

Understanding Public Opinion Polling in Aotearoa New Zealand

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Abstract

Public opinion polling provides a platform to elucidate the public's attitudes towards and support for various issues, and allows politicians to learn of and respond to these attitudes. However, a low level of understanding about how polls work and a lack of communication and transparency about the methods used for a poll can impede this function. Although ample resources on the topic of public opinion polling have been produced across international organisations, these can be difficult to navigate and piece together for a lay audience. They also cannot provide information on political polling as it relates to specific contexts, such as Aotearoa New Zealand's unique mixed member proportional (MMP) electoral system. Here, we provide a guide to understanding and reporting on public opinion polling in New Zealand. The guide covers key information on how polls work, aspects of polls that speak to their quality, including sample size, error and sampling methods, and how political polling relates to actual party representation in the New Zealand Parliament. By identifying and explaining key aspects of public opinion polling, and why they matter, we hope this guide facilitates improved poll transparency and standards of reporting among journalists and media, and overall understanding of poll results by poll consumers.

Keywords: public opinion polling, political polling, sampling, survey design,

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Whakarāpopotonga

Kei te whakarato te rangahau whakaaro tūmatanui i te pūhara whakamahuki i ō te iwi whānui waiaro, tautoko hoki mō ētahi take, me te aha ka tuku i ngā kaitōrangapū kia mōhio me te urupare ki aua waiaro. Heoi, ka taea e te itinga o te māramatanga ki te āhua e mahi ai te rangahau whakaaro, e te korenga hoki o te whakawhitiwhiti kōrero me te pūrangiaho mō ngā tikanga e whakamahia ana e te rangahau, taua taumahi te whakararu. Ahakoa kua whakaputaina ngā rauemi huhua mō te kaupapa nei, te rangahau whakaaro tūmatanui, puta noa i ngā whakahaere aowhānui, ka uaua pea te whakatere i ērā me te whakahiato mā te hunga mātanga kore. Tē taea hoki e ērā te whakarato mōhiohio mō te rangahau tōrangapū e pā ana ki ngā horopaki tauwhāiti, pērā i te pūnaha pōtitanga whirirua ahurei o Aotearoa. Kei te whakaratohia e mātou i konei he aratohu kia mārama ki te rangahau whakaaro tūmatanui i Aotearoa me te tuku pūrongo mō tērā. Ka kapi i te aratohu he mōhiohio matua mō te āhua e mahi ai te rangahau, ngā āhuatanga mō te kounga o ngā rangahau, taea noatia te rahi o te tīpako, ngā hapa, me ngā tikanga tīpako, ā, ka pēhea te ranhagau tōrangapū e pā ai ki te whakanohitanga tūturu i te pāremata o Aotearoa. Mā te tautuhi me te whakamahuki i ngā āhuatanga matua o te rangahau whakaaro tūmatanui me ngā take e whaitake ai, ka tūmanako mātou kia huawaere tēnei aratohu i te pai ake o te pūrangiaho me ngā paerewa pūrongorongo i waenga i te hunga haurapa kōrero, hunga pāpāho anō hoki, ka mutu, o te māramatanga whānui ki ngā otinga rangahau e te hunga aro ki ngā rangahau.

Ngā kupu matua: rangahau whakaaro tūmatanui, rangahau tōrangapū, tīpako, hoahoa rangahau, Aotearoa

Public opinion polling can provide critical insights into the ‘mood’ of a nation. Modern democracies rest on the ability of citizens to have their say on national issues, and public opinion polling provides both a platform for this to take place, and a chance for politicians and policymakers to take stock. In order to fulfil this function, however, the methods used to conduct a poll must be appropriate, and these methods must be reported completely and transparently. Poorly conducted polls produce unreliable results, and readers need to know which results should – and should not – be trusted. Even if pollsters or reporters evaluate a poll as being trustworthy, the public should be able to see and evaluate the qualities of the poll for themselves. Accuracy and transparency in the communication of opinion poll results is also essential for maintaining public trust in researchers. For example, knowing poll results have associated margins of error, and what that means, can be the difference

between the public perceiving natural variation in a result versus perceiving researchers as ‘getting it wrong’ when a poll result does not match an official result. Moreover, as instances of and concern about misinformation and disinformation become more prevalent in society, complete and accurate reporting of polls can help provide a source of trustworthy information. This can reduce instances of people accidentally, or even purposefully, miscommunicating what a poll result means.

