Life in Australia™
Be heard | Be represented

Recruiting an Australian Probability-Based Online Panel using ABS, IVR and SMS Push-to-Web

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Social Research Centre

A subsidiary of Australian National University

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Life in Australia™

Australia's first probability-based online panel

Monthly waves (currently ~5,500 unique completes per wave)

Mostly online; offline panel members interviewed via CATI (3.3% August 2022)

Target length = 15 minutes (10 AUD incentive incremented at 20 minutes)

Provide government, academics, and non-profits with probability sample at lower cost than a standalone telephone survey

Life in Australia™

Be heard | Be represented

A brief history of recruitment to Life in Australia™

Year	Frame	Panel members profiled	Current panel members	Notes
2016	Dual-frame RDD	3,322	1,752	Panel establishment
2018	Mobile RDD	267	137	Panel replenishment Only enrolled under age 55; quota on education
2019	ABS	1,810	1,220	Panel expansion
2020	ABS, IVR & SMS	612	486	Panel replenishment
2021	SMS	510	335	Trial of retention initiatives
2021	ABS	3,715	3,715	Panel expansion

For more details on panel establishment see: Kaczmirek, Lars, Benjamin Phillips, Darren Pennay, Paul J. Lavrakas, and Dina Neiger. 2019. *Building a Probability-Based Online Panel: Life in Australia™*. CSRM & SRC Methods Paper No. 2/2018. Canberra: Centre for Social Research and Methods, Research School of Social Sciences, the Australian National University.

Address-based sampling (ABS): 2019 to 2021

Characteristic	2019*	2020	2021
Field dates	Nov 20, 2019 – Jan 5, 2020	Nov 5, 2020 – Jan 5, 2021	Aug, 5 2021 – Oct 3, 2021
Address selections	3,000	5,031	50,461
Profiles complete	256	309	3,715
Yield (complete / selections)	8.5%	6.1%	7.4%
AAPOR Response Rate 3	9.0%	6.1%	7.7%

* Three replicates in 2019 tested various parameters (advance letter, pre-/post-paid incentive) using experimental and nonexperimental designs. The 2020 design followed the third and final replicate, results of which are shown.

For definition of AAPOR RR3, see American Association for Public Opinion Research (2016).

Interactive voice response (IVR) and SMS push-to-web

Internal developmental trials of IVR and SMS push-to-web running in November-December 2020

IVR used to recruit for Canadian Prob*it* Panel (Probit 2021); more generally, see Cooley et al. (2000), Corkrey and Parkinson (2002), Gribble et al. (2000), Lau et al. (2019), Levine et al. (2019) and Steiger and Conroy (2008)

SMS push-to-web for probability panel recruitment appeared to be uncharted ground at the time (note parallel work for the LEAS panel in Chile); generally, see de Bruijne and Wijnant (2014), Mavletova and Couper (2014)

Sampling frames

Address-based sampling

Geo-coded National Address File: authoritative list of addresses built from contributions from Australia Post, state and territory land agencies, and Australian Electoral Commission

Exclude addresses not matched to Postal Address File due to low yield

Coverage estimated at 96.1% of residential addresses

IVR and SMS

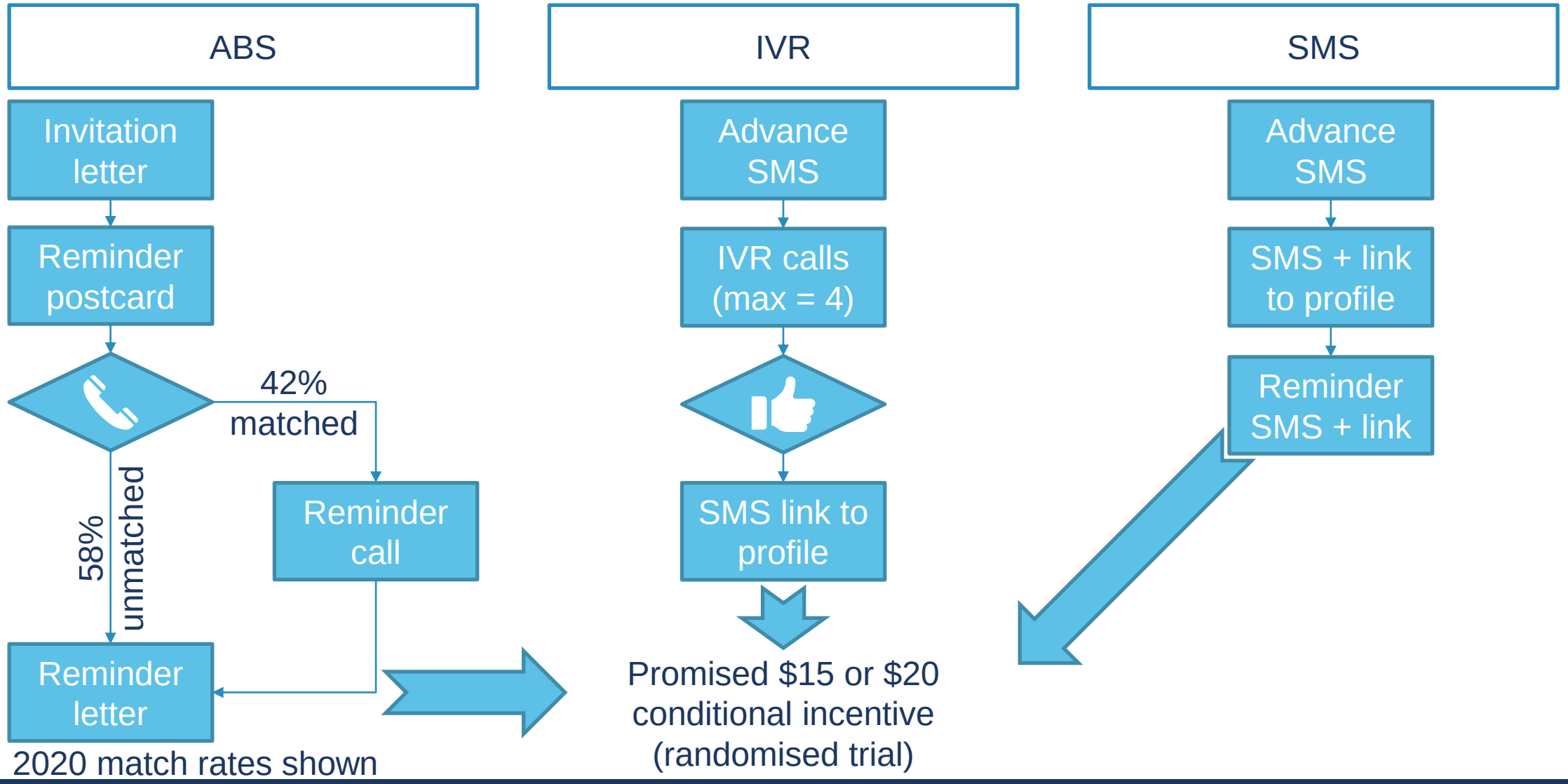
Mobile RDD sample provided by SamplePages

Mobile phone coverage estimated at 95% of adults (ACMA 2020)

SamplePages uses HLR lookup (pinging/pulsing) with estimated 1% false negative rate

Coverage estimated at 94% of adult population

Workflow


ABS
IVR
SMS
Invitation letter
Reminder postcard
42% matched
58% unmatched
Reminder call
Reminder letter
2020 match rates shown
Advance SMS
IVR calls (max = 4)
SMS link to profile
Promised $15 or $20 conditional incentive (randomised trial)
Advance SMS
SMS + link to profile
Reminder SMS + link

