

Using Computer Audio Recorded Interviews (CARI) to Assess Interviewer Behavior and Response Outcomes in the Consumer Expenditure (CE) Interview Survey

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Overview



Brief Overview of
the CE



CARI in Analysis



Vehicle Services



Findings

Consumer Expenditure Surveys

<https://www.bls.gov/cex/>

■ Interview and Diary Surveys

- ▶ Collect Spending Data about Consumers in the United States

■ Consumer Expenditures Interview Survey

- ▶ Address based national survey, around 5,000 completed per quarter
- ▶ Respondents represent a Consumer Unit (CU), analogous to household
- ▶ 4 waves per CU, 3-month recall period
- ▶ Large purchases and recurring payments
- ▶ In-person and telephone surveys



CARI

- Computer Audio Recorded Interviewing (CARI)
 - ▶ How are interviewers delivering survey questions?

SCRIPT-READING

- Did the interviewer read the item as worded?
(Read: relevant time frame, all response options, specific key words)

VISUAL AID

- Did the interviewer reference the Information Booklet? (A visual aid listing all response options)

RESEARCH QUESTION

- Do variations in these lead to differences in response outcomes?

Background – Vehicle Services

■ Vehicle Services Section

- ▶ Features a “laundry list” style of question: a single question stem (“In the last three months, did you pay for any...”) and a select-all group of response options

■ 12 Response options at the time of the CARI study

- ▶ Some very specific items (ex: oil change, lubrication or oil filter)
- ▶ Some broader categories (ex: vehicle accessories or customizing)

Response Options in Information Booklet (InfoBook)

Since the first of (reference month), have you or any members of your household had expenses for any of the following:

Part A – Vehicle Maintenance and Repair, Parts, and Equipment

1. Oil change, lubrication, or oil filter
2. Motor tune-up, including –

air/fuel filters	emission controls	PCV valve
computer sensor	ignition timing or mixture adjustment	spark plugs
distributor cap, rotor		valve adjustment
3. Battery purchases or installation
4. Repairs to tires, including patches and plugs
5. Tire purchases or mounting
6. Front end alignment, wheel balancing, or wheel rotation
7. Shock absorber replacement, including MacPherson struts
8. Body work or painting, including –

accident repairs	doors	rust proofing	T-roof
convertible top	glass replacement	sanding	window repair
9. Any other vehicle or engine repairs, including –

air conditioning	carburetor	engine work	muffler
alternator	car computer	exhaust system	radiator
axle	clutch	fan switch or belt	steering
battery	condenser	fuel injector or pump	suspension
bearings	differential	hydraulic system	timing belt
brakes	electrical system	ignition system	transmission
10. Vehicle accessories or customizing, including –

alarm system	carpeting	seat covers
bike, luggage, or ski racks	fender skirts	spoilers
bumper guards	running boards	steering wheel covers
11. Other vehicle services, parts, or equipment, including –

battery cables	jack	vent filters
charcoal canister filters	lights	wheel lugs
gas cable/cap/can	speedometer cable	wheels/rims/hub caps
gasket sets	upholstery work	windshield wipers
12. Vehicle cleaning services including car washes, including –