With that said, the intention of this guide is to provide an informative overview of how polls work, what features to look for in a poll and why they matter, and what information should be reported about a poll. It is particularly targeted towards journalists, who play a crucial role in reporting on and accurately conveying the details of a poll, but will also be of use to anyone needing to make sense of polls, including students or those working in politics or policy. Although qualities of a good poll transcend international borders, this guide is most relevant to the Aotearoa New Zealand (hereafter, New Zealand) context, particularly when it comes to understanding political polling. It also fills a current gap in educational resources available at the introductory level for understanding polling in New Zealand.

Overall, we recommend looking for the following features of a public opinion poll, and reporting information about each of them:

1. the target population and sample size
2. the poll commissioner and polling company
3. the sampling method
4. the margin of error
5. weighting adjustments
6. the question wording
7. the percentage of ‘don’t know’s or undecideds, and
8. the time the poll was conducted.

In the following sections, we go in to further detail about what these features refer to and why they are important. We also discuss political polling in the New Zealand context, what to look out for, and how to interpret political poll results in relation to New Zealand’s electoral system. We have also prepared an accompanying ‘quick guide’ version of this guide (see Satherley et al., 2023), summarising just the key messages of this full guide. Finally, the appendix provides a list of additional educational polling

resources from both New Zealand and abroad, which readers may find useful as a supplement to this guide.

How do public opinion polls work?

The aim of public opinion polling is to get a sense of what a population of interest (very often voting-eligible adults) thinks about a particular issue. Because sampling every single person in the population would be incredibly time consuming and expensive, polls are conducted on a much smaller sample of the population to make *inferences* about that population. How this is possible is down to the statistical theory behind random sampling. With *random sampling*, if everyone in the population has a known equal probability of being sampled, then even with small sample sizes it is possible to achieve a reasonable estimate of what the population as a whole think (see Robertson & Sibley, 2018).

The ‘if’ in the previous sentence is a crucial one. As we will get into in subsequent sections, the probability of being selected for a sample is rarely truly random and equal across individuals in a population, and decisions around the design of a sample can influence who gets selected. This means that although bigger samples can help reduce the truly random variation expected in poll results by chance, a well-designed smaller-sample poll will always outperform a larger-sample poorly designed poll. While it is a common and seemingly intuitive perception that larger samples are needed for accurate results, as we will explain, it is the many design decisions and response (and non-response) biases that can have the greatest impact on the accuracy of a poll.

Just how big a sample is needed comes down to a trade-off between the expense of collecting larger samples and how much error or random variation can be tolerated in the results. A minimum of 500–1000 people is typically recommended for nationwide polls in New Zealand. The Research Association New Zealand (2020), for example, recommend a sample size of at least 500 for nationwide political polls; thus, polls can be appropriately conducted on a very small proportion of the population. Nevertheless, sample size remains a very important feature of a poll to report. Similarly, it is important to know who the intended population of interest for the sample is (e.g., voting-eligible adults in New Zealand), because this identifies who the results apply to.

It is also good practice to identify (and report on) who has conducted the polling and who commissioned it. Aside from providing appropriate credit (and transparency) for the work, these details can provide an initial degree of confidence in the results. Many polling companies in New Zealand have reputations for delivering reliable polls (particularly political polls), such as 1 News Verian (formerly Kantar Public / Colmar Brunton) and Newshub Reid Research (see Research Association New Zealand (n.d.) for analysis; see also Brett Kelly, 2023). Polls are usually commissioned, however, by the media or other groups and organisations who may or may not have vested interest in the poll results. It is common for mainstream media outlets in New Zealand, such as 1 News, Newshub and the *New Zealand Herald*, to commission polls (particularly political polls) to generate information to report on (for discussion, see Brett Kelly, 2023). However, polls commissioned by politically slanted news outlets or organisations with vested interests in any particular issue (e.g., euthanasia, cannabis, tax) should be treated with more caution, as they may be more likely to engage in dubious practices (e.g., selectively releasing only favourable results or manipulating question wording to secure a specific outcome).

Sampling methods

The sampling methods used when conducting polls are critical to ensure the sample, and therefore results, reflect the underlying population of interest. Sampling frames are sources of potential respondents who researchers or pollsters can use to sample their population of interest. As such, sampling frames should cover the entire population of interest, providing everyone in the population an opportunity to be sampled (although the match is rarely perfect in practice). For example, the New Zealand Electoral Rolls can be used as a sampling frame in academic or state sector research settings, as they contain the details of New Zealanders aged 18 and over who are eligible to vote, with some exceptions based on privacy and safety concerns. Polling companies may have databases of people who have signed up to a panel, and can obtain samples from randomly selected members of the panel who match the population of interest.