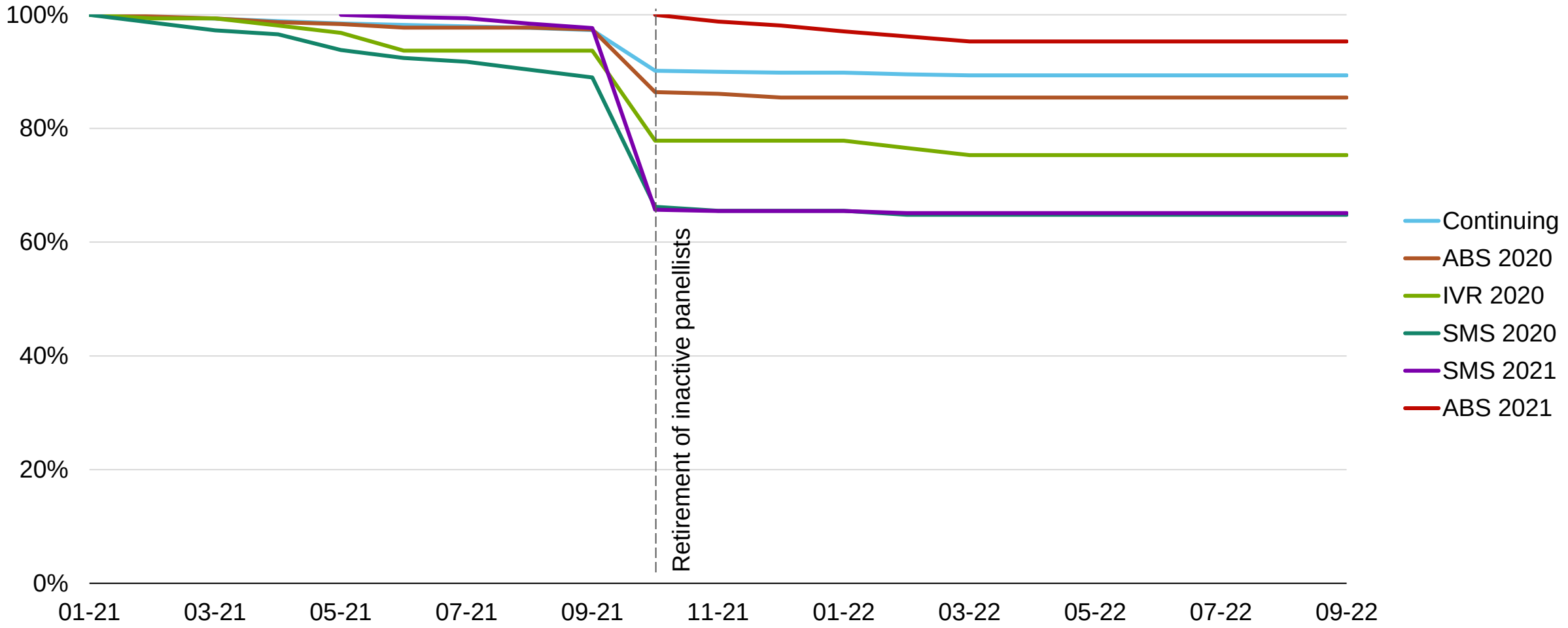
Recruitment and Profile Rates

Recruitment	Field dates	Sample released	Profiles completed	RECR × PROR
ABS 2019	Nov 20, 2019–Jan 5, 2020	16,771	1,810	10.8%*
ABS 2020	Nov 5, 2020–Jan 5, 2021	5,031	309	6.1%
IVR 2020	Dec 10, 2020–Jan 4, 2021	9,979	158	1.6%
SMS 2020	Dec 16, 2020–Jan 4, 2021	4,990	145	3.1%
SMS 2021	Apr 26, 2021–May 2, 2021	17,244	510	3.4%
ABS 2021	Aug 5, 2021–Oct 3, 2021	50,461	3,715	7.7%

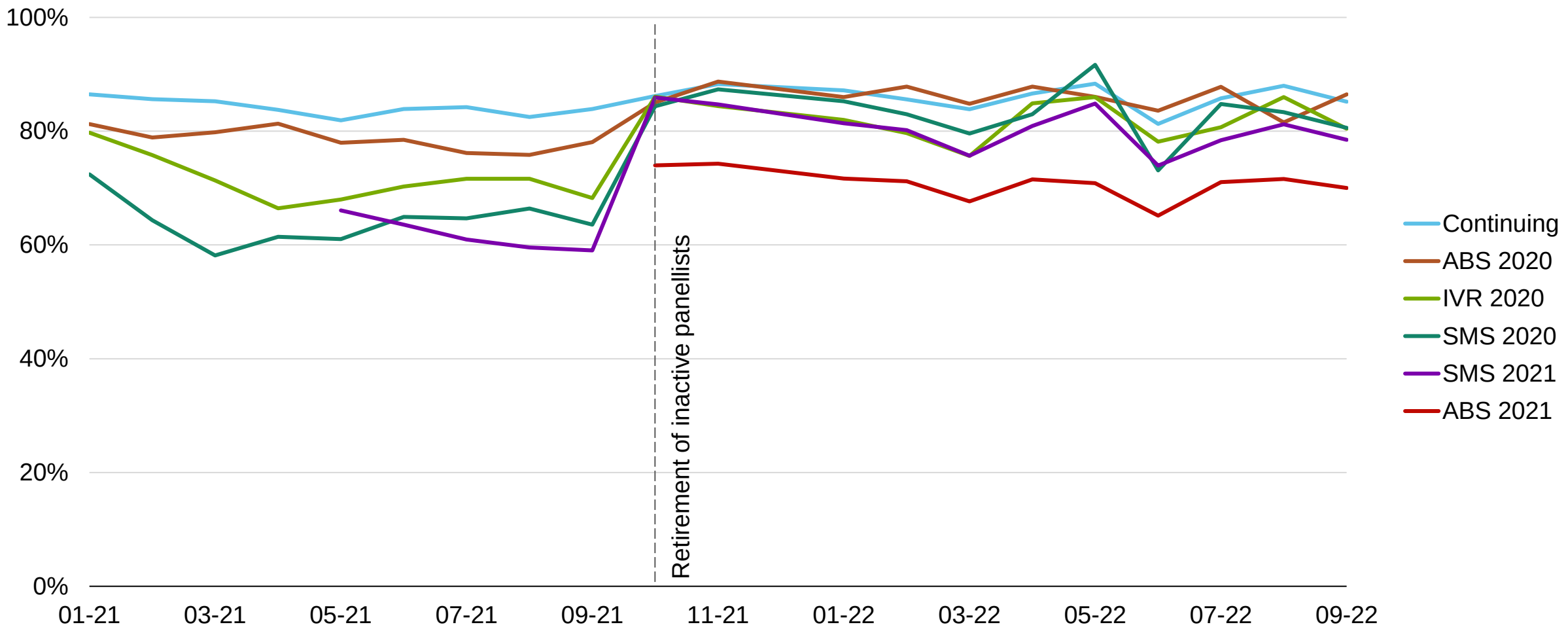
* Trial of various recruitment approaches across three replicates. Earlier versions of this presentation showed the 9.0% RECR × PROR for the final replicate that 2020 ABS recruitment was based on. We show net recruitment across three replicates.

For definitions of outcome rates see Callegaro and DiSogra (2008).

