



RSGC
Royal St. George's College

The Young Researcher

2021 Volume 5 | Issue 1

Follow the Money: Ontario's Provincial Departmental Funding from 1950-1959 and its Relation to the Polio Epidemic

Jacob Buchan

Recommended Citation

Buchan, J. (2021). Follow the money: Ontario's provincial departmental funding from 1950-1959 and its relation to the polio epidemic. *The Young Researcher*, 5 (1), 66-81. <http://www.theyoungresearcher.com/papers/buchan.pdf>

ISSN: 2560-9815 (Print) 2560-9823 (Online) Journal homepage: <http://www.theyoungresearcher.com>

All articles appearing in *The Young Researcher* are licensed under CC BY-NC-ND 2.5 Canada License.

Follow the Money: Ontario's Provincial Departmental Funding from 1950-1959 and its Relation to the Polio Epidemic

Jacob Buchan

What can we learn from past epidemics? Beyond consolidating medical history, investigating past public health crises can reveal institutional successes; scholarly inquiry can unearth the sources of these triumphs, providing guidance for current and future hardship. The academic community is well-versed in the polio epidemic in Canada, but research gaps still remain; this *ex post facto* analysis examines Ontario's provincial department budgeting from 1950 to 1959, illustrating fiscal priorities and governmental reactions to the polio epidemic. Three main factors — relative financial constancy, a lack of inflated funding for the Department of Health, and major investment in non-polio related sectors — signal Ontario's financial success during the epidemic. This budgetary victory coincides with the final downturn of Ontario polio cases, suggesting that a provincial government with preexisting and robust medical infrastructure can weather an epidemic without creating severe financial fallout.

Keywords: Polio epidemic, epidemic comparison, Ontario finance, provincial budget analysis, financial analysis

Introduction

The opening two years of the 2020s have been shaped by COVID-19. Though the reach of the coronavirus is unprecedented, mass disease outbreaks have been common in history — as solutions are sought, examining past health emergencies could proffer insight for both the present crisis and future plights. For epidemic aid, managerial insight awaits, while retrospective study in general could anatomize effective emergency management. In Canada, one of the most recent widespread illnesses was the polio epidemic. Though polio plagued Canadians throughout the early 20th century, it reached a crescendo in the 1950s and prompted decisive government action: with 9,000 infected Canadians in 1953, the University of Toronto's Connaught Medical Lab embraced a central role in the first polio vaccine's development (Rutty

et al., 2005). While this immense contribution led to a thorough documentation of federal politics and the disease's medical history, certain aspects of provincial response remain unilluminated. One of these facets currently uninvestigated is the fiscal history; tracking a provincial government's financial records would elucidate bureaucratic response to the polio crisis. The question remains: how did the Ontario government's departmental funding from 1950-1959 relate to the polio epidemic? This retrospective analysis seeks to answer that query and clarify this part of Canadian history. The ten-year time frame encompasses the building epidemic, its peak in 1953, and the years that followed. The digitally archived Journals of the Legislative Assembly — the Ontario government's sessional transcripts — provided the department budget data from 1950 to 1959. With this wealth of government data and historical context established with the exist-

ing literature, this study illuminates a currently uninvestigated aspect of Canadian history, and exposes the flow of funding in and around a time of crisis. The research lends itself to a myriad of contemporary applications, first and foremost as an historical reference. In addition to informing speculation about Ontario's fiscal response to current and future epidemics, this study simultaneously explores the determinants of effective crisis management.

Literature Review

Historical Significance

While polio was present in Canada throughout the early 20th century, the 1950s were medically significant years. Increasingly severe outbreaks in the late forties prompted the proactive National Health Grants in 1948 and laid the foundation for modern federal healthcare systems (Mulder, 2001). The University of Toronto's Connaught Medical Lab provided major resources and research efforts in developing Jonas Salk's polio vaccine, which was pivotal in establishing Canada's international medical presence (Rutty et. al, 2005). The work on vaccines in particular emphasized the viability of immunization, steering the course of Canadian health measures towards long-term investments (Butler-Jones, 2009). The epidemic reframed healthcare as a major consideration for provincial governments, as health, education, and welfare came to make up roughly 50 percent of Ontario expenditures (Dupre, 1993). The severity of polio and its prominence in the public sphere generated government reevaluations of health insurance in the country — the first conversations in 1955 between federal and provincial legislators evolved into provincial universal healthcare plans over the next decade (Simner, 2020). Indeed, in regard to policy and healthcare funding in 1957, Iglehart (2000) claims "cornerstone" choices were made.