In New Zealand, sampling is typically conducted over the phone (either landline or cellphone, or a combination of the two) with random-digit dialling, or online (through panels). These methods allow for quicker and less expensive sampling than face-to-face interviews, which had previously

been used in New Zealand political polling by the Heylen Research Centre. In New Zealand, a blend of sampling methods is often used (i.e., phone and internet panel-based samples), each of which can have pros and cons (see Greaves, 2017). However, benchmarking tests of different Australian probability samples (obtained through random-digit dialling and residential addresses) and nonprobability samples (internet panels) indicate nonprobability internet panels are more error prone and more variable in quality (Lavrakas et al., 2022).

How the sampling is conducted can also differ between polls, but simple random samples (where everyone has a theoretically equal chance of being selected), *stratified samples* (where the population of interest is first split into subgroups, before random sampling occurs within each group) and *quota samples* (where specific numbers of responses from each group are obtained) are each recommended by Research Association New Zealand (2020). *Self-selection surveys*, where anyone can choose to participate, are recommended to be avoided (Research Association New Zealand, 2020). Examples of these include internet polls, such as those posted on news websites or social media (e.g., Facebook, Twitter). These sorts of polls offer both little control over who is responding (i.e., those who respond self-select), and often a very narrow selection of individuals. For example, they capture only people who happened to visit that site on a certain day and time, and provide no information about who is responding, or even whether the same people have responded multiple times. As such, their results generally cannot be used to infer anything meaningful about the wider population.

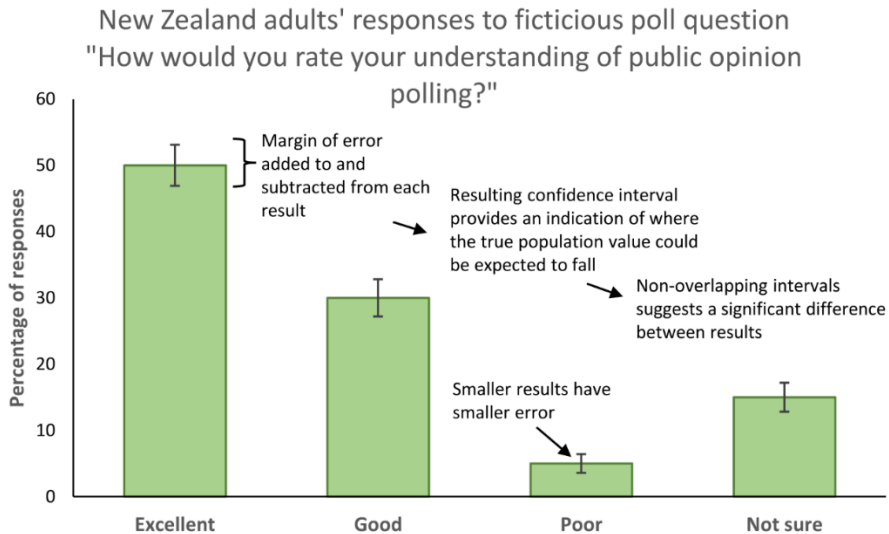
Knowing the sampling methods used to conduct a poll matters because the methods provide an indication of how representative of the population of interest the sample is likely to be. Polls conducted exclusively by landline may overrepresent older members of a population (who are more likely to have a landline), while those conducted exclusively through online panels may not adequately reach those in lower socio-economic circumstances and those who lack internet access. These factors make it crucial for the sampling methods for a poll to be reported in full and transparently. This includes both the method of sampling (i.e., landline, mobile, online panel, or a combination), and type of sampling (i.e., random probability, stratified, quota).

Margin of error and bias in polls

Random sampling can allow for reasonably accurate assessments of what the population of interest think, but the samples still contain some degree of error. The *margin of error* is a representation of the random error from random variation in responses that would be expected across samples, relative to the population of interest. However, it does not account for all sources of error in a poll. It is a value that is added to and subtracted from a particular proportion obtained in a poll to represent the range of values where the true underlying population value can be expected to fall. It arises as a natural and unavoidable consequence of taking a sample of a population, rather than the entire population as a whole. This is demonstrated in Figure 1.

