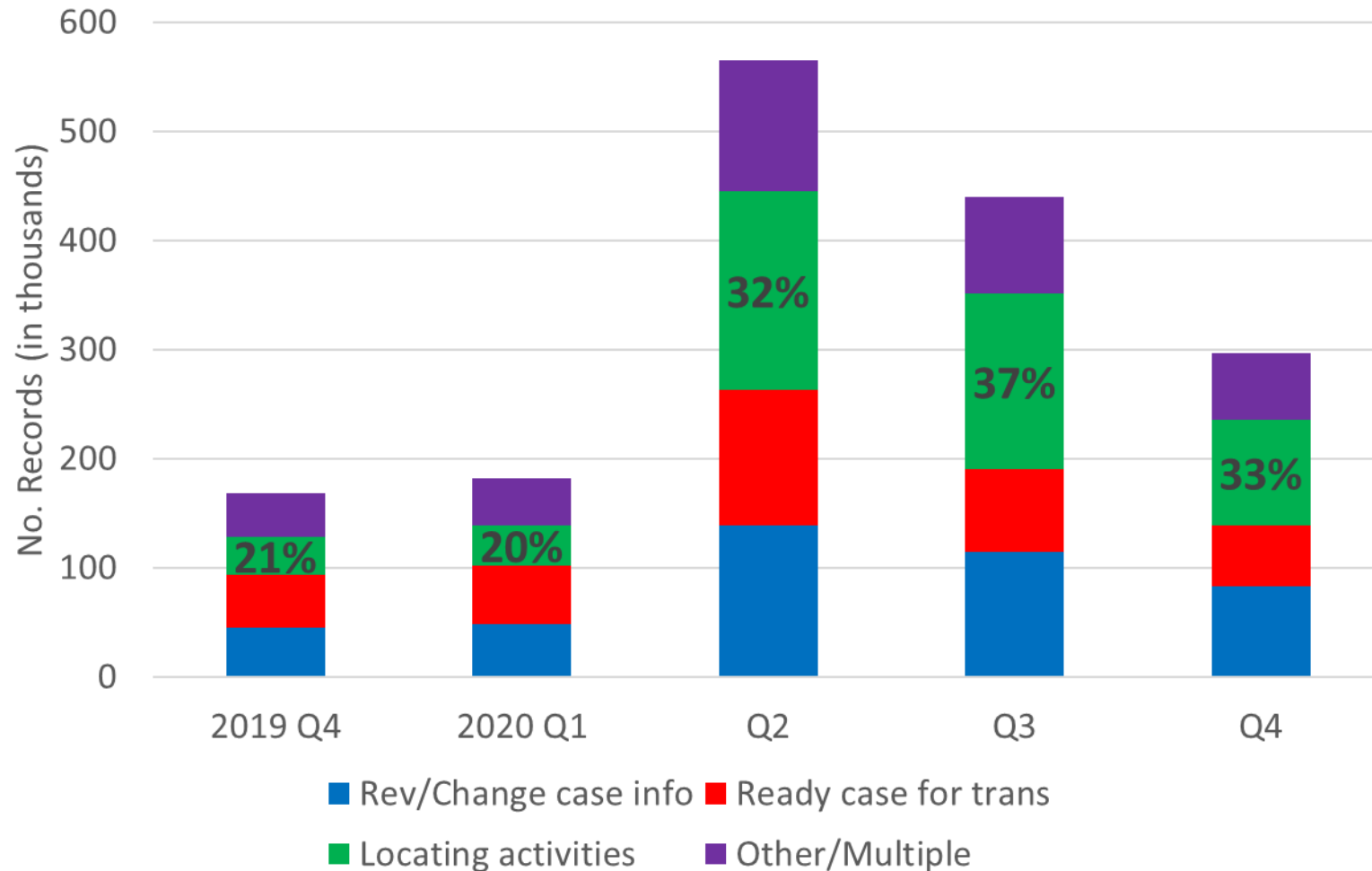
Decrease in “too busy” during shift to phone, increase during PV return