boat cleaning services	vacuuming	vehicle detailing services
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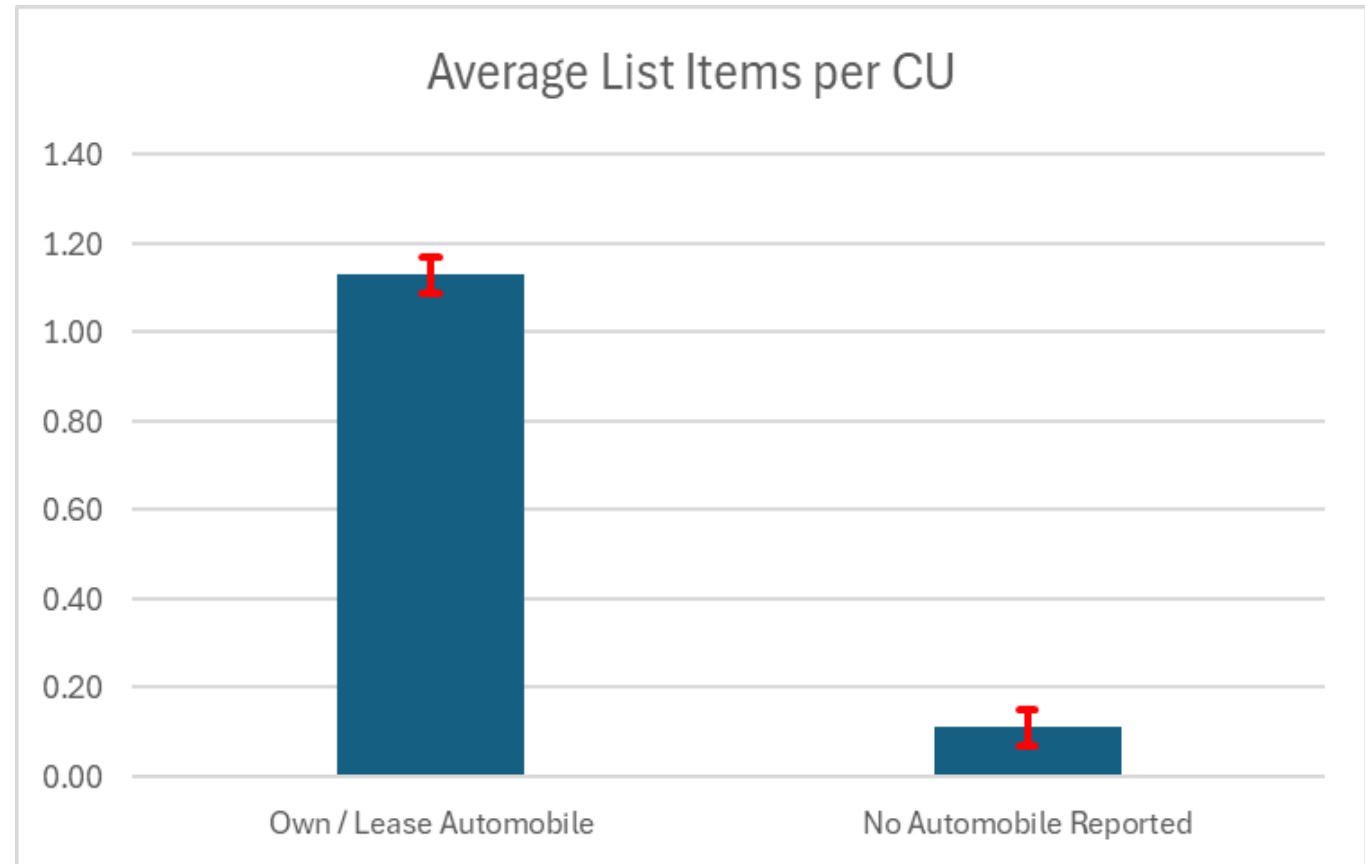
CE Interview Sample

	Consumer Units	Own / Lease Automobile	Consented to CARI	Interviewer Reported Infobook Use	Average Vehicle Services Expenses Reported (from list of 12)
Jan - March 2023	4,807	90.3%	62.2%	26.2%	1.031
➤ First Interview	1,288	89.9%	64.1%	32.0%	1.064
➤ Interviews 2-4	3,519	90.5%	61.5%	24.1%	1.018



