

### **Ipsos Poll Conducted for Reuters**

2020 Democratic Primary Horserace Poll 07.02.2019

These are findings from an Ipsos poll conducted **June 29-July 2, 2019** on behalf of Thomson Reuters. For the survey, a sample of roughly 2,221 adults age 18+ from the continental U.S., Alaska and Hawaii was interviewed online in English. This sample includes 1,973 registered voters, 909 Democratic registered voters, 800 Republican registered voters, and 189 Independent registered voters.

The sample for this study was randomly drawn from Ipsos's online panel (see link below for more info on "Access Panels and Recruitment"), partner online panel sources, and "river" sampling (see link below for more info on the Ipsos "Ampario Overview" sample method) and does not rely on a population frame in the traditional sense. Ipsos uses fixed sample targets, unique to each study, in drawing sample. After a sample has been obtained from the Ipsos panel, Ipsos calibrates respondent characteristics to be representative of the U.S. Population using standard procedures such as raking-ratio adjustments. The source of these population targets is U.S. Census 2016 American Community Survey data. The sample drawn for this study reflects fixed sample targets on demographics. Post-hoc weights were made to the population characteristics on gender, age, region, race/ethnicity and income.

Statistical margins of error are not applicable to online non-probability polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Where figures do not sum to 100, this is due to the effects of rounding. The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll has a credibility interval of plus or minus 2.4 percentage points for all respondents (see link below for more info on Ipsos online polling "Credibility Intervals"). Ipsos calculates a design effect (DEFF) for each study based on the variation of the weights, following the formula of Kish (1965). This study had a credibility interval adjusted for design effect of the following (n=2,221 DEFF=1.5, adjusted Confidence Interval=3.9).

The poll also has a credibility interval plus or minus 2.5 percentage points for registered voters, plus or minus 3.7 percentage points for Democratic registered voters, plus or minus 4.0 percentage points for Republican registered voters, plus or minus 8.1 percentage points for Independent registered voters (see link below for more info on Ipsos online polling "Credibility Intervals").

For more information about Ipsos online polling methodology, please go here http://goo.gl/yJBkuf

**TOPLINE BEGINS ON THE FOLLOWING PAGE** 



		All Americans	All Registered Voters	Democratic Registered Voters	Republican Registered Voters	Independent Registered Voters
	Joe Biden	22%	24%	28%	*	14%
	Kamala Harris	10%	11%	13%	*	4%
	Elizabeth Warren	9%	11%	13%	*	3%
	Bernie Sanders	16%	17%	18%	*	11%
	Beto O'Rourke	3%	3%	4%	*	2%
	Cory Booker	1%	1%	1%	*	1%
	Julian Castro	1%	1%	2%	*	0%
	Amy Klobuchar	0%	1%	1%	*	1%
	Kirsten Gillibrand	1%	1%	1%	*	1%
	Pete Buttigieg	3%	4%	4%	*	3%
	Tulsi Gabbard	0%	0%	0%	*	0%
If the 2020 Development	John Hickenlooper	0%	0%	0%	*	1%
If the 2020 Democratic presidential primary	Steve Bullock	1%	1%	0%	*	0%
election were held today,	Jay Inslee	0%	0%	0%	*	0%
and you had to choose	John Delaney	0%	0%	0%	*	1%
from the list of candidates below, for whom would	Marianne Williamson	0%	0%	0%	*	0%
you vote?	Andrew Yang	2%	3%	3%	*	1%
	Tim Ryan	1%	1%	1%	*	0%
	Wayne Messam	0%	0%	0%	*	0%
	Eric Swalwell	0%	0%	0%	*	0%
	Seth Moulton	0%	0%	0%	*	1%
	Michael Bennet	0%	0%	0%	*	0%
	Bill de Blasio	0%	0%	0%	*	0%
	Mike Gravel	0%	0%	0%	*	0%
	Joe Sestak	0%	0%	0%	*	0%
	Other	2%	1%	1%	*	3%
	Don't know	21%	15%	9%	*	32%
	I can't/won't vote in the Democratic primary	4%	3%	1%	*	18%