The 1950s was consequential in the timeline of Canadian history. The academic world is well-versed in many aspects of the Canadian polio epidemic, though scholars predominantly examine medical history, such as Arya & Agarwal's (2010) investigation of polio immunity in Ontario. As emphasized by the works of Dupre (1993) and Iglehart (2000), the polio epidemic

— and the 1950s, in particular — is a highly relevant period for retrospective and historical analysis.

Pertinence of Financial Analysis

Academic works on Canadian healthcare boast a variety of analytical approaches. Some focus on qualitative methods, determining opinions and public perception of government investment (Silva et. al, 2012). Others, like Dupre (1993), mixed qualitative historical overviews with empirical data from financial records; his findings challenged the conception that Ontario out-spent Quebec throughout the 19th and 20th centuries, and called for a thorough re-examination of the academic literature. His strong conclusion reinforces that financial investigation is an especially practical mixed-methodology: beyond assessing physical infrastructure (i.e. hospitals, facilities, staffing, etc.), tracking funding is a viable way to identify trends; the data are typically easily accessible in government records and reveal institutional priorities. Past works, like that of Deber & Swan (1999), have reviewed health expenditures' political implications, while others focus on vaccine-related funding (Priscilla et al. 2007). Some recent examinations take a different approach: scholarly works like those of Dahlby and Smart's (2015) publication underscore the virtue of effectively and transparently structured provincial budgets. This use of financial analysis is echoed by the work of Butler-Jones (2009), who examined Canadian disease outbreaks, healthcare response, and financial investments to clarify successes and necessary alterations — his in-depth analysis led him to assert that funding strong legislative and medical institutions (with robust communication between the two) will best prevent health crises amongst Canadians. This conclusion endorses broad fiscal analysis; yet the work of Alvin Ho-ting Li et. al (2020), who investigated funding in order to determine the success of Ontario hospital reforms, demonstrates that the methodology can also translate to focused examinations. Other scholars have delved even further into financial analysis, using expenditure breakdowns to gauge the priority of specific areas of healthcare in Ontario (Duncan et al, 2019). While many methods of historical analysis are useful, the critical examination of funding provides practical insight: relating spending trends to any phenomena — medical or historical — is a shrewd method of evaluating resource distribution.

Gap Analysis

Research on government fiscal history — and healthcare budgeting, in particular — is split by a general divide: one collection focuses on qualitative history, while the other relies on purer quantitative analysis. The fulsome and accessible overview of polio in Canada by Rutty et al. (2005) provides rich historical understanding, whereas Dahlby and Smart's (2015) examination of provincial budgets yields precise empirical insight. MacDougall (2007) combines aspects of both approaches to analyze the efficacy of Toronto's health department in both the influenza pandemic in 1918 and the SARS outbreaks in 2003. With these general trends of research in mind, a gap remains: no works have analyzed the polio epidemic in Ontario with provincial funding analysis. Although Ontario crisis management has been researched by scholars like Henstra (2011), they lack empirical data, while highly focused financial dissections like that of Hutchison et al. (2003) are without historical emphasis. Mixed-method studies are, in some cases, present on Canadian/Ontarian healthcare: various scholars have attempted to identify the roots of health expenditures through financial examinations (Bilgel & Tran, 2013; Di Matteo, L., & Di Matteo, R., 1998) — yet the specific combination of provincial funding analysis with the historical examination of polio is unexplored. This study is particularly aligned with the work of Manuel et al. (2019), who used government expenditures to investigate Ontarian society, but focused on socioeconomics and lifestyle choices in recent years. Even the work of Ruckert et al. (2015), exploring Ontario's past health expenditures, also examines contemporary life, looking at the 1990s onward. Conversely, Battles (2017) mapped the socioeconomic distribution of polio cases in the first half of the 20th century. As a general assessment of currently published works, the history of polio in Canada, and specifically, the medical history, has been well-documented. Similarly, Canadian and Ontarian expenditure analyses have been a prominent research topic, most even using their findings to draw conclusions about healthcare efficacy. None, however, examines the Ontario government's finances in the 1950s or discusses the findings through the lens of the polio epidemic — reinforcing the need to answer the research question, “how did the Ontario government's departmental funding from