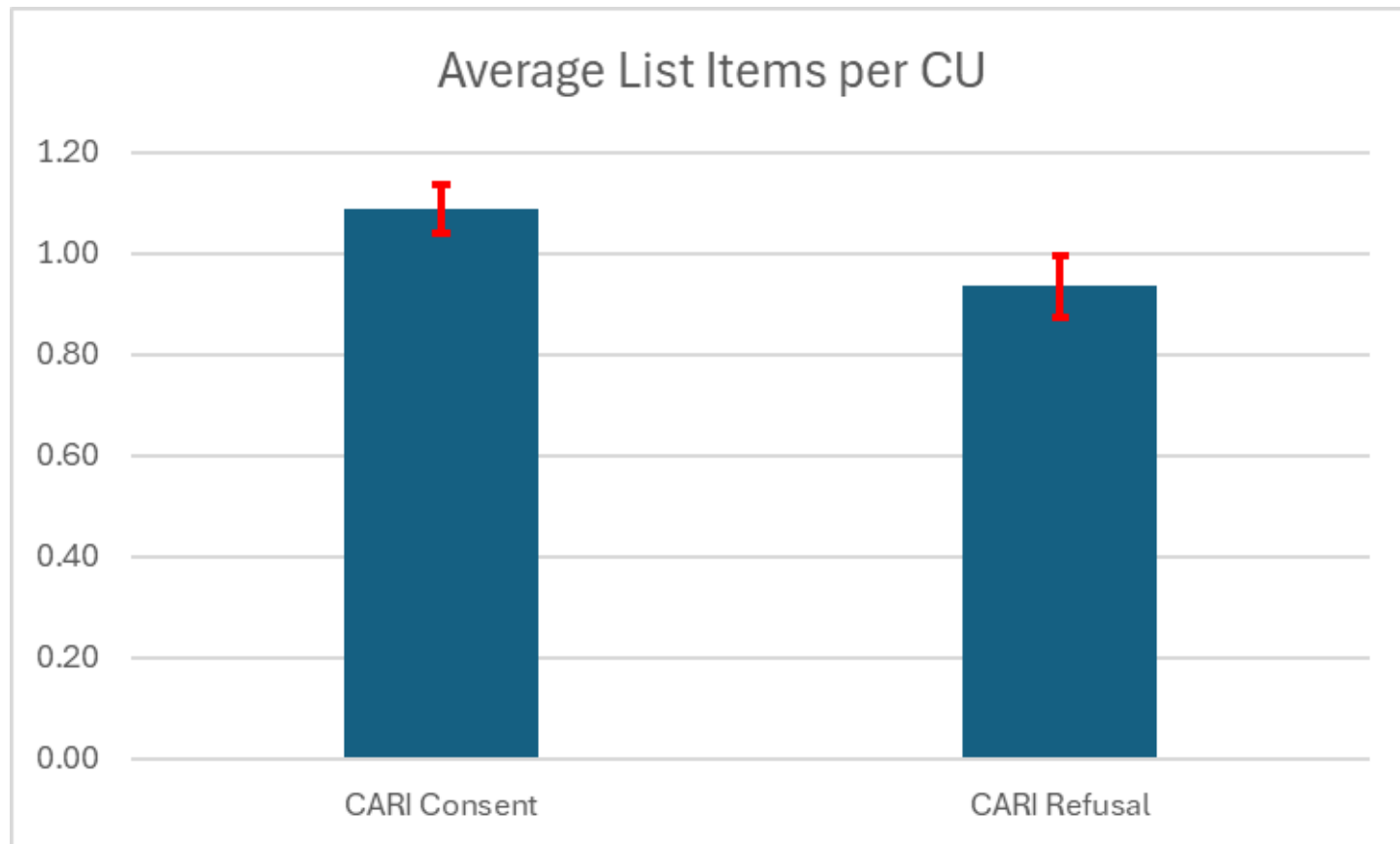
Number of List Items Reported - Full Sample (Jan – Mar, 2023): Automobile Ownership (n = 4,807)

	Average List Items per CU
Own / Lease Automobile	1.13
No Automobile Reported	0.11