	Total	1367	1173	909	0	189
	Completely certain	35%	36%	37%	*	31%
How certain are you that	Mostly certain	44%	44%	45%	*	36%
you will vote for [CANDIDATE NAME] in the Democratic presidential	Not very certain	17%	17%	15%	*	27%
primary?	Not at all certain	3%	3%	3%	*	6%
	Total	1031	941	812	0	93
	Joe Biden	15%	15%	17%	*	8%
	Kamala Harris	12%	14%	16%	*	8%
	Elizabeth Warren	14%	16%	19%	*	6%
	Bernie Sanders	14%	14%	15%	*	16%
	Beto O'Rourke	4%	5%	5%	*	2%
	Cory Booker	4%	5%	5%	*	3%
	Julian Castro	3%	3%	3%	*	0%
	Amy Klobuchar	3%	3%	3%	*	1%
	Kirsten Gillibrand	2%	2%	1%	*	3%
	Pete Buttigieg	5%	6%	6%	*	3%
	Tulsi Gabbard	0%	0%	0%	*	0%
If your first choice dropped out of the race or you had	John Hickenlooper	0%	0%	0%	*	0%
to choose someone to vote	Steve Bullock	0%	0%	0%	*	0%
for, who would you vote	Jay Inslee	0%	0%	0%	*	0%
for in the upcoming	John Delaney	0%	0%	0%	*	0%
presidential primary election?	Marianne Williamson	0%	0%	0%	*	0%
	Andrew Yang	0%	0%	0%	*	0%
	Tim Ryan	0%	0%	0%	*	0%
	Wayne Messam	0%	0%	0%	*	0%
	Eric Swalwell	0%	0%	0%	*	0%
	Other	24%	18%	9%	*	50%
	Don't know	0%	0%	0%	*	0%
	Seth Moulton	0%	0%	0%	*	0%
	Michael Bennet	0%	0%	0%	*	0%
	Bill de Blasio	0%	0%	0%	*	0%
	Mike Gravel	0%	0%	0%	*	0%
	Joe Sestak	0%	0%	0%	*	0%
	Total	1314	1131	905	0	151



	A great deal	17%	19%	27%	13%	11%
How much, if anything,	A fair amount	28%	29%	33%	29%	20%
have you seen, heard or read about the most recent	A little bit	38%	38%	32%	45%	43%
Democratic presidential primary debate?	Not heard anything at all	17%	13%	8%	12%	26%
, ,	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 26th between Cory	No	84%	82%	76%	86%	91%
Booker, Amy Klobuchar, Elizabeth Warren, Tulsi	Yes	16%	18%	24%	14%	9%
Gabbard, Tim Ryan, John Delaney, Beto O'Rourke, Julian Castro, Bill de Blasio, and Jay Inslee? Yes, I watched it live	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 26th between Cory	No	86%	85%	83%	84%	92%
Booker, Amy Klobuchar, Elizabeth Warren, Tulsi	Yes	14%	15%	17%	16%	8%
Gabbard, Tim Ryan, John Delaney, Beto O'Rourke, Julian Castro, Bill de Blasio, and Jay Inslee? Yes, I saw or heard some clips of the debate on TV/Radio/Podcast	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 26th between Cory	No	87%	87%	83%	89%	93%
Booker, Amy Klobuchar, Elizabeth Warren, Tulsi	Yes	13%	13%	17%	11%	7%
Gabbard, Tim Ryan, John Delaney, Beto O'Rourke, Julian Castro, Bill de Blasio, and Jay Inslee? Yes, I saw some clips of the debate online	Total	2221	1973	909	800	189



Did you watch the Democratic primary debate	No	80%	78%	80%	76%	75%
on June 26th between Cory Booker, Amy Klobuchar, Elizabeth Warren, Tulsi	Yes	20%	22%	20%	24%	25%
Gabbard, Tim Ryan, John Delaney, Beto O'Rourke, Julian Castro, Bill de Blasio, and Jay Inslee? No, but I read or heard coverage of the debate	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 26th between Cory	No	58%	62%	70%	60%	45%
Booker, Amy Klobuchar, Elizabeth Warren, Tulsi	Yes	42%	38%	30%	40%	55%
Gabbard, Tim Ryan, John Delaney, Beto O'Rourke, Julian Castro, Bill de Blasio, and Jay Inslee? No, I have not seen any of the debate	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 27th between Joe	No	83%	81%	74%	86%	91%
Biden, Michael Bennet, Kirsten Gillibrand, Kamala	Yes	17%	19%	26%	14%	9%
Harris, Bernie Sanders, Pete Buttigieg, John Hickenlooper, Eric Swalwell, Marianne Williamson, and Andrew Yang? Yes, I watched it live	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 27th between Joe	No	86%	85%	83%	85%	91%
Biden, Michael Bennet, Kirsten Gillibrand, Kamala	Yes	14%	15%	17%	15%	9%
Harris, Bernie Sanders, Pete Buttigieg, John Hickenlooper, Eric Swalwell, Marianne Williamson, and Andrew Yang? Yes, I saw or heard some clips of the debate on TV/Radio/Podcast	Total	2221	1973	909	800	189