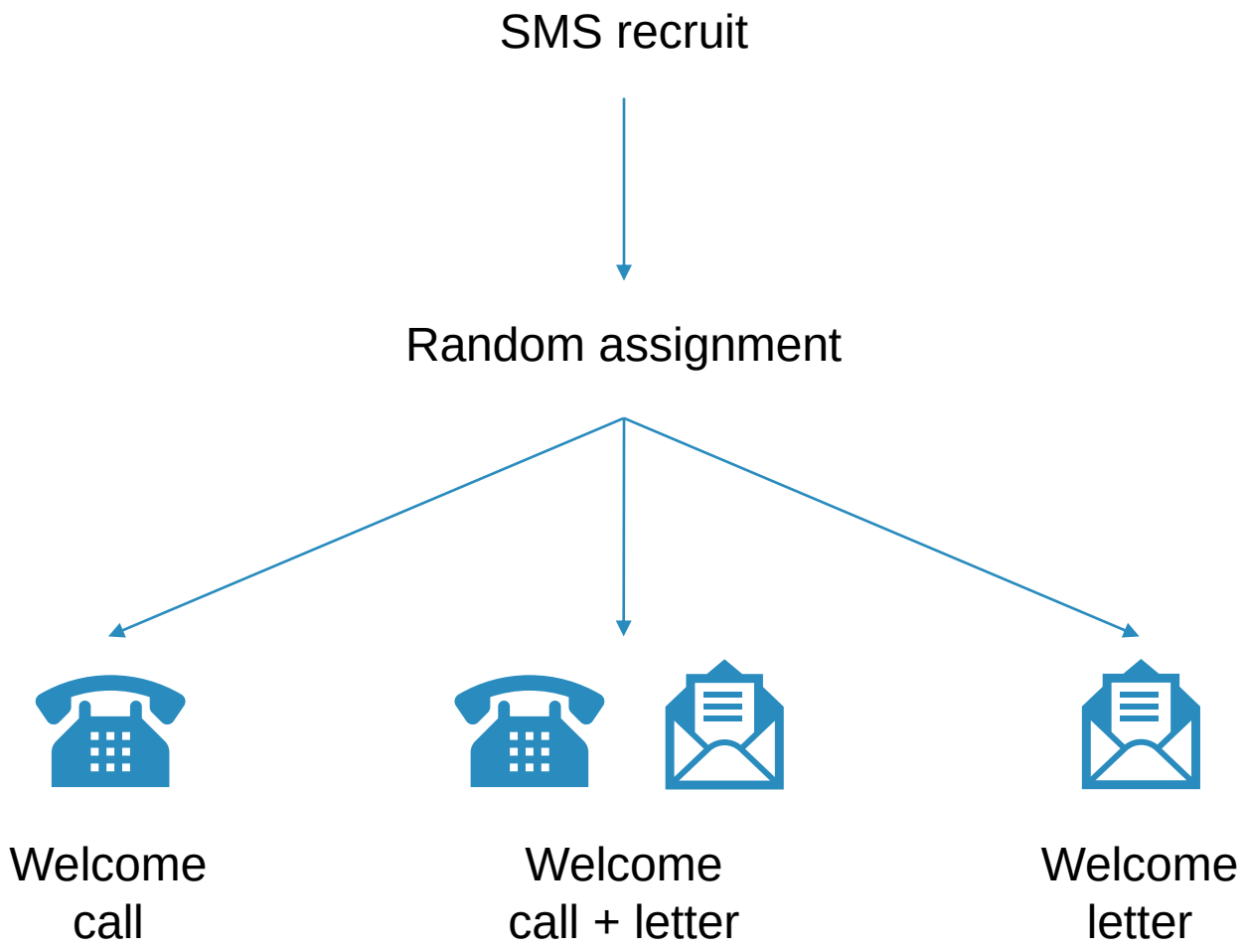
Retention Rates



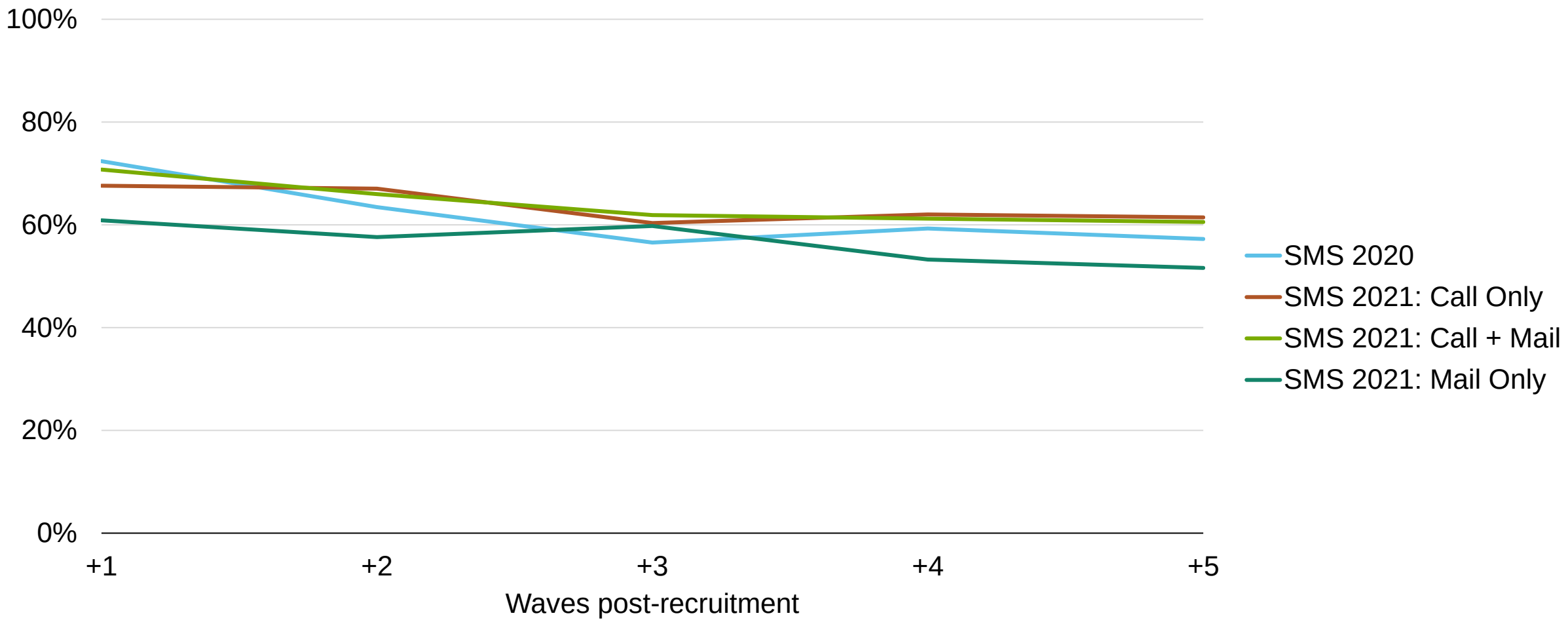
Completion Rates



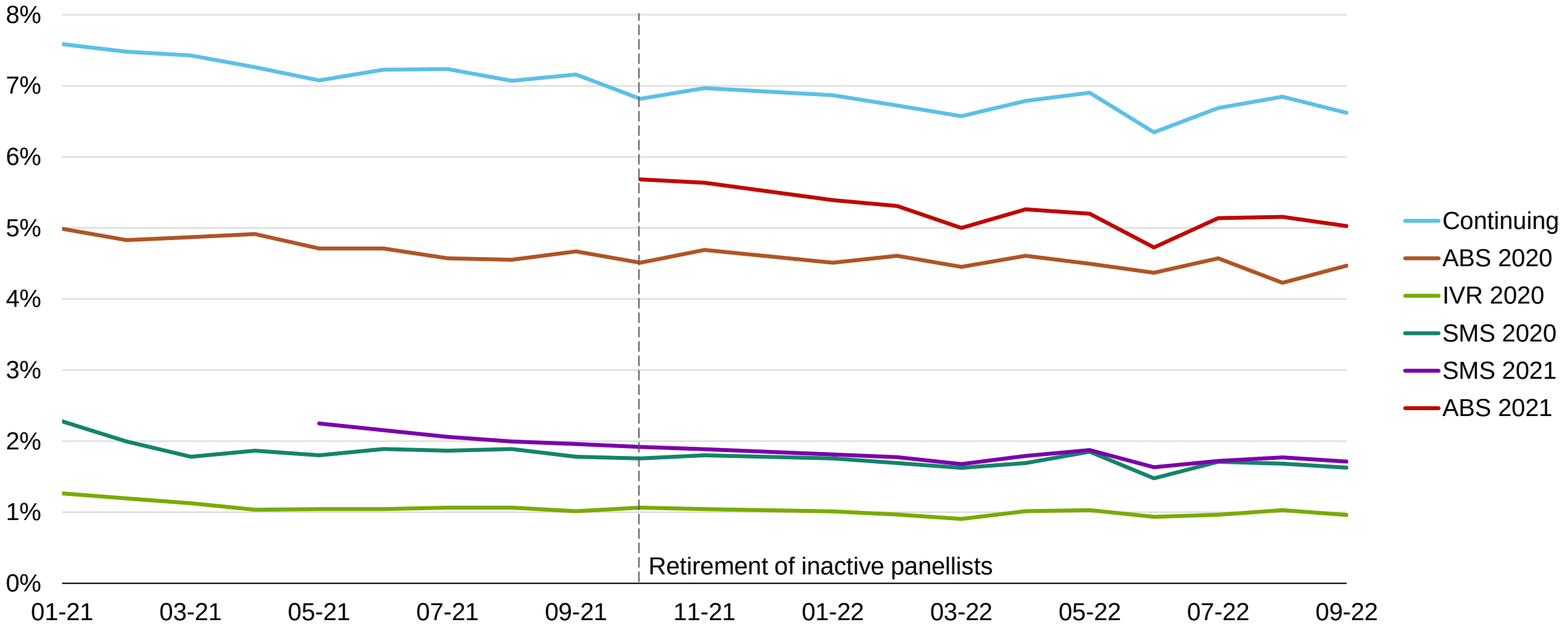