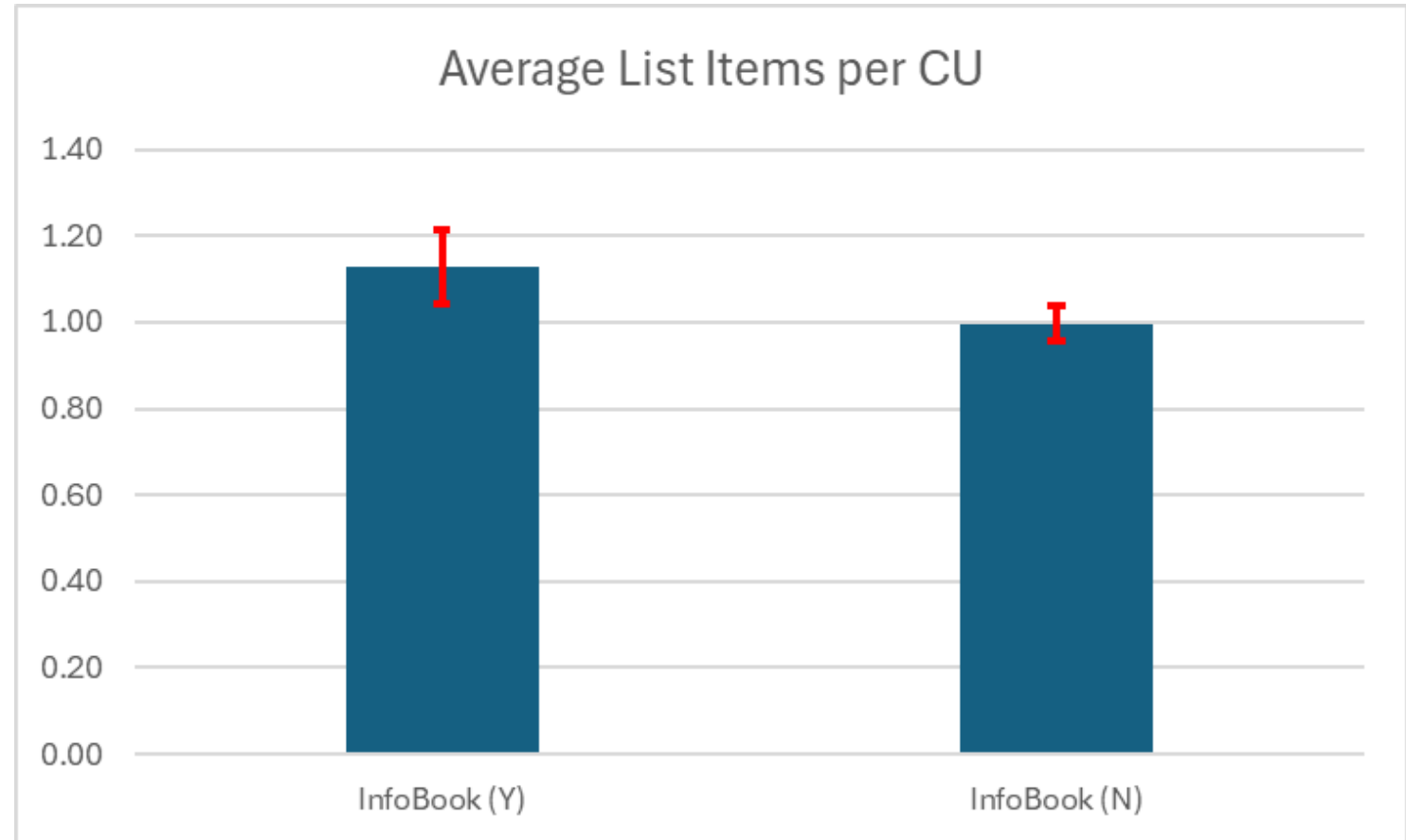
Number of List Items Reported - Full Sample (Jan – Mar, 2023): CARI Consent (n = 4,807)