Results can be compared within polls to determine differences in support for different parties. Overlap in the result, plus and minus the standard error, for two parties suggests the true underlying proportions of support in the population could be the same (even if one polls at 45 per cent, and the other at 39 per cent, for example). Results can also be compared between polls over time to assess changes in support for a given party. Upward or downward trends in support can be observed when margins of errors around poll results (confidence intervals) become non-overlapping over time. Trends become easier to observe over longer periods of time with more poll results available to compare.

Figure 1. A demonstration of error in public opinion poll results



Note: The values are based on a fictitious poll assuming 1000 responses and a standard 95% confidence interval.

The size of the margin of error is determined by both the sample size and the size of a given result (see Table 1 for a demonstration). This is an important aspect of the margin of error to bear in mind: the margin of error differs for *different sized results*, and is largest at values of 50 per cent, and smaller the further out to the extremes the results are. Thus, although poll results are often published with a single margin of error value (almost always the 'maximum margin of error' for a result of 50 per cent), this value does not apply equally across different results (it is much smaller for a result of 10 per cent, for example).

The margin of error will also be larger in analyses of subgroups (e.g., what women aged 35–50 think), so extra caution should be taken when interpreting such analyses. Because its value depends on sample size, the margin of error will be smallest for results using the total sample. If the sample is split up to report on subgroups, the sample size can quickly diminish and hence the margin of error increases. For example, a breakdown by gender will roughly halve the sample size, and having three or four age groups within each gender will leave even smaller subsamples. Polls are usually conducted with a sample size appropriate for inferences about the total population, rather than these subgroups. In general, unless the poll has specifically intended to sample and report on these subgroups, then

results within subgroups should be treated with great caution (and ideally, the larger margins of error should be exactly reported).

Table 1. Margin of error associated with different poll result sizes (columns) at different sample sizes (rows)

Sample size	Poll result value				
	2%	5%	10%	30%	50%
<i>N</i> = 250	1.7%	2.7%	3.7%	5.7%	6.2%
<i>N</i> = 500	1.2%	1.9%	2.6%	4.0%	4.4%
<i>N</i> = 1000	0.9%	1.4%	1.9%	2.8%	3.1%
<i>N</i> = 1500	0.7%	1.1%	1.5%	2.3%	2.5%
<i>N</i> = 2000	0.6%	1.0%	1.3%	2.0%	2.2%

Note: Margins of error assuming standard 95% confidence (the margin of error must be both added to and subtracted from the poll result to obtain the overall confidence interval range).

Additional sources of error

The margin of error or sampling error in a poll can be thought of as the minimum error present. It makes up only one part of the total survey error, and does not account for other sources of error; that is, *non-sampling errors*, which are errors not due to the process of sampling itself. Non-sampling errors are much harder to quantify and can be much larger in size (Assael & Keon, 1982). Non-sampling errors are numerous and can include the sampling frame not matching the population of interest (thus missing segments of the population, or including people who are not members of the population of interest), measurement error in recording ‘true’ responses (e.g., due to poor survey and question design), interviewer error, and non-response bias, such that those not responding may be systematically different from those who do respond (e.g., younger or less interested in politics; McNabb, 2014). These sources of error can affect any poll, and are why it remains important to fully consider (and report on) all aspects of a poll – stating the margin of error alone does not account for these other sources of error. In general, pollsters need to be clear about how they have minimised these non-sampling errors, which might include, for example, through good survey design (e.g., clear simple question wording) and eligibility questions (e.g., checking the person they are sampling is eligible

to vote). Research Association New Zealand (2020) suggest pollsters should report call-backs to those who could not be reached by phone (i.e., a common strategy to minimise non-response bias), and restrict sign-ups to online panels (to diminish self-selection bias) as well as the number of times a panel member can be sampled within a specified time frame.

Overall, the maximum margin of error of a poll should always be reported, and consideration should be given to reporting margins of error at other, more relevant values depending on the poll results. Unless the poll was specifically designed to examine subgroups, subgroup analyses should be avoided. If they are reported, margins of error associated with each subgroup result should be included.