Post-enrolment trials: SMS 2021



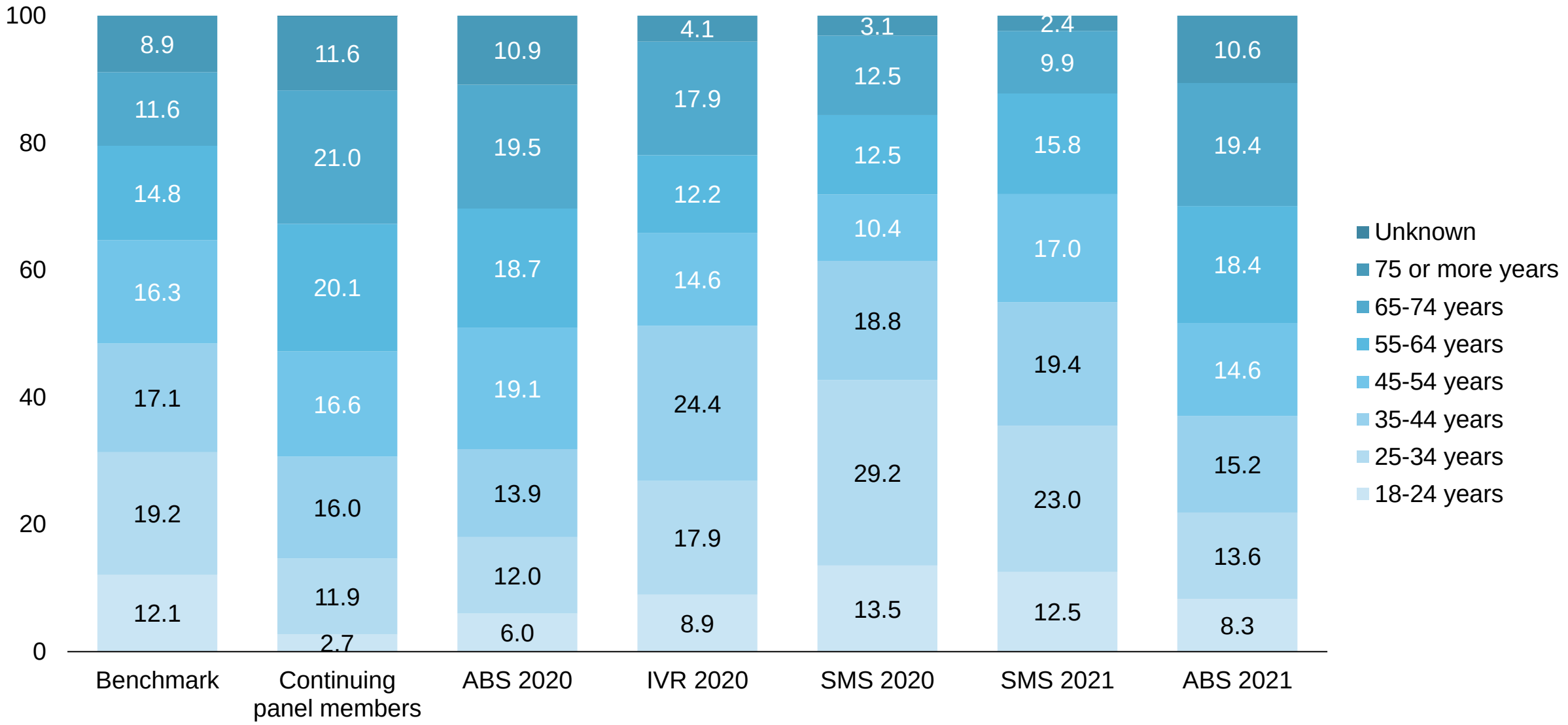
Did the trials help? Retention × Completion Rates