Opposite trend for “privacy concerns,” “hang up/slams door,” and “other” concerns

Increase in “asks about survey” during shift to phone, remained top concern thru 2020

Least change in “not interested”

ACS CAPI Non-Contact Action Distribution, by Quarter (2019-2020)



Increase in all non-contact action types during shift to phone

“Locating activities” increased most and made up highest proportion of cases in 2020

Decrease in all non-contact actions as PVs returned later

Conclusions

- FRs made more contact attempts when personal visits were suspended or limited
 - Most overall contact attempts during “telephone only” (Q2)
 - Most contact attempts per HU during limited return of personal visits (Q3)
- FRs were less successful reaching eligible HUs when personal visits were suspended or limited
 - No. eligible HUs reached by FRs met highest points when personal visits were fully or mostly allowed (Q1, Q4)
 - This met lowest point during “telephone only” (Q2)
- Rate of completed interviews dropped steadily in 2020
 - Greatest drop during “telephone only” (Q2), as well as highest non-interview rate

Conclusions (cont'd)

- Top contact strategies by FRs shifted as contact mode shifted
 - Personal visit strategies (leaving paper materials) replaced by telephone strategies (calling HU or leaving voice message)
- HU concern/reluctance types shifted as contact mode shifted
 - “Too busy” higher when personal visits fully or mostly allowed, while “Privacy concerns” and some others higher during “telephone only”
- FRs made more non-contact actions during “telephone only”
 - Mainly driven by increase in “Locating activities”

Discussion

- Many potential factors driving changes during 2020
- Some changes were more likely driven by shift from in-person to telephone data collection
 - Main contact strategies used by FRs
 - Increase in non-contact actions
- Other changes were unclear how much was driven by mode changes vs confounding factors
 - Increased contact attempts
 - Less success reaching HUs or obtaining complete interviews
 - Changes in respondent concerns

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Supplemental Slides (1) – Coding, Households by Final Outcome, Slide 12

Category	Code	Meaning
Complete	FINAL_OUTCOME in ('201', '203', '501')	Interview completed and household is occupied ('201'); interview sufficient partially completed and household is occupied ('203'); or interview completed and household is temporarily occupied ('501')
Late Return	FINAL_OUTCOME in ('309', '409')	Household response submitted by Late Mail Return ('309'); or Late Internet Return ('409')
Non-Interview	FINAL_OUTCOME in ('213', '214', '216', '217', '218', '219', '313')	Interview not completed due to language problem ('213'); unable to locate ('214'); no one home ('216'); residents temporarily absent ('217'); respondent refusal ('218'); other occupied non-interview ('219'); or respondent burden exceeded ('313')

Supplemental Slides (2) – Coding, Households In Scope vs Out of Scope, Slides 12-14

Category	Code	Meaning
Households In Scope	CONTACT_STATUS in ('C', 'P', 'U')	Contact was ever made with the household, regardless of Complete Interview ('C'), Partial Interview ('P), or Unable to Complete Interview ('U')
Households Out of Scope	FINAL_OUTCOME in ('229', '233', '240', '241', '243', '244', '245', '248', '253', '254', '255', '258')	Household was coded as Type B ('233') or Type C: Under construction ('229'); Demolished ('240'); Home moved/empty mobile home site ('241'); Permanent business/storage ('243'); Merged w/ other unit ('244'); Condemned ('245'); Other ('248'); Unit nonexistent BSA found ('253'); Address nonexistent ('254'); Group quarters ('255'); or Unlocatable sample address ('258')
	FINAL_OUTCOME = '301'	Household was coded as Vacant ('301')
	CONTACT_STATUS not in ('C', 'P', 'U')	Contact was never made with the household; all records were Noncontact ('N'), Not Attempting Contact ('X'), and/or Ghost Records (blank)