	Average List Items per CU
CARI Consent	1.09
CARI Refusal	0.94



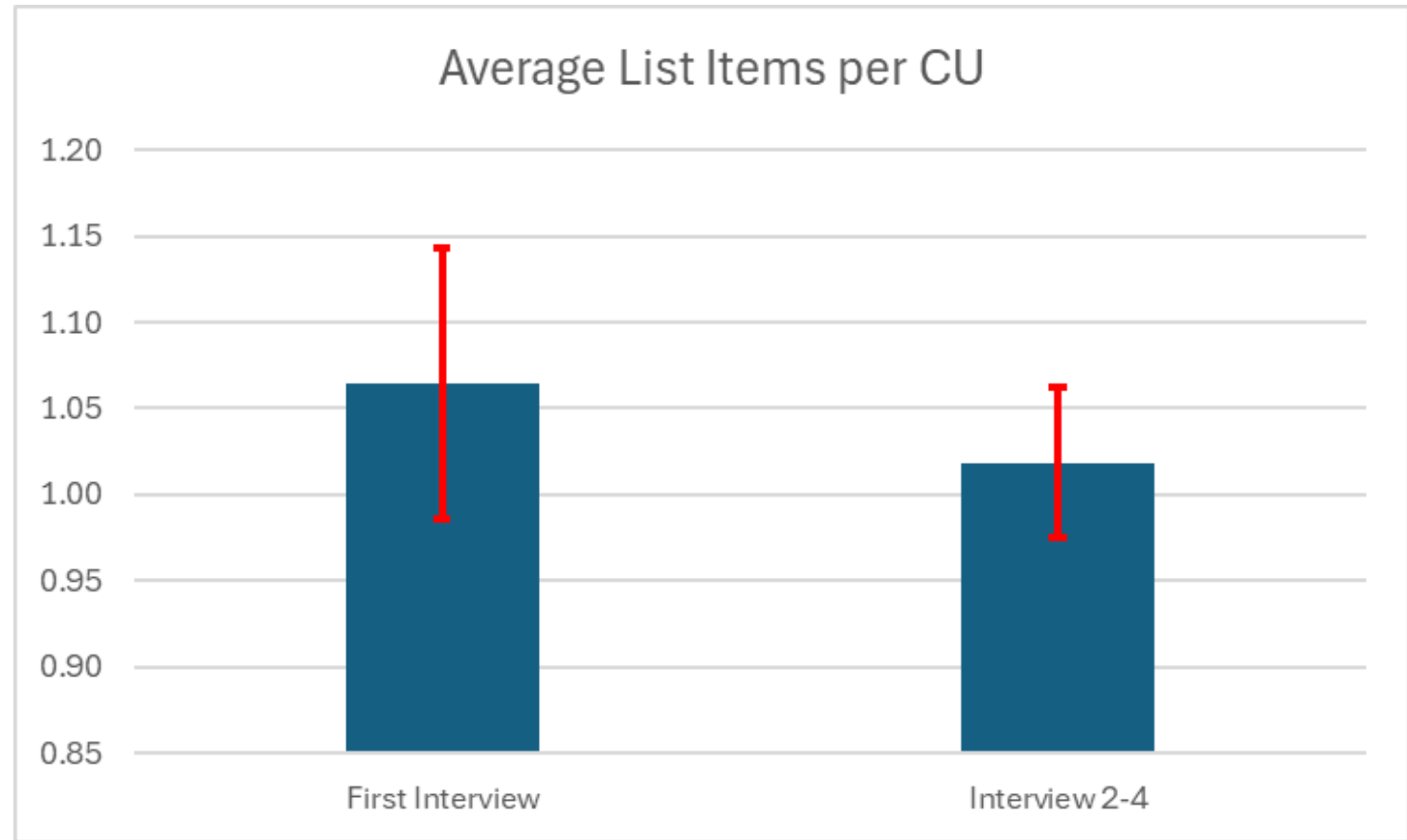
Number of List Items Reported - Full Sample (Jan – Mar, 2023): InfoBook Available (n = 4,807)

	Average List Items per CU
InfoBook (Y)	1.13
InfoBook (N)	1.00



Number of List Items Reported - Full Sample (Jan – Mar, 2023): Interview Wave (n = 4,807)

	Average List Items per CU
First Interview (1,288)	1.06
Interview 2-4 (3,519)	1.02



CARI-Sampled Data

- A subset of CE-Sampled Data: Jan - March, 2023 (N = 488)
 - ▶ Required CARI consent by respondent
 - ▶ Sufficiently complete interview – including targeted survey item
 - ▶ Required sufficient audibility for the survey item in question
 - Microphone turned on (some recordings were silent)
 - Audio recording not misaligned with the full Interviewer-Respondent Interaction in any way (no truncation / interruption)
 - Sufficiently clear / intelligible
 - English