## Reuters/Ipsos Poll Data

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Prepared	by I	psos

Did you watch the Democratic primary debate on June 27th between Joe	No	90%	89%	87%	91%	93%
Biden, Michael Bennet, Kirsten Gillibrand, Kamala	Yes	10%	11%	13%	9%	7%
Harris, Bernie Sanders, Pete Buttigieg, John Hickenlooper, Eric Swalwell, Marianne Williamson, and Andrew Yang? Yes, I saw some clips of the debate online	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 27th between Joe	No	79%	77%	79%	75%	79%
Biden, Michael Bennet, Kirsten Gillibrand, Kamala	Yes	21%	23%	21%	25%	21%
Harris, Bernie Sanders, Pete Buttigieg, John Hickenlooper, Eric Swalwell, Marianne Williamson, and Andrew Yang? No, but I read or heard coverage of the debate	Total	2221	1973	909	800	189
Did you watch the Democratic primary debate on June 27th between Joe	No	58%	62%	70%	60%	43%
Biden, Michael Bennet, Kirsten Gillibrand, Kamala	Yes	42%	38%	30%	40%	57%
Harris, Bernie Sanders, Pete Buttigieg, John Hickenlooper, Eric Swalwell, Marianne Williamson, and Andrew Yang? No, I have not seen any of the debate	Total	2221	1973	909	800	189



	Cory Booker	5%	5%	6%	5%	4%
	Amy Klobuchar	5%	4%	5%	4%	2%
	Elizabeth Warren	32%	33%	43%	18%	30%
Regardless of which	Tulsi Gabbard	5%	5%	4%	8%	2%
candidate you happen to	Tim Ryan	3%	4%	2%	7%	4%
support, who do you think	John Delaney	3%	3%	2%	4%	0%
did the better job in the	Beto O'Rourke	7%	7%	8%	6%	4%
June 26th debate?	Julian Castro	6%	6%	8%	4%	7%
	Bill de Blasio	2%	2%	3%	1%	2%
	Jay Inslee	2%	2%	3%	1%	0%
	Don't know	30%	28%	17%	41%	46%
	Total		788	448	279	43
	1	839				
	Joe Biden	15%	15%	16%	14%	18%
Regardless of which	Michael Bennet	2%	2%	2%	2%	0%
	Kirsten Gillibrand	2%	2%	1%	2%	0%
	Kamala Harris	35%	35%	44%	21%	27%
	Bernie Sanders	10%	10%	13%	6%	12%
candidate you happen to support, who do you think	Pete Buttigieg	6%	6%	6%	5%	12%
did the better job in the June 27th debate?	John Hickenlooper	2%	2%	1%	4%	0%
	Eric Swalwell	2%	1%	2%	1%	0%
	Marianne Williamson	3%	3%	2%	4%	4%
	Andrew Yang	5%	5%	5%	6%	5%
	Don't know	19%	18%	6%	35%	23%
	Total	830	784	450	269	46
	Yes - more positive towards candidate	21%	21%	29%	10%	13%
And has the debate changed your view of each candidate? Cory Booker:	Yes - more negative towards candidate	17%	17%	10%	30%	8%
candidater Cory Booker :	No - has not changed my view	52%	54%	53%	53%	67%
	Don't know	9%	8%	8%	7%	12%
	Total	839	788	448	279	43



