

# Analysis of The Lifespan of Australian Prime Ministers\*

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## 1 Data

### 1.1 Overview

The data used in this analysis was from Wikipedia on the List of Prime Ministers of Australia (Wikipedia 2024). Federal elections are held every three years unless called early by prime ministers. Prime ministers do not have fixed terms and generally serve the full length of their term unless they lose the majority of the House or are replaced as the leader of their party (Wikipedia 2024). The Wikipedia page contains the 31 prime ministers elected from 1901 to the current year. It includes attributes such as Name (Birth-Death) Constituency, Election, Term of Office, Political party, Ministry, Monarch, and Government General. However, we are only interested in Name (Birth-Death) Constituency during this analysis.

Using the R programming language (R Core Team 2022) and packages, babynames (Wickham 2021), and tidyverse (Wickham et al. 2019) were used to simulate and test the data set and generate tests. The xml2 (Wickham, Hester, and Ooms 2023), janitor (Firke 2023), tidyverse (Wickham et al. 2019), knitr (**knitr?**) and rvest (Wickham 2022) packages were then used to read and write HTML files from Wikipedia as well as clean the raw web scraped data, test for it, and display the data. R code was referenced by Rohan (Alexander 2023).

The data cleaning process took longer than expected as I ran into problems separating the data into multiple columns. For example, separating “Edmund Barton(1849–1920)MP”, into columns name, born, and died. After that, everything started to flow together and become fun as no serious and time-consuming issues came up. What I would do differently next time is the selection of data, instead of years lived, I would want to investigate the time in office instead.

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\*Code and data are available at: <https://github.com/eatingcorn/prime-ministers-of-australia>

## 1.2 Result

Table 1: Australian Prime Ministers, by how old they were when they died

Prime Minister	Birth year	Death year	Years lived
George Reid	1845	1918	73
Edmund Barton	1849	1920	71
Alfred Deakin	1856	1919	63
Joseph Cook	1860	1947	87
Andrew Fisher	1862	1928	66
Billy Hughes	1862	1952	90
Chris Watson	1867	1941	74
James Scullin	1876	1953	77
Joseph Lyons	1879	1939	60
Earle Page	1880	1961	81
Stanley Bruce	1883	1967	84
John Curtin	1885	1945	60
Ben Chifley	1885	1951	66
Frank Forde	1890	1983	93
Robert Menzies	1894	1978	84
Arthur Fadden	1894	1973	79
John McEwen	1900	1980	80
Harold Holt	1908	1967	59
William McMahon	1908	1988	80
John Gorton	1911	2002	91
Gough Whitlam	1916	2014	98
Bob Hawke	1929	2019	90
Malcolm Fraser	1930	2015	85
John Howard	1939	NA	NA
Paul Keating	1944	NA	NA
Malcolm Turnbull	1954	NA	NA
Kevin Rudd	1957	NA	NA
Tony Abbott	1957	NA	NA
Julia Gillard	1961	NA	NA
Anthony Albanese	1963	NA	NA
Scott Morrison	1968	NA	NA

Table 1, provides an overview of the web-scraped data cleaned from Wikipedia on the List of Prime Ministers of Australia.

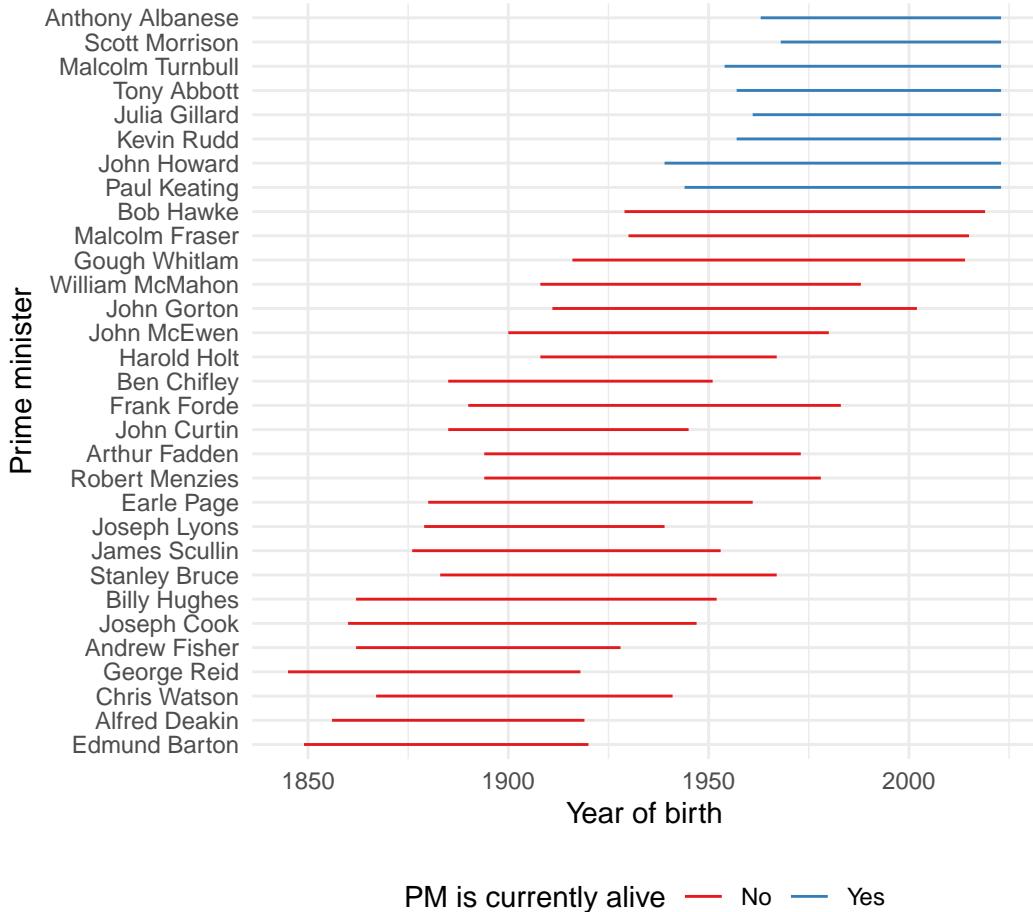


Figure 1: How long each prime minister of Australia lived

## 2 Discussion

From Table 1, and Figure 1, observing the years lived we see that prime ministers born in the 19th century have a life span less than those in the 20th century. Continuing this observation, we can explore how developments in health and the impact of world wars might have influenced this trend. From the transition from the 19th to the 20th century, improvements in sanitation, introduction of new antibiotics, advancements in technology, and other medical innovations most likely increased the life expectancy of not only the prime minister but all Australians. The First and Second World Wars most likely affected those alive during those times as tremendous stress, trauma, and physical demands of wartime may have taken a toll on their health, especially those leading at the time of war.

## References

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