Sample weighting

Obtaining a truly random sample that perfectly reflects the population of interest is difficult. Non-sampling errors can lead to differences in the sample compared with the target population, due to different segments of the population being more (or less) difficult to contact, or more (or less) willing to participate. In New Zealand, for example, European/Pākehā are more likely to respond to invitations to participate in a survey, and so are often overrepresented in survey samples (for both research and polling) relative to Māori and other ethnicities (e.g., see Greaves et al., 2017). When these differences are known, the results can (and should) be adjusted to help take into account, and correct, these differences. *Sample weighting* refers to this process of bringing the sample into greater alignment with the target population. Groups and characteristics that are underrepresented in the sample relative to the population are weighted more heavily than groups and characteristics that are overrepresented. This is commonly done based on variables where proportions in the population are obtainable (i.e., through the census), such as gender, age, education and ethnicity. Weighting can also be used to adjust for design effects in the sampling, such as when certain groups are purposely sampled at a higher or lower probability of selection than others (e.g., in stratified sampling; see Robertson & Sibley, 2018).

When appropriate weighting adjustments are not made, the reliability of the poll results can be affected. For example, a review into widespread polling failures during the 2019 Australian Federal election (where polling consistently indicated a Labor Party victory when the

Liberal-National Coalition in fact won) identified unrepresentative samples that were not appropriately adjusted for biases (particularly for sample education levels) as the likely reason for the polling failure (Pennay et al., 2020).

While sample weighting is commonly used to bring the sample into greater alignment with the population of interest, it cannot fix other issues (such as poorly worded questions) and it cannot be applied to characteristics of respondents that are unknown in the sample or that are not readily measured in the population (such as level of interest in politics, for example). Thus, high-quality polling design and conduct which seeks to minimise these issues at the outset remains the more crucial factor. Nevertheless, it should always be noted whether and how (e.g., by ethnicity, education, region) poll results were weighted.

Question wording

The questions asked of respondents in public opinion polls is another crucial indicator of the quality of the poll, and should be reported accurately. The questions should reflect the underlying research question behind the poll. For example, a poll to gauge support for political parties should ask who people would vote for, not who they think will win. Questions should be direct and use simple language that is free of jargon. Questions should also not be double-barrelled (i.e., consisting of two parts). For example, a double-barrelled question might ask: “Should tax cuts be provided to help increase spending?” Respondents may feel differently about the first half (“Should tax cuts be provided?”) compared with the second (“to help increase spending?”), creating ambiguity as to what their response actually means. Even different questions on the same topic that are otherwise clearly worded can influence how people respond. For example, Gallup polling in the United States identified a 20-percentage point difference in support for euthanasia (in cases of incurable disease) depending on whether people were asked about allowing doctors to “end the patient’s life by some painless means” or “assist the patient to commit suicide” (Saad, 2013).

Overall, good question wording increases confidence about how people have responded by reducing measurement error (incorrect recording of true opinions), and therefore increases the reliability and validity of the results. Reporting should include the exact question used in the poll, and whether (and what) response options were provided to respondents. For

example, did response options cover all possible answers to a question? And were options provided, or did respondents have to generate their own answer? This information helps to eliminate ambiguity as to what the results reflect, and provides transparency about how the questions were asked, as well as any potential issues in their interpretation.

Presenting poll results

The way poll results are presented can have a large impact on how they are interpreted. Although they are commonly reported in text, graphs can make it much easier for readers to compare and contrast results. In particular, bar graphs of the percentage result (for each response option) can be plotted to display the margin of error (i.e., the value added to and subtracted from each result), with non-overlapping error indicating significant differences in results (see Figure 1). Pie charts are also commonly used, with a circle or 'pie' representing the total number of responses, and each portion of the pie representing the size of the sample who selected each response option. Unfortunately, these go very wrong when the portion sizes do not match the actual proportion of responses. If 32 per cent of respondents selected a given option, then exactly 32 per cent of the size of the pie should be shaded to represent those respondents. And because there is no obvious way of displaying the margin of error on pie charts, generally bar graphs are a better option for displaying poll results.

When comparing poll results over time, line graphs are particularly useful. These graphs plot a point for the percentage response for a given option (e.g., support for a particular party) on the *y*-axis/vertical axis, with time (the date the poll was conducted) on the *x*-axis/horizontal axis. Line graphs are extremely useful for highlighting the trend in results over time, and can similarly be used to display margins of error (i.e., lines proportionate to the margin of error applied above and below each point for that particular poll result).