Yes - more positive towards candidate							
And has the debate changed your view of each candidate? Amy Klobuchar:    No - has not changed my view   No - has not changed your view of each candidate?   No - has not changed your view of each candidate?   No - has not changed your view of each candidate? Elizabeth Warren:   No - has not changed my view   No - has not changed your view of each candidate? Tulsi Gabbard:   No - has not changed your view of each candidate? Tulsi Gabbard:   No - has not changed your view of each candidate? Tulsi Gabbard:   No - has not changed your view of each candidate? Tulsi Gabbard:   No - has not changed my view   No - has not changed your view of each candidate?   No - has not changed my view   No - has not view   No - has	changed your view of each	positive towards	15%	15%	20%	9%	7%
No - has not changed my view   Don't know   13%   11%   11%   10%   14%		negative towards	13%	14%	9%	20%	15%
Total   839   788   448   279   43		No - has not changed my	60%	61%	60%	61%	65%
And has the debate changed your view of each candidate Warren:  And has the debate changed your view of each candidate Warren:  And has the debate changed my view  And has the debate changed my view  And has the debate changed your view of each candidate? Tulsi Gabbard:  And has the debate changed your view of each candidate? Tulsi Gabbard:  And has the debate changed your view of each candidate? Tulsi Gabbard:  And has the debate changed your view of each candidate? Tulsi Gabbard:  And has the debate changed my view  Don't know  And has the debate changed my view  Don't know  And has the debate changed my view  Don't know  Don't know		Don't know	13%	11%	11%	10%	14%
And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate? Tulsi Gabbard :  And has the debate changed your view of each candidate    Yes - more negative towards candidate    No - has not changed my view    Don't know    13%    13%    13%    45%    45%    65%    45%    66%    88%    788    448    279    43    44%    45%    65%    86%    87    14%    14%    16%    13%    44%    45%    65%    65%    86%    66%    87    15%		Total	839	788	448	279	43
And has the debate changed your view of each candidate? Elizabeth Warren:    No - has not changed my view   No - has not changed my view	changed your view of each	positive towards	32%	32%	45%	14%	13%
And has the debate changed your view of each candidate? Tulsi Gabbard:  And has the debate changed your view of each candidate? Tulsi Gabbard:  No - has not changed my view of each candidate  No - has not changed my view  Don't know 13% 12% 12% 10% 20%		negative towards	18%	19%	9%	35%	13%
Total   839   788   448   279   43	Warren :	changed my	43%	44%	42%	45%	65%
Yes - more		Don't know	7%	5%	4%	6%	8%
And has the debate changed your view of each candidate? Tulsi Gabbard:    Don't know   13%   14%   14%   16%   13%   13%   4%     14%   16%   13%   13%   14%   16%   13%   13%     14%   14%   16%   16%   15%     15%   15%   15%     16%   15%   15%     16%   15%   15%     16%   15%   15%     16%   15%   16%   15%     16%   15%   16%     16%   16%   16%     16%   16%   16%     16%   16%   16%     16%   16%   16%     16%   16%   16%     16%   16%		Total	839	788	448	279	43
And has the debate changed your view of each candidate? Tulsi Gabbard:  No - has not changed my view  Don't know  11%  12%  9%  16%  15%  15%  15%  62%  63%  62%  63%  62%  61%  10%  20%	changed your view of each	positive towards	14%	14%	16%	13%	4%
No - has not changed my view       61%       62%       63%       62%       61%         Don't know       13%       12%       12%       10%       20%		negative towards	11%	12%	9%	16%	15%
		changed my	61%	62%	63%	62%	61%
Total 839 788 448 279 43		Don't know	13%	12%	12%	10%	20%
		Total	839	788	448	279	43



	Yes - more positive towards candidate	11%	11%	12%	10%	4%
And has the debate changed your view of each candidate? Tim Ryan:	Yes - more negative towards candidate	14%	15%	13%	19%	9%
candidate: miniquin	No - has not changed my view	61%	63%	62%	63%	71%
	Don't know	14%	12%	14%	8%	16%
	Total	839	788	448	279	43
And has the debate changed your view of each candidate? John Delaney:	Yes - more positive towards candidate	12%	12%	12%	15%	2%
	Yes - more negative towards candidate	10%	10%	7%	16%	6%
culturate. John Belancy .	No - has not changed my view	62%	64%	66%	57%	78%
	Don't know	16%	14%	14%	12%	14%
	Total	839	788	448	279	43
And has the debate changed your view of each candidate? Beto O'Rourke :	Yes - more positive towards candidate	16%	16%	21%	9%	14%
	Yes - more negative towards candidate	21%	22%	16%	33%	7%
	No - has not changed my view	55%	56%	57%	52%	66%
	Don't know	8%	6%	6%	6%	13%
	Total	839	788	448	279	43