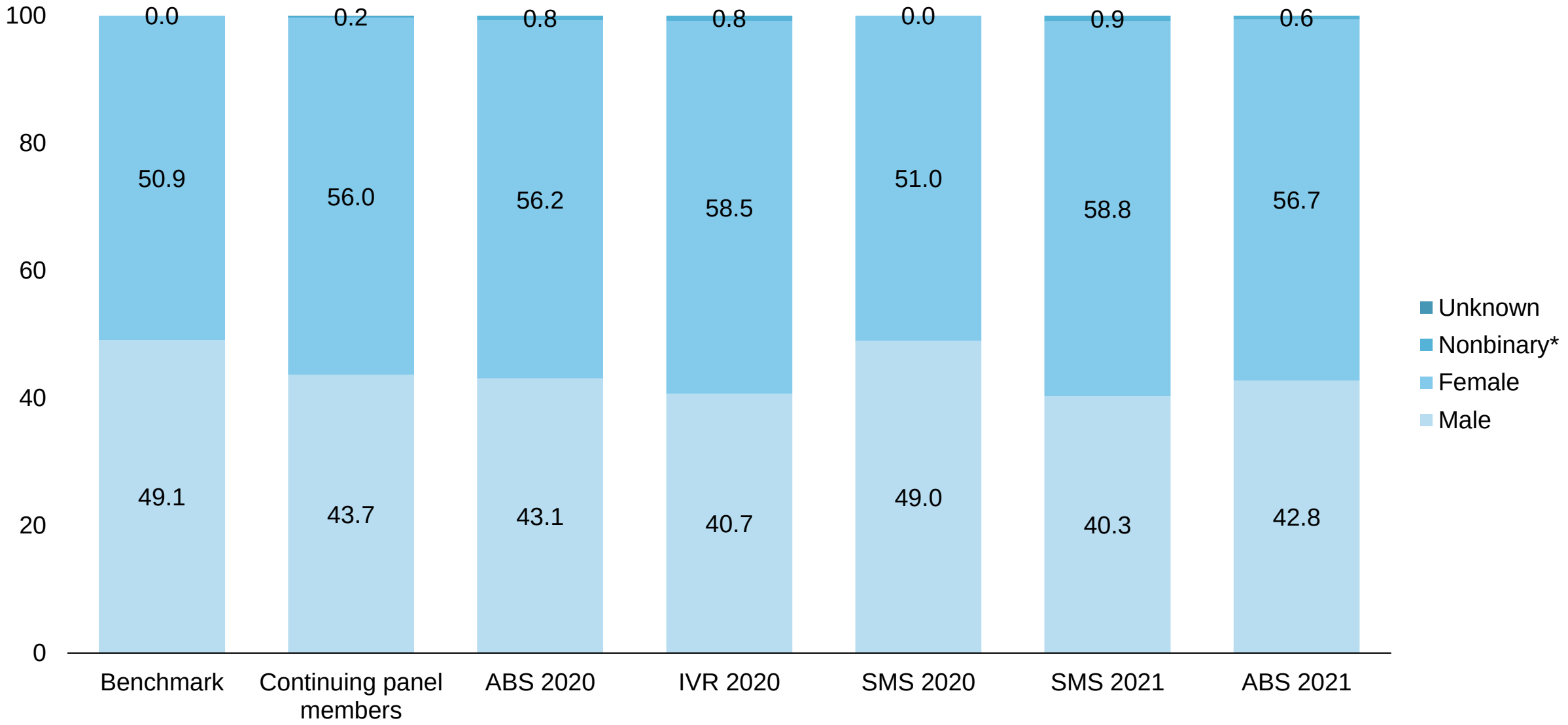
Cumulative Response Rate 2



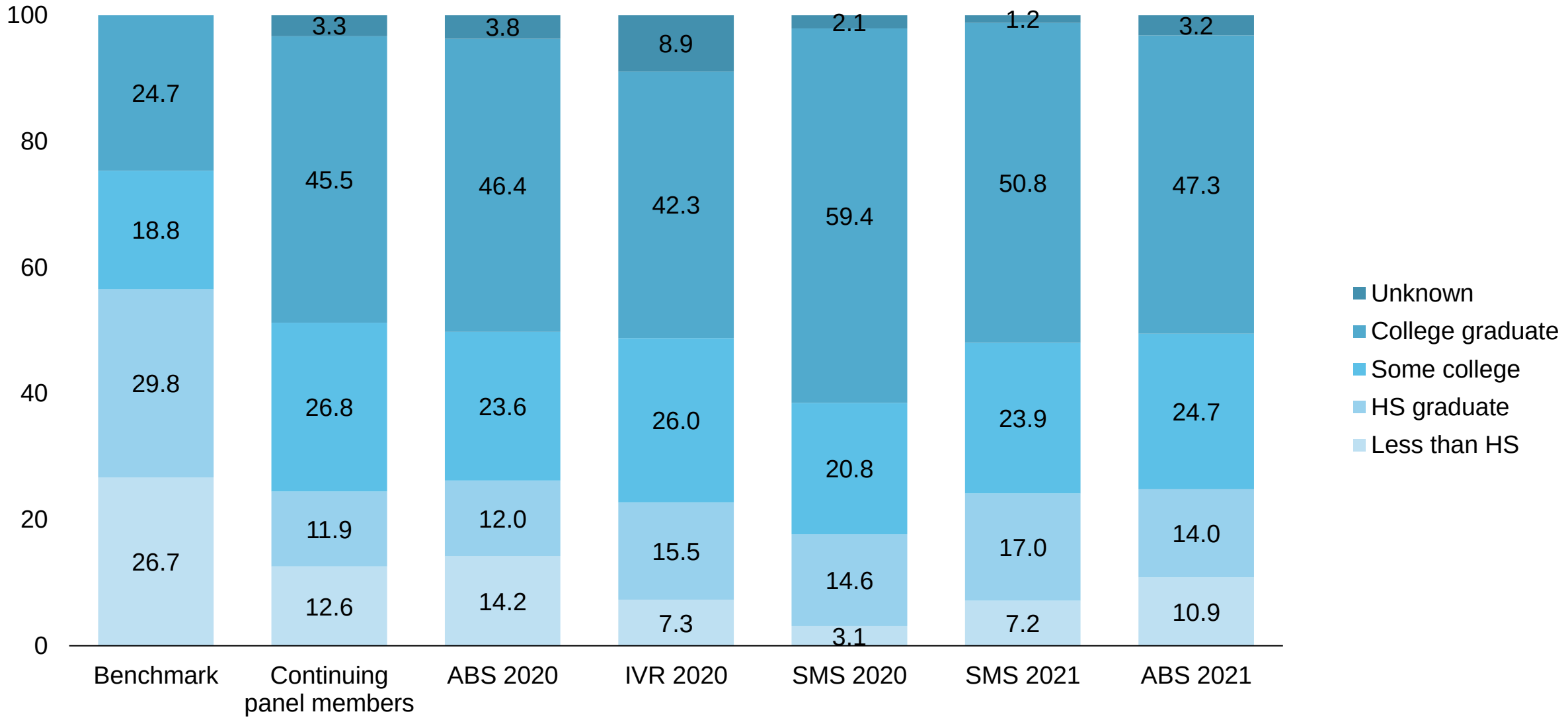
Age (Oct 2021)


100
80
60
40
20
0
8.9
11.6
14.8
16.3
17.1
19.2
12.1
11.6
21.0
20.1
16.6
16.0
11.9
2.7
10.9
19.5
18.7
19.1
13.9
12.0
6.0
4.1
17.9
12.2
14.6
24.4
17.9
8.9
3.1
12.5
12.5
10.4
18.8
29.2
13.5
2.4
9.9
15.8
17.0
19.4
23.0
12.5
10.6
19.4
18.4
14.6
15.2
13.6
8.3
Benchmark
Continuing panel members
ABS 2020
IVR 2020
SMS 2020
SMS 2021
ABS 2021
Unknown
75 or more years
65-74 years
55-64 years
45-54 years
35-44 years
25-34 years
18-24 years