'Don't know' or undecided responses

Whether presenting poll results graphically or reporting in text, reporting on the percentage of 'don't know' or undecided responses, and whether they are included or excluded from the percentages presented, is very important. When percentages of responses to a poll question are presented and exclude

the don't knows, the overall level of support for each option will be inflated. For example, 60 per cent support when excluding don't know responses could only be 45 per cent if don't know responses were included in the denominator. Moreover, within the same poll the don't know responses may be differentially included or excluded across different questions. For example, political polls will include all people who are eligible to vote but the analysis of support for political parties has to exclude the don't knows/not sures and 'would not answer' votes. By contrast, results for questions such as preferred prime minister or support for political policies may include don't know responses. If this aspect of the percentage is ignored or is unclear, it can lead to misleading statements about poll results, particularly regarding 'majority' support or opinions.

The time the poll was conducted

A final important aspect of a poll to consider is when it was conducted, and what was happening at the time. Polls only ever capture public opinion at the time in which they were conducted, and those conducted further away in time from an official result, such as for referenda or elections, will likely match the result less closely. Similarly, poll results could be swayed by relevant events taking place at the same time, particularly if the result seems unexpected or notably different from previous polls. For example, publicised debates between politicians, or new information that comes to light before or when a poll is being conducted could see people forming and changing opinions on an issue (particularly if it is a new one), which may help account for changes in poll results seen over time. Political poll results may also be influenced by changes in party leadership. That said, people's attitudes tend to be fairly stable, and the potential impact of these events is difficult to gauge, so their relevance should not be overstated. It can be useful to compare results back to previous results in these situations, to determine whether the result was actually in line with the overall trend.

For these reasons, it is important to know and report on the dates the poll was conducted, and any events that took place within that time that stand out as being potentially relevant to understanding or influencing the result.

Political polling in New Zealand

Political polling (i.e., of voting intentions) operates in much the same way as general public opinion polling. However, there are a number of additional nuances to consider when interpreting political polling, including how the results relate to the electoral context. These nuances are important to understand, especially given how prominently political poll results feature in the lead up to national elections. Political polling to gauge party support is the most common use of opinion polling in New Zealand, and is often conducted by the same companies who do general public opinion polling. Some of the main companies are Verian (formerly Kantar Public /Colmar Brunton), Reid Research, Roy Morgan, Curia, and Talbot-Mills (formerly UMR). These polls are generally commissioned by media and television networks, such as 1 News ('1 News Verian poll') and Newshub ('Newshub Reid Research poll'). Some polls are commissioned by political parties for internal polling for the party but are not always released to the public. The purpose of political polls is to provide a snapshot of the public's intended party vote at a particular point in time, and therefore how the next election could go *if held at the time the poll was conducted*. The population of interest is those who would be likely to or intend to vote, rather than all those who are eligible to vote. (The 'voting-eligible population' is all enrolled adults aged 18 and over.)

Many political polling companies explicitly note that the polls are not intended to predict the election outcome. Rather, they attempt to capture how the election could go if held at the time the poll was conducted. This is due to a number of reasons. Most notably, political polls are often conducted far out from an election, from months to years, in which time events can occur that subsequently shift public opinion and voting preferences. Additionally, it can be difficult to capture the preferences of people who are actually going to vote. Most polls capture a sizeable proportion of people who are unsure of, or do not want to share, who they intend to vote for. Whether these people eventually turn up to vote, or previously intended voters do not vote, can influence the outcome. This makes it important to know whether those who are unlikely to vote, or do not intend to vote, have been excluded from political poll results.

Political polls also typically assess people's party vote, but not their electorate vote. This means that when translating into seats in parliament,

the assumption is made that the 72 electorate seats remain with the parties who currently hold them. Although the party vote determines the overall proportion of seats a party is entitled to, parties (particularly minor parties) can sometimes obtain more electorate seats than their overall party vote would provide them. For example, in 2008, Te Pāti Māori (the Māori Party) received 2.4 per cent of the party vote, which would entitle the party to three seats in parliament if it won an electorate seat. However, the party won five electorate seats, creating a two-seat overhang (Electoral Commission, 2008).

With this in mind, the major political polls in New Zealand have tended to produce final poll estimates that closely matched election outcomes. For example, between 2002 and 2017, the average party vote difference between the polls and elections was generally between only 1 and 2 per cent (Research Association New Zealand, n.d.). The 2020 Newshub Reid Research and 1 News Verian (formerly Colmar Brunton) polls were off by a greater margin for National and Labour party votes (overestimating National by 4 per cent and underestimating Labour by 3 per cent). The 2020 election saw a historic result for the Labour Party (allowing the party to govern alone), and a large number of early voters is suspected to have accounted for the disparities. Specifically, as final election polls took place when many people had already voted, early voters were asked who they would vote for, rather than who they did vote for, which could be interpreted differently (Campbell, 2020).