And has the debate changed your view of each candidate? Julian Castro:	Yes - more positive towards candidate	22%	22%	31%	12%	6%
	Yes - more negative towards candidate	16%	17%	12%	27%	11%
	No - has not changed my view	51%	52%	50%	52%	76%
	Don't know	11%	8%	7%	10%	7%
	Total	839	788	448	279	43
And has the debate changed your view of each candidate? Bill de Blasio :	Yes - more positive towards candidate	10%	11%	13%	9%	0%
	Yes - more negative towards candidate	20%	20%	14%	31%	6%
	No - has not changed my view	60%	61%	66%	51%	78%
	Don't know	10%	9%	7%	9%	16%
	Total	839	788	448	279	43
	Yes - more positive towards candidate	11%	10%	13%	8%	2%
And has the debate changed your view of each candidate? Jay Inslee:	Yes - more negative towards candidate	10%	11%	7%	16%	10%
	No - has not changed my view	63%	64%	64%	65%	64%
	Don't know	16%	15%	16%	11%	24%
T .						

Total



And has the debate changed your view of each	Yes - more positive towards candidate	23%	24%	31%	13%	17%
	Yes - more negative towards candidate	25%	26%	21%	36%	16%
candidate? Joe Biden :	No - has not changed my view	47%	47%	45%	48%	60%
	Don't know	4%	3%	2%	3%	8%
	Total	830	784	450	269	46
And has the debate changed your view of each candidate? Michael Bennet	Yes - more positive towards candidate	12%	12%	15%	9%	0%
	Yes - more negative towards candidate	10%	10%	8%	16%	5%
:	No - has not changed my view	62%	63%	61%	63%	75%
	Don't know	16%	15%	16%	12%	20%
	Total	830	784	450	269	46
And has the debate changed your view of each candidate? Kirsten Gillibrand :	Yes - more positive towards candidate	14%	13%	17%	9%	6%
	Yes - more negative towards candidate	18%	19%	14%	28%	20%
	No - has not changed my view	60%	60%	62%	57%	61%
	Don't know	9%	7%	7%	7%	12%
	Total	830	784	450	269	46



And has the debate changed your view of each candidate? Kamala Harris:	Yes - more positive towards candidate	39%	39%	55%	17%	19%
	Yes - more negative towards candidate	19%	20%	9%	38%	14%
candidate: Namaia marris .	No - has not changed my view	37%	38%	34%	40%	60%
	Don't know	5%	3%	2%	5%	7%
	Total	830	784	450	269	46
And has the debate changed your view of each candidate? Bernie Sanders :	Yes - more positive towards candidate	22%	22%	28%	11%	29%
	Yes - more negative towards candidate	23%	24%	16%	42%	7%
candidate: Bernie Januers.	No - has not changed my view	51%	51%	54%	45%	62%
	Don't know	3%	2%	2%	3%	2%
	Total	830	784	450	269	46
	Yes - more positive towards candidate	25%	26%	32%	19%	11%
And has the debate changed your view of each candidate? Pete Buttigieg:	Yes - more negative towards candidate	13%	14%	10%	21%	7%
	No - has not changed my view	53%	53%	49%	55%	71%
	Don't know	9%	7%	8%	5%	10%
	Total	830	784	450	269	46



And has the debate changed your view of each candidate? John Hickenlooper:	Yes - more positive towards candidate	11%	12%	13%	12%	2%
	Yes - more negative towards candidate	12%	13%	9%	19%	7%
	No - has not changed my view	65%	65%	66%	60%	78%
	Don't know	12%	11%	12%	9%	12%
	Total	830	784	450	269	46
And has the debate changed your view of each candidate? Eric Swalwell :	Yes - more positive towards candidate	11%	10%	11%	9%	9%
	Yes - more negative towards candidate	13%	13%	10%	20%	10%
	No - has not changed my view	64%	64%	65%	63%	69%
	Don't know	13%	12%	14%	8%	12%
	Total	830	784	450	269	46
And has the debate changed your view of each candidate? Marianne Williamson :	Yes - more positive towards candidate	12%	12%	12%	13%	4%
	Yes - more negative towards candidate	18%	19%	19%	21%	14%
	No - has not changed my view	57%	57%	56%	57%	65%
	Don't know	13%	12%	13%	9%	18%
	Total	830	784	450	269	46
				_		