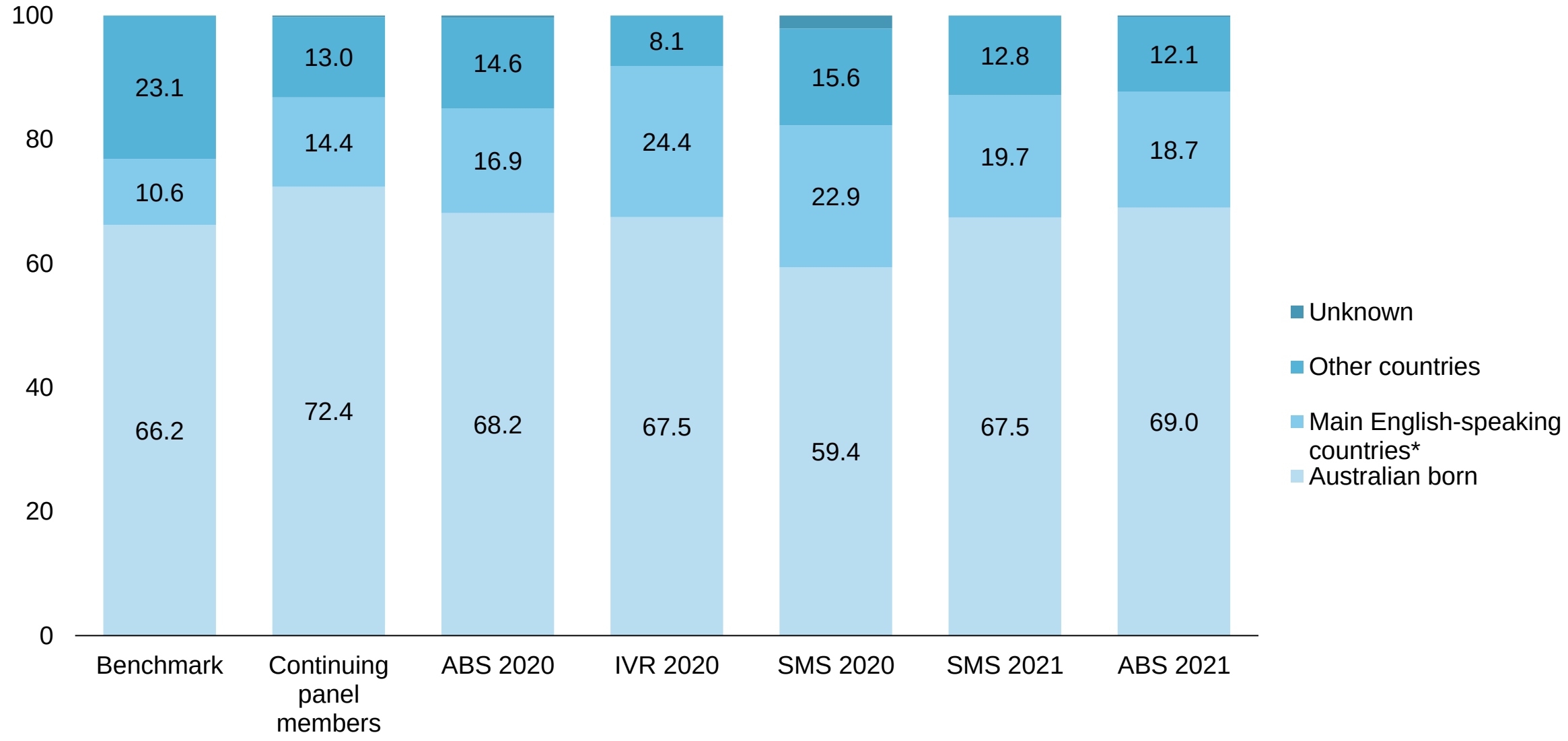
Gender (Oct 2021)



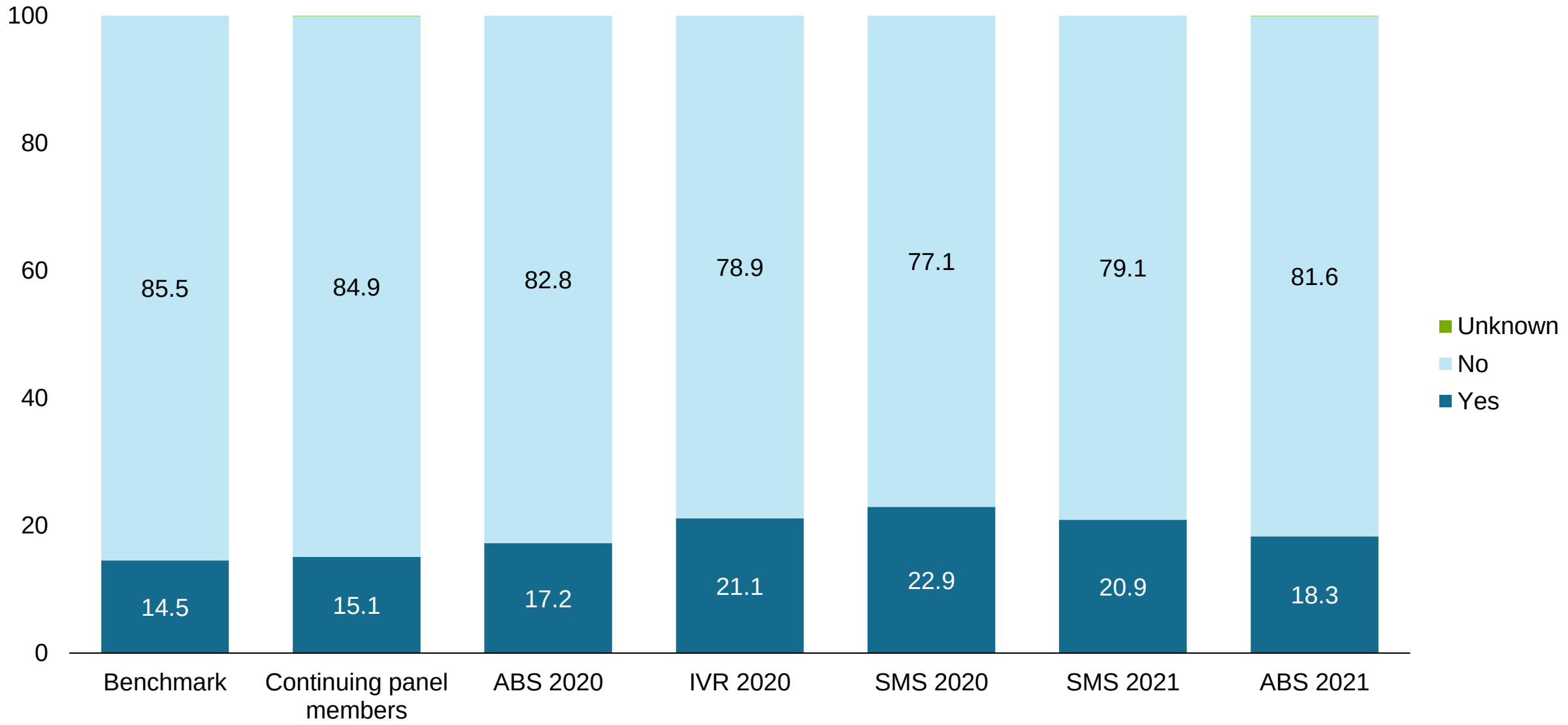
Education (Oct 2021)



Country of birth (Oct 2021)



Speak language other than English at home (Oct 2021)



Odds ratios for Completion × Retention Rates after controls

Wave	IVR 2020	SMS 2020
January 2021	.993	.669
February 2021	.881	.519**
March 2021	.705	.386***
April 2021	.505**	.410**
May 2021	.615*	.451**
June 2021	.637	.545*
July 2021	.777	.608*
August 2021	.850	.672
September 2021	.603*	.505**