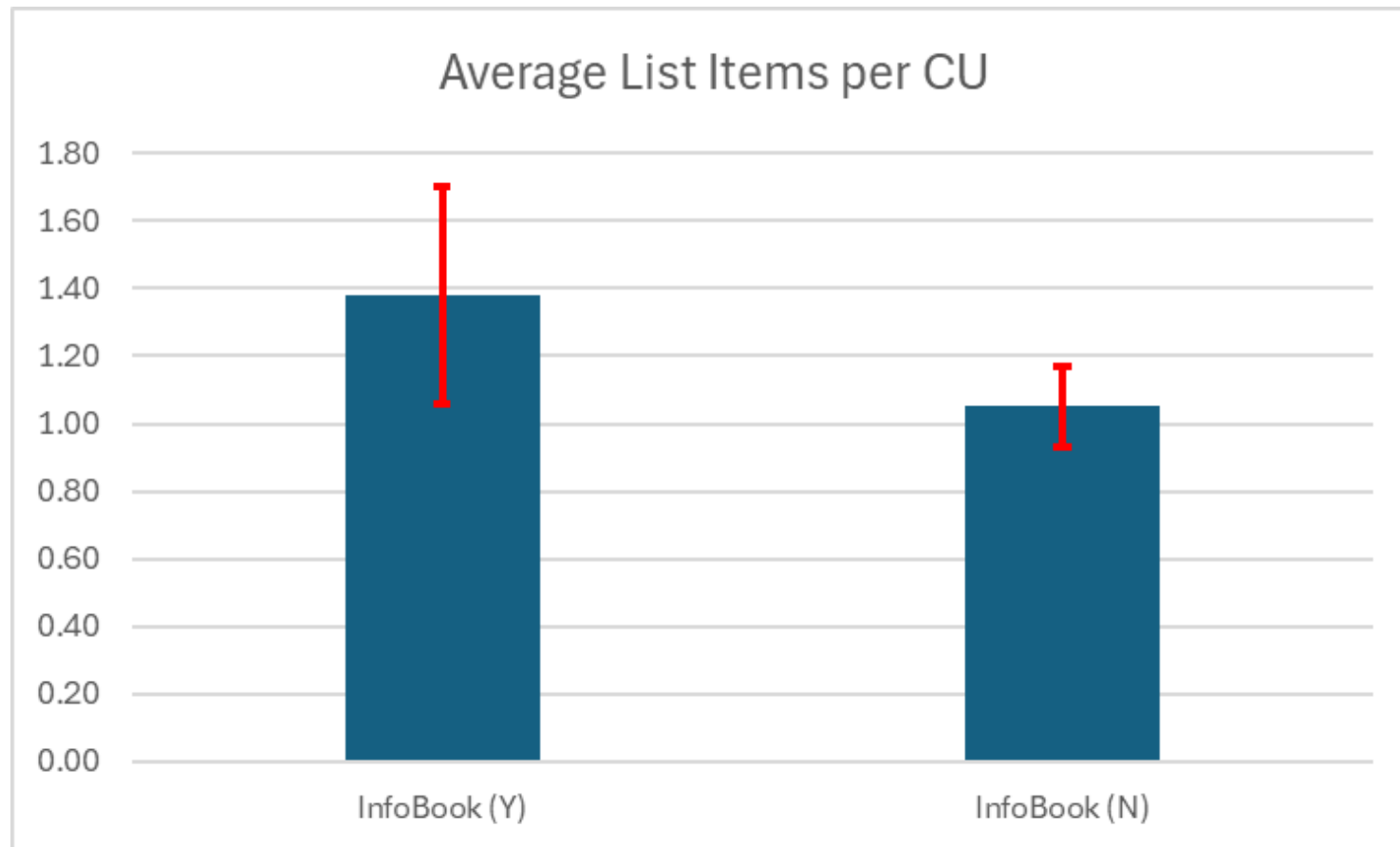
Key CARI Observations

	Consumer Units	Infobook (heard on recording)	Verbatim-ish (no major change to question)	All laundry list response options verbally communicated
Jan - March 2023	488	20.90%	13.10%	18.90%
➤ First interview	170	25.30%	10.60%	14.70%
➤ Interviews 2-4	318	18.60%	14.50%	21.10%