And has the debate changed your view of each candidate? Andrew Yang:	Yes - more positive towards candidate	16%	16%	19%	12%	5%
	Yes - more negative towards candidate	15%	16%	14%	20%	11%
canadate. Anarem rang	No - has not changed my view	58%	58%	56%	61%	68%
	Don't know	11%	10%	10%	7%	17%
	Total	830	784	450	269	46
	Strong on immigration	4%	3%	3%	*	5%
	Strong on healthcare	11%	12%	12%	*	15%
	Strong on the environment	5%	4%	4%	*	4%
If the 2020 Democratic	Strong on the economy and job creation	10%	10%	11%	*	7%
presidential primary election were held today, which of the following candidate traits would be the MOST important factor for you in deciding who to vote for?	Can beat President Trump in the general election	36%	40%	45%	*	23%
	Strong progressive	5%	6%	7%	*	3%
	Can unify the Democratic Party	5%	6%	7%	*	1%
	Someone new and different	6%	6%	5%	*	11%
	Don't know	17%	12%	6%	*	31%
	Total	1314	1131	905	0	151



	Strong on immigration	6%	6%	6%	*	5%
	Strong on healthcare	22%	23%	24%	*	17%
	Strong on the environment	11%	11%	11%	*	11%
	Strong on the economy and job creation	13%	13%	12%	*	26%
And which of the following traits is the second most important factor for you in deciding who to vote for?	Can beat President Trump in the general election	14%	13%	14%	*	9%
	Strong progressive	9%	9%	9%	*	8%
	Can unify the Democratic Party	13%	14%	15%	*	10%
	Someone new and different	8%	9%	8%	*	11%
	Don't know	3%	3%	2%	*	4%
	Total	1114	1005	851	0	111
	Joe Biden	14%	15%	16%	*	9%
	Bernie Sanders	10%	11%	12%	*	7%
	Kamala Harris	11%	13%	14%	*	11%
For each of the following, please select the candidate	Elizabeth Warren	8%	9%	11%	*	1%
from the list below you think is the best on that particular issue. Immigration:	Pete Buttigieg	2%	2%	3%	*	1%
	Beto O'Rourke	7%	7%	8%	*	6%
	Cory Booker	4%	4%	4%	*	3%
	Some other candidate	5%	5%	5%	*	5%
	Don't know	38%	34%	27%	*	56%
	Total	1314	1131	905	0	151



	Joe Biden	16%	17%	19%	*	11%
	Bernie Sanders	21%	22%	24%	*	13%
	Kamala Harris	7%	8%	9%	*	6%
For each of the following, please select the candidate	Elizabeth Warren	13%	15%	17%	*	8%
from the list below you	Pete Buttigieg	2%	2%	2%	*	0%
think is the best on that particular issue. Healthcare	Beto O'Rourke	2%	3%	3%	*	0%
;	Cory Booker	3%	3%	3%	*	3%
	Some other candidate	3%	3%	2%	*	7%
	Don't know	33%	27%	20%	*	53%
	Total	1314	1131	905	0	151
	Joe Biden	13%	14%	16%	*	9%
	Bernie Sanders	14%	14%	16%	*	9%
	Kamala Harris	7%	8%	8%	*	6%
For each of the following, please select the candidate	Elizabeth Warren	11%	13%	15%	*	4%
from the list below you	Pete Buttigieg	4%	4%	5%	*	1%
think is the best on that particular issue. The	Beto O'Rourke	4%	4%	4%	*	2%
environment :	Cory Booker	3%	4%	4%	*	3%
chiviloninene.	Some other candidate	6%	6%	6%	*	6%
	Don't know	38%	34%	27%	*	59%
	Total	1314	1131	905	0	151
	Joe Biden	18%	19%	21%	*	11%
	Bernie Sanders	16%	16%	18%	*	10%
	Kamala Harris	6%	7%	7%	*	7%
For each of the following, please select the candidate from the list below you think is the best on that particular issue. The economy and jobs:	Elizabeth Warren	13%	15%	17%	*	6%
	Pete Buttigieg	3%	3%	3%	*	1%
	Beto O'Rourke	3%	3%	3%	*	3%
	Cory Booker	3%	4%	4%	*	4%
	Some other candidate	4%	3%	2%	*	8%
	Don't know	35%	31%	24%	*	49%
	Total	1314	1131	905	0	151