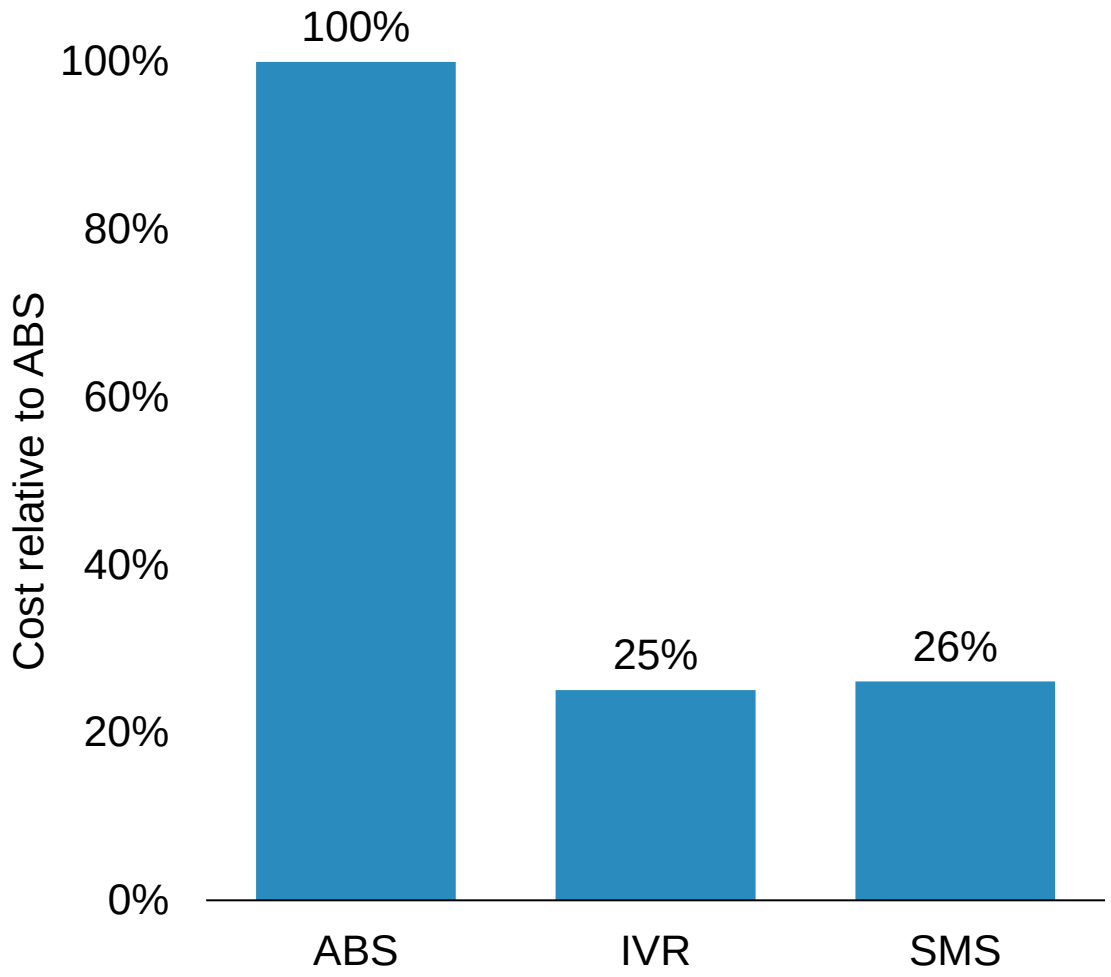
* $p < .05$; ** $p < .01$; *** $p < .001$

Were the lower retention and completion results due to sample profile and not a direct effect of recruitment method?

No.

Logit models controlling for age group, gender, country of birth group, Indigenous status, state, and region of state (capital, rest of state). Rest of model not shown. A-BS recruitment is reference category. Excludes unknown country of birth.

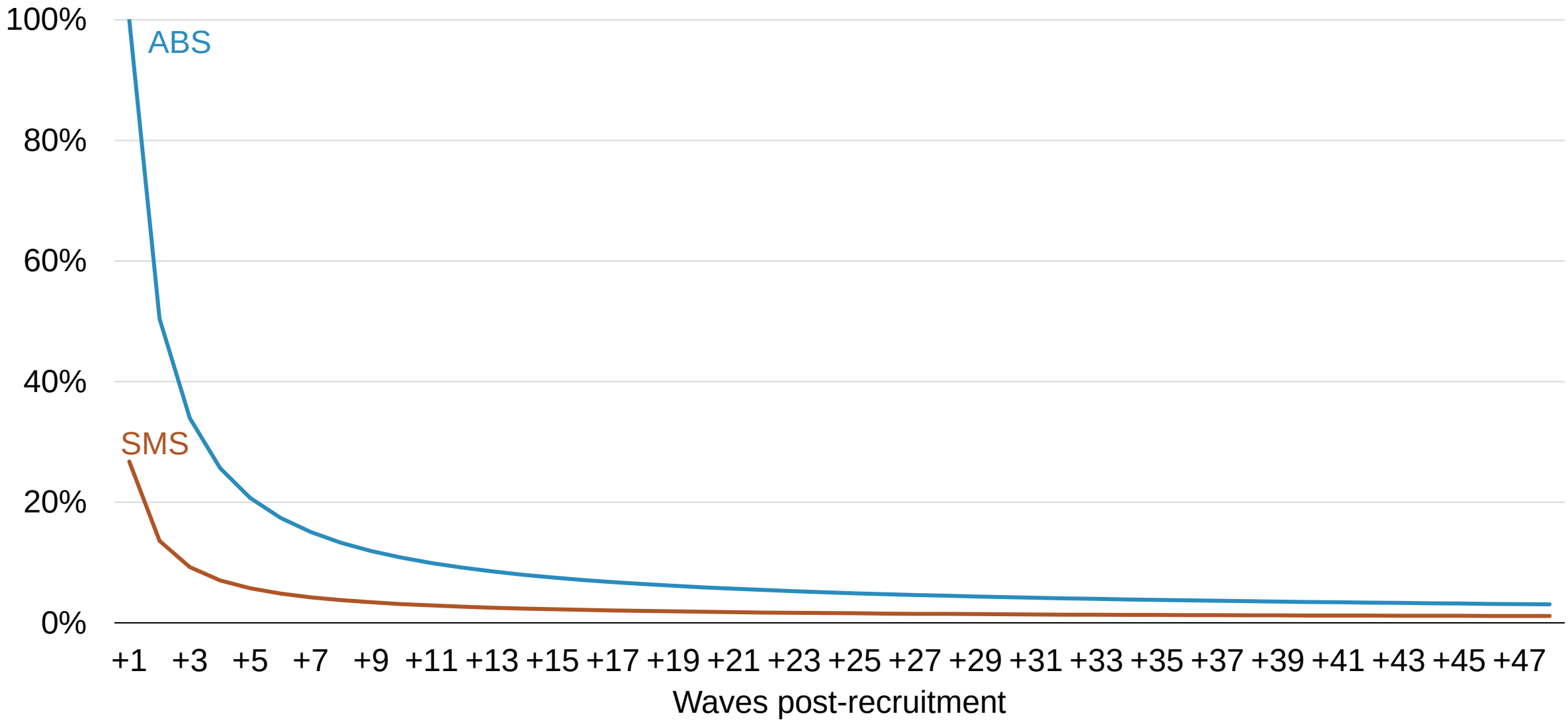
Relative cost per enrolled panel member



Higher fixed costs for IVR set-up

Savings to be passed on to clients: recruitment costs amortised over several year span

Projected amortised recruitment rate cost per complete



Conclusion

Times change:

- When last presented: planned ABS for major expansion, SMS for top-ups
- Now: SMS push-to-web preferred for expansion due to lower costs, greater representation of young adults

Potential impact from major data breach in September 2022 at Optus, Australia's second largest mobile carrier

- 10 million customers
- Material accessed includes names, birth dates, phone numbers, email addresses, home addresses and passport and driver's license numbers

Will have SMS push-to-web surveys—not for Life in Australia™ recruitment—in the field in December to shed light on any impact of the Optus breach

Social Research Centre

Life in Australia™
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Thank you

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Odds ratios of model of survey response