Preferred prime minister ratings

Some polling companies also provide results on who respondents would prefer to be prime minister. However, these questions often have a large percentage of 'don't know' responses. For example, there were 28–33 per cent don't know responses to this question in 1 News Verian polls between September 2022 and August 2023 (Verian, 2023). A relatively high proportion of don't know responses can be an indication the question is one that people find difficult to answer, which may be reinforced by the open-ended nature of the question (such that response options are not provided; participants must name a person). The current prime minister almost always receives the highest result, while major party leaders and prime ministers almost always receive a sizeable boost upon being elected. This can suggest a combination of factors at play, including people being guided by their party preference, name recognition and a status quo bias. Further

compounding this is that prime ministers are not directly determined by the electorate or party vote (New Zealanders do not actually get a say in the matter). These factors suggest extra caution should be taken when interpreting preferred prime minister ratings, and they are best examined comparatively, across polls over time.

Margin of error in political polls

Differences in margin of error for different results are particularly important to take into account for political polling, and especially in light of New Zealand's multiparty system. Minor parties in New Zealand typically poll anywhere from 0 per cent and 10 per cent, and thus the *maximum* margin of error associated with results of 50 per cent should not be applied to these parties. Moreover, the vote shares of smaller parties should not be described as being 'below' or 'within' the margin of error. Instead, the smaller margin of error associated with each result among smaller parties should be presented. Knowing the margin of error at (and around) a result of 5 per cent is particularly useful in New Zealand, as this is the party vote threshold required for minor parties to gain representation in Parliament (unless they are able to secure an electorate seat). Thus, knowing the exact margin of error associated with these smaller polling values provides a better sense of whether these parties are generally above or below that threshold.

The relatively frequent nature of political polling also means many changes in a party's level of support (e.g., 1 to 2 per cent) fall within the margin of error between any two adjacent polls. It is therefore generally more useful to consider political polls in the context of broader trends over time, rather than on increases or decreases for a party relative to the previous poll.

Māori electorates

Māori electorates are an important aspect of New Zealand's electoral system, and can have a large influence on representation and government formation. Their number (currently seven) is determined by the proportion of Māori who are registered on the Māori electoral roll (50.9 per cent as at 1 October 2023; see Electoral Commission, n.d.), and they have historically been held mostly by Labour or Te Pāti Māori members. This is important as

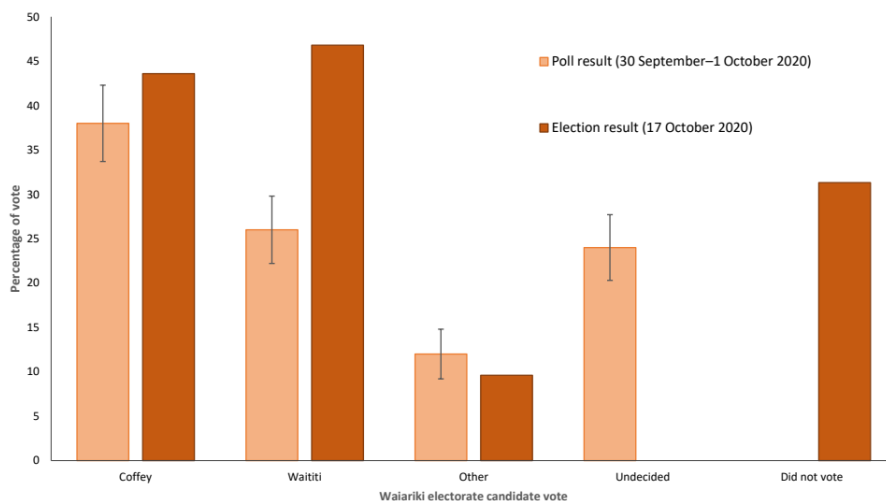
Te Pāti Māori historically polls below the 5 per cent threshold requirement in party vote, but can and has gained representation in Parliament through winning Māori electorate seats (which they did so from 2004 to 2017, then again in 2020 and 2023; Greaves & Hayward, 2020). This can change the composition of Parliament and potential government coalitions that can be formed.