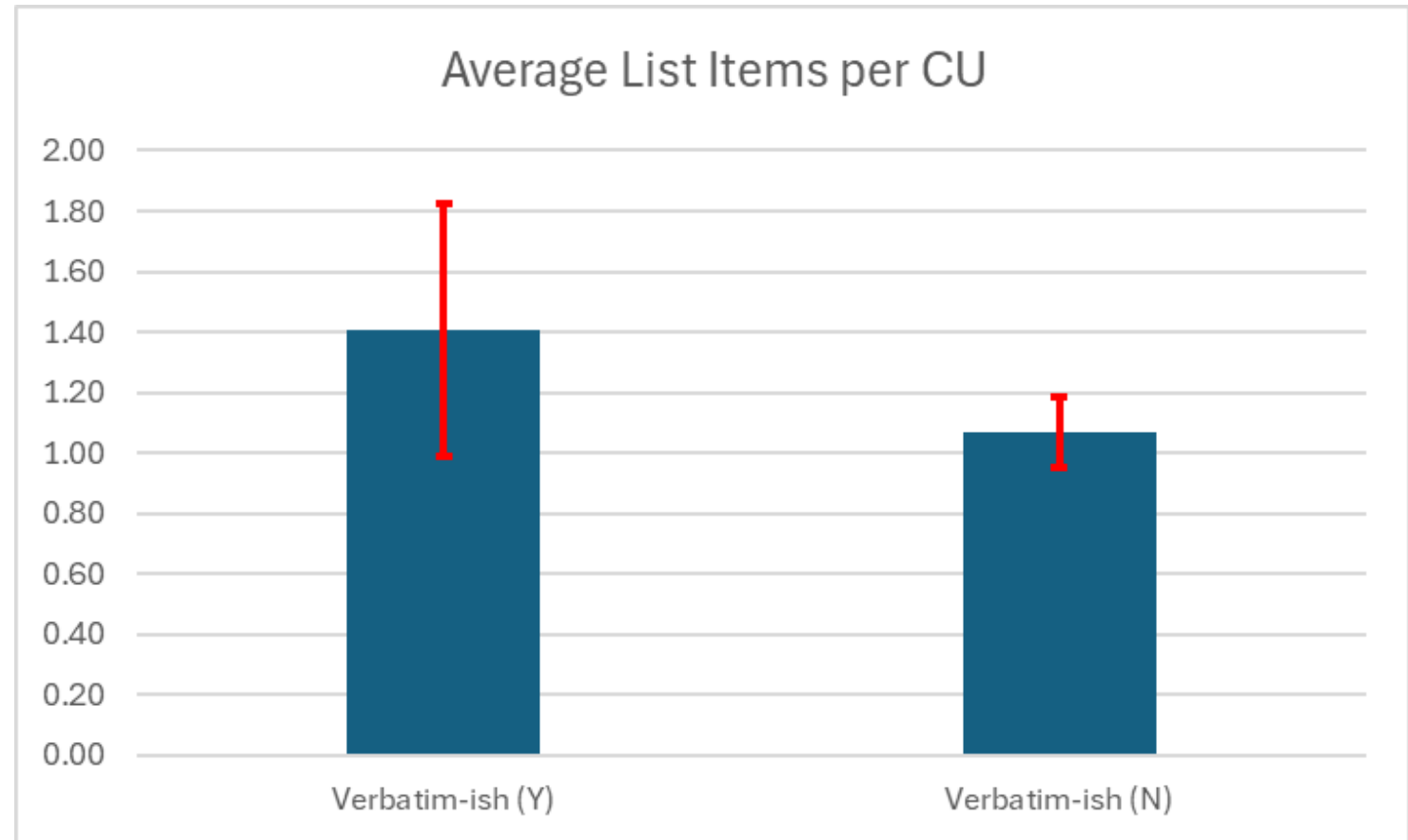
Number of List Items Reported – CARI Sample (Jan – Mar, 2023): InfoBook Referenced (n = 483)