	Joe Biden	30%	32%	36%	*	19%
	Bernie Sanders	14%	14%	14%	*	11%
For each of the following,	Kamala Harris	7%	9%	10%	*	6%
please select the candidate from the list below you	Elizabeth Warren	7%	8%	9%	*	2%
think is the best on that	Pete Buttigieg	2%	2%	3%	*	2%
particular issue. Most likely	Beto O'Rourke	3%	3%	3%	*	2%
to beat President Trump in	Cory Booker	3%	3%	3%	*	3%
the general election :	Some other candidate	3%	3%	2%	*	9%
	Don't know	31%	26%	20%	*	46%
	Total	1314	1131	905	0	151
	Joe Biden	12%	13%	15%	*	8%
	Bernie Sanders	19%	21%	22%	*	16%
	Kamala Harris	10%	11%	12%	*	8%
For each of the following, please select the candidate	Elizabeth Warren	12%	13%	15%	*	5%
from the list below you	Pete Buttigieg	3%	3%	4%	*	0%
think is the best on that particular issue. Strong	Beto O'Rourke	4%	4%	4%	*	3%
progressive :	Cory Booker	3%	3%	3%	*	2%
	Some other candidate	3%	2%	1%		5%
	Don't know	35%	29%	22%		51%
	Total	1314	1131	905	0	151
	Joe Biden	22%	23%	26%	*	12%
	Bernie Sanders	12%	13%	14%	*	10%
	Kamala Harris	9%	11%	12%	*	7%
For each of the following, please select the candidate from the list below you think is the best on that particular issue. Can unify	Elizabeth Warren	9%	10%	12%	*	4%
	Pete Buttigieg	3%	3%	3%	*	3%
	Beto O'Rourke	3%	4%	5%	*	0%
the Democratic Party :	Cory Booker	3%	3%	4%	*	0%
·	Some other candidate	3%	3%	2%	*	6%
	Don't know	35%	30%	23%	*	58%
	Total	1314	1131	905	0	151



	Joe Biden	8%	9%	11%	*	3%
	Bernie Sanders	10%	10%	10%	*	10%
	Kamala Harris	18%	21%	22%	*	14%
For each of the following, please select the candidate	Elizabeth Warren	9%	9%	11%	*	5%
from the list below you	Pete Buttigieg	12%	13%	15%	*	9%
think is the best on that particular issue. A new and	Beto O'Rourke	6%	6%	7%	*	3%
different voice :	Cory Booker	4%	4%	5%	*	2%
	Some other candidate	4%	5%	3%	*	11%
	Don't know	27%	22%	16%	*	43%
	Total	1314	1131	905	0	151
As you may know, there	Strongly agree	42%	44%	40%	54%	32%
are more than 20 candidates running for the	Somewhat agree	29%	30%	34%	24%	34%
Democratic presidential nomination. How much do	Somewhat disagree	12%	12%	14%	10%	14%
you agree or disagree with the following statements?	Strongly disagree	6%	7%	8%	5%	5%
There are too many candidates running for the	Don't know	11%	7%	5%	6%	15%
Democratic presidential nomination :	Total	2221	1973	909	800	189
As you may know, there	Strongly agree	19%	21%	29%	12%	16%
are more than 20 candidates running for the	Somewhat agree	39%	39%	40%	38%	40%
Democratic presidential nomination. How much do you agree or disagree with the following statements? Having several candidates allows the Democrats to choose the best candidate possible for presidential nomination:	Somewhat disagree	18%	19%	17%	21%	21%
	Strongly disagree	12%	13%	9%	19%	7%
	Don't know	12%	9%	6%	9%	15%
	Total	2221	1973	909	800	189



### **How to Calculate Bayesian Credibility Intervals**

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter  $\theta$ \, i.e., Y| $\theta$ ^Bin(n, $\theta$ ), where n is the size of our sample. In this setting, Y counts the number of "yes", or "1", observed in the sample, so that the sample mean ( $\overline{y}$ ) is a natural estimate of the true population proportion  $\theta$ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian <sup>1</sup> statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for  $\theta$  adjusted after observing the sample data. In reality, the posterior distribution is one's knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution ( $\pi(\theta/y)$ ^ $\theta(y+a,n-y+b)$ ), but with updated hyper-parameters.

Our credibility interval for  $\vartheta$  is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for  $\vartheta$  given our updated knowledge base. There are different ways to calculate these intervals based on  $\pi(\theta/y)$ . Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that a=1 and b=1 and y=n/2. Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$\bar{y} \mp \frac{1}{\sqrt{n}}$$

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect 1+L=1.3 to account for complex weighting<sup>2</sup>

Examples of credibility intervals for different base sizes are below. Ipsos does not publish data for base sizes (sample sizes) below 100.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2
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