Despite their importance, few polls are conducted in the Māori electorates, and those that are are mostly commissioned by Māori Television from either Curia Research or Reid Research. There are also often high proportions of undecided voters within polls of Māori electorates, which can make the results on election day more uncertain. For example, the final poll before the 2020 election in the Waiariki electorate had Labour's Tamati Coffey at 38 per cent of the candidate vote, ahead of Rawiri Waititi's 26 per cent (Te Ao Māori News, 2020a), yet with 24 per cent of respondents undecided. The result on election day, however, saw Waititi win the electorate with 3 percentage points more than Coffey in the candidate vote (see Figure 2). This was crucial for Te Pāti Māori to be represented in Parliament, who could then bring in additional list member Debbie Ngarewa-Packer through the party vote. Similarly, the final 2020 poll for the Te Tai Hauāuru electorate saw Labour Party candidate Adrian Rurawhe on a comfortable 18 percentage point lead over Te Pāti Māori's candidate, Ngarewa-Packer, but with 30 per cent undecided voters (Te Ao Māori News, 2020b). The election result saw a much smaller difference of just 4 per cent. By contrast, favourable Māori electorate polling for Te Pāti Māori at the 2017 election did not translate to any seats won by the party on election night (see Greaves & Hayward, 2020).

Many factors, beyond undecided voters, likely influence polling difficulties in these electorates. They represent much smaller and more specific populations of interest, without more specific sampling frames being readily available. Polling conducted by landlines and cellphones may be more likely to miss eligible voters who are younger and in lower socio-economic circumstances, making people harder to reach. In general, the Māori population is more mobile (Statistics New Zealand, 2006) and much younger than the general population, with younger people turning out to vote less, and voter turnout lower in the Māori compared with general electorates (see Greaves & Hayward, 2020; Vowles et al., 2017). Confusion and misinformation about the Māori electoral roll among electoral staff have

also been cited as barriers for Māori participation in past elections (Tawhai, 2017). To summarise, these aspects of polling within Māori electorates mean that despite their importance, greater caution should be taken when interpreting the poll results, with election day results less predictable.

Figure 2. Comparison of candidate vote indicated by final pre-election poll, and



election day vote result, for the Waiariki Māori electorate

Note: The Other category for the poll includes 2 per cent intending to vote for Hannah Tamaki and a further 8 per cent not otherwise stated in the reporting of the poll.

Source: Poll result sourced from Te Ao Māori News (2020a).

Summary

The usefulness of public opinion polling rests on a combination of good polling practices, transparent reporting of methods, and a general understanding of how polling works among those who need to interpret poll results. Here, we identified the key aspects of public opinion polls that readers should identify and have an understanding of in order to appropriately evaluate and interpret their results. We hope this guide facilitates improved poll transparency and standards of reporting among journalists and media, but also general understanding among the general public, students, and those working in politics and related areas.

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Appendix: Additional educational polling resources

There are many guides available internationally on various topics in political polling, although tracking them down can be difficult. Our quick guide version of this guide, which provides just a quick summary of the key points, is available at <https://inzight.co.nz/quick-polling-guide.pdf>. Here we also list links to a selection of additional public opinion polling resources provided by national and international organisations.

1. **Research Association New Zealand** (RANZ) has published the *New Zealand Political Polling Code*, which provides best practice guides on political polling in New Zealand, including aspects of poll design, reporting and media reporting. The code also provides an exemplar template for media reporting of the key details of a political poll.
<https://www.researchassociation.org.nz/political-polling>
2. The **British Polling Council** has a quick guide on the use and reporting of opinion polls.
<https://www.britishpollingcouncil.org/>
3. **ESOMAR** (World Association for Social, Opinion and Market Research) and **WAPOR** (World Association for Public Opinion Research) provide a joint guideline on opinion poll and survey conduct (although generally aimed specifically at researchers).
<https://esomar.org/code-and-guidelines/guideline-on-opinion-polls-and-published-surveys>
4. The **American Association for Public Opinion Research** (AAPOR) provides various resources aimed at journalists and members of the media for understanding and reporting on polls.
<https://www.aapor.org/Education-Resources/For-Media.aspx>
5. The **Pew Research Centre** provides an extensive collection of resources on topics in public opinion polling in the United States, including a general overview of the polling basics.
<https://www.pewresearch.org/course/public-opinion-polling-basics/>
6. The **Market Research Society** has multiple guides on understanding and reporting on polling.
<https://www.mrs.org.uk/resources/interpreting-polls-and-election-data-guidance-for-media-and-journalists->