	Average List Items per CU
InfoBook (Y)	1.38
InfoBook (N)	1.05



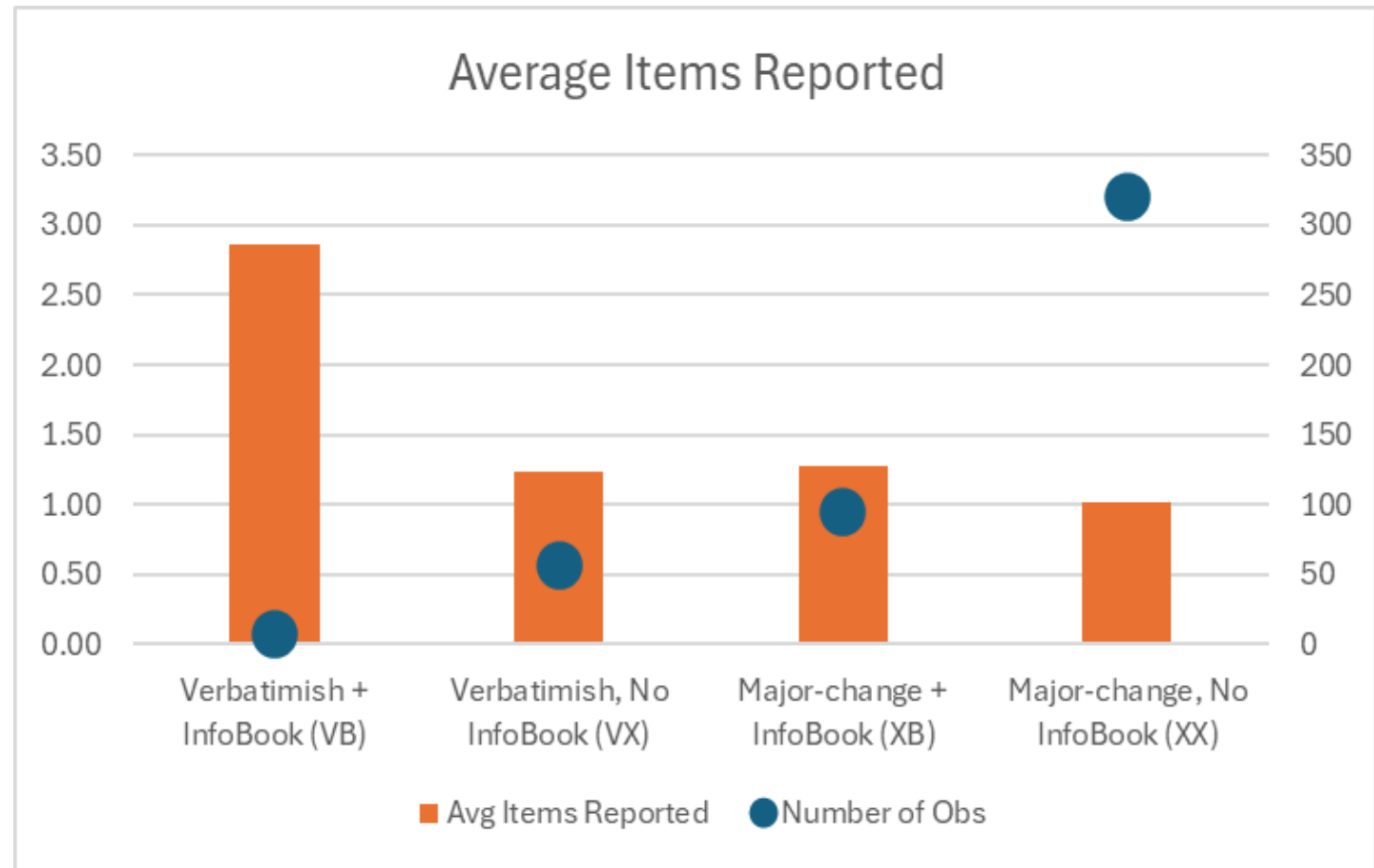
Number of List Items Reported – CARI Sample (Jan – Mar, 2023): Verbatim-ish / No major change (n = 484)

	Average List Items per CU
Verbatim-ish (Y)	1.41
Verbatim-ish (N)	1.07



Number of List Items Reported – CARI Sample (Jan – Mar, 2023): Interviewer Approach (n = 479)

Interviewer Approach	Number of Obs	Avg Items Reported
Verbatimish + InfoBook (VB)	7	2.86
Verbatimish, No InfoBook (VX)	57	1.23
Major-change + InfoBook (XB)	95	1.27
Major-change, No InfoBook (XX)	320	1.01



Interviewer Approaches to Laundry List

- Abbreviate the lists by constructing broader categories
- Read off the most common / presumed most likely responses

“...have you had any maintenance or repairs on your vehicle? What about car washes?”

“ok, any work done on your vehicle, oil change, tune-up, battery, tire purchase or rotation, alignment. Nothing?”

“Did you have any expenses for your vehicle? Like an oil change? Any car wash?”

Interviewer Approaches to Laundry List

- Interviewer assumptions about respondent awareness or likely expenses?

After “Y” to oil change, “...any other expense? Tires or batteries or anything?”

“ok, since there aren’t any cars, there’s no expense”

Last interview you said you had xxxxx, did you have anything like that this time?

Summary

- CARI Findings: Variance in interviewer approaches to laundry list style question
 - ▶ Associations between approach and outcomes
- Interviewer challenges to communicate script and cues
 - ▶ Complication of context: acknowledging respondent reports in prior interviews or earlier in the survey
- Administration Protocols
 - ▶ Favoring approaches that seem to elicit more responses

Thank you!!

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