	January†		February		March		April‡		May		June‡		July	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Mode														
ABS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IVR	0.993	0.272	0.881	0.226	0.705	0.174	0.505**	0.126	0.615*	0.145	0.637	0.156	0.777	0.185
SMS	0.669	0.176	0.519**	0.128	0.386***	0.094	0.410***	0.103	0.451**	0.107	0.545*	0.134	0.608*	0.147
State														
NSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VIC	0.998	0.299	1.615	0.470	1.231	0.342	0.981	0.271	1.042	0.275	1.164	0.320	0.896	0.243
QLD	0.774	0.240	0.732	0.205	0.843	0.240	0.626	0.180	0.706	0.192	0.535*	0.151	0.548*	0.153
SA	0.965	0.427	1.351	0.590	1.041	0.416	1.264	0.542	1.076	0.430	1.268	0.532	0.793	0.313
WA	0.678	0.252	0.835	0.296	1.072	0.389	1.099	0.417	0.942	0.326	1.092	0.402	0.615	0.213
TAS	0.825	0.552	0.567	0.343	0.571	0.355	0.560	0.348	0.908	0.557	0.817	0.527	0.806	0.511
NT	0.038**	0.045	0.069*	0.080	0.200	0.196	-	-	0.082*	0.096	-	-	0.218	0.214
ACT	1.375	0.823	1.106	0.580	1.184	0.605	1.326	0.708	1.142	0.571	1.224	0.619	1.274	0.672
Region														
Capital city	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rest of state	1.034	0.263	0.614*	0.144	1.079	0.259	0.971	0.234	0.818	0.184	1.012	0.241	0.870	0.201

* $p < .05$; ** $p < .01$; *** $p < .001$

† Non-binary gender dropped due to perfect prediction; ‡ NT dropped due to perfect prediction.

Odds ratios of model of survey response

	January†		February		March		April‡		May		June‡		July	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Gender														
Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Female	0.690	0.152	0.971	0.199	0.776	0.158	1.002	0.205	0.984	0.191	0.952	0.193	0.878	0.173
Non-binary	-	-	3.704	4.457	1.462	1.467	6.409	7.672	1.832	1.810	2.082	2.031	0.896	0.870
Age group														
18-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-34	1.642	0.620	1.153	0.415	1.547	0.545	1.666	0.598	1.468	0.511	1.178	0.413	1.052	0.363
35-44	1.948	0.745	1.529	0.559	1.690	0.600	2.056*	0.744	2.256*	0.802	1.316	0.465	1.703	0.597
45-54	4.542***	1.957	3.204**	1.279	2.898**	1.104	5.608***	2.299	4.083***	1.574	2.633*	0.995	3.637**	1.372
55-64	4.234**	1.837	2.693*	1.079	3.636**	1.452	4.669***	1.909	3.265**	1.253	4.682***	1.933	4.259***	1.679
65-74	7.301***	3.498	6.658***	3.052	9.274***	4.326	12.269***	5.822	7.312***	3.103	19.712***	11.030	11.695***	5.428
75+	3.079*	1.667	5.336**	3.205	5.840**	3.459	6.373**	3.638	3.623*	1.845	4.510**	2.539	5.260**	2.840
Country of birth														
Australia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Main Eng.-spk.	0.776	0.244	0.799	0.243	1.018	0.316	0.907	0.287	0.948	0.279	1.240	0.393	1.039	0.314
Other	1.424	0.425	1.202	0.331	1.222	0.325	1.206	0.322	1.185	0.303	1.683	0.449	1.500	0.390

* $p < .05$; ** $p < .01$; *** $p < .001$

† Non-binary gender dropped due to perfect prediction; ‡ NT dropped due to perfect prediction.

Odds ratios of model of survey response

	January†		February		March		April‡		May		June‡		July	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Indigenous														
No	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yes	0.367	0.284	1.099	0.857	0.193*	0.156	0.184*	0.148	0.679	0.512	0.198	0.165	0.393	0.300
Education														
LT H.S.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H.S.	3.787**	1.694	2.766*	1.168	2.238	0.928	2.455*	1.083	3.100**	1.272	2.549*	1.100	2.506*	1.022
Technical	1.932	0.682	1.910	0.669	1.403	0.491	1.102	0.402	1.795	0.605	1.678	0.616	1.788	0.617
University	2.520**	0.857	2.560**	0.871	2.793**	0.965	2.202*	0.794	2.570**	0.843	2.114*	0.753	2.715**	0.914
Not provided	3.051	2.143	7.340*	6.130	2.671	1.749	0.979	0.570	2.372	1.377	3.471	2.351	2.631	1.633
Constant	0.998	0.517	0.914	0.457	0.848	0.420	0.891	0.456	0.664	0.323	0.743	0.374	0.705	0.344
n	604		609		609		604		609		604		609	
Log-likelihood	-284.410		- 310.332		-318.539		-309.266		-340.355		-315.186		-332.388	
Chi-square	60.31		74.50		87.92		97.53		72.09		102.05		91.21	
DF	24		25		25		24		25		24		25	
p	0.000		0.000		0.000		0.000		0.000		0.000		0.000	
Pseudo-R^2	0.096		0.107		0.121		0.136		0.096		0.139		0.121	

* $p < .05$; ** $p < .01$; *** $p < .001$

† Non-binary gender dropped due to perfect prediction; ‡ NT dropped due to perfect prediction.

Odds ratios of model of survey response

	August		September	
	OR	SE	OR	SE
Mode				
ABS	-	-	-	-
IVR	0.850	0.204	0.603*	0.144
SMS	0.672	0.163	0.505**	0.122
State				
NSW	-	-	-	-
VIC	0.756	0.204	1.089	0.289
QLD	0.531*	0.151	0.720	0.200
SA	0.930	0.374	1.278	0.517
WA	0.884	0.319	1.340	0.484
TAS	0.372	0.224	0.482	0.283
NT	0.066*	0.078	0.092*	0.109
ACT	1.036	0.525	1.822	0.961
Region				
Capital city	-	-	-	-
Rest of state	1.327	0.315	1.228	0.287

* $p < .05$; ** $p < .01$; *** $p < .001$

Odds ratios of model of survey response

	August		September	
	OR	SE	OR	SE
Gender				
Male	-	-	-	-
Female	0.959	0.190	0.970	0.191
Non-binary	2.836	2.782	2.487	2.428
Age group				
18-24	-	-	-	-
25-34	1.510	0.531	1.596	0.561
35-44	2.117*	0.753	2.593**	0.929
45-54	5.605***	2.215	5.112***	1.989
55-64	4.664***	1.831	5.016***	1.981
65-74	13.040***	5.988	14.844***	3.052
75+	11.772***	7.086	6.938***	3.803
Country of birth				
Australia	-	-	-	-
Main Eng.-spk.	1.293	0.408	0.888	0.268
Other	1.504	0.408	1.087	0.275

* $p < .05$; ** $p < .01$; *** $p < .001$

Odds ratios of model of survey response

	August		September	
	OR	SE	OR	SE
Indigenous				
No	-	-	-	-
Yes	0.532	0.414	0.443	0.319
Education				
LT H.S.	-	-	-	-
H.S.	3.713**	1.578	3.314**	1.406
Technical	1.660	0.581	1.729	0.607
University	3.154**	1.087	2.768**	0.949
Not provided	2.073	1.235	2.452	1.456
Constant	0.398	0.199	0.409	0.204
n	609		609	
Log-likelihood	-328.096		-330.812	
Chi-square	99.80		100.57	
DF	25		25	
p	0.000		0.000	
Pseudo-R^2	0.132		0.132	

* $p < .05$; ** $p < .01$; *** $p < .001$

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