1950-1959 relate to the polio epidemic?” This study complements the works currently circulating in the academic conversation, providing a clarified view of financial changes, a discussion of their historical implications, and conclusions about the contemporary uses for such insight.

Methodology

Mixed-Method Research

A mixed-method approach is well-suited to establish the historical relevance of empirical data. This synthesized approach combines quantitative and qualitative analysis, providing balance and flexibility in drawing conclusions (Creswell, 2014). Mixed-method studies add nuance to inquiry; they combine the clarity of a quantitative approach with the potential for interconnected insight from qualitative conclusions. This pluralist quality is key for this study: the data consolidation constitutes the primary research, while the suggestion of trends and discussion of relevance expounds the value of the findings.

Examples of Scholarly Approaches

This study's specific design is best defined as *ex post facto* research, where collected data on a past phenomenon is examined for possible relationships between an event and its consequences. The *ex post facto* archetype is a common approach; several works using government data collection utilize this methodology — their work stood as a guide for this study. The primary demonstration of a focused *ex post facto* study is Xie and Wang's (2019) investigation, which examined the funding of anti-pollution initiatives and the levels of three air pollutants in Beijing from 2006 to 2015. They retrieved their data from the Beijing statistical yearbooks, an open-source government database. After preliminary discussion, the scholars developed several comparative graphs, charting the levels of air pollution with the government spending. Based on their models and the general trends they identified, Xie and Wang (2019) were able to draw conclusions about the government's efficacy in reducing air pollutants. Other studies, like that of Ercolano and Romano (2018), take an even deeper dive into examining

ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

government expenditures: the researchers collected data from 21 European countries and organized their spending records into multiple categories. Utilizing similar data analysis to Xie and Wang (2019), the scholars created models of the data and drew their conclusions about European pollution investments. Both works were referenced to guide the methodology of this study.

Design: Data Collection and Analysis

Using the archived Journals of the Legislative Assembly, this study scrutinized the Committee of Supply Reports for the Ontario provincial government for every fiscal year from 1950 to 1959. These sections list the budget for each provincial department's sub-branches for the financial year (beginning in April). In addition to the budgets, this study also analyzed the supplemental funding included in the Committee of Supply report: these amounts are granted as defrayal for unforeseen expenditures in the previous budgeting period. These budget data were manually transcribed into a Microsoft Excel file: the program is designed for a data coalition and it enabled mathematical manipulations — for each year in the decade, sub-branch budget data were tabulated to determine every department's total funding; these totals were used in this study's analysis. Below is an example of the collated data (full tables can be found in Appendices A-J):

Department of Agriculture	
Main Office	503890
Agricultural or Horticultural Societies Branch	710600
Agricultural Representative Branch	799460
Co-operation and Markets Branch	45300
Crops, Seeds and Weeds Branch	143805
Dairy Branch	228300
Farm Economics Branch	77485

Fruit Branch	253760
Live Stock Branch	82500
Milk Control Board of Ontario	81810
Northern Ontario Branch	700000

Excel similarly provided the graphical representation: using the department totals, a line graph tracked the progression of health funding from 1950 to 1959, and pie charts for each year compared every department's proportional makeup of the total budget (see Appendices K-U). These changes indicate changes in the stature of the Department of Health, but also indicate what government departments were depleted or boosted as a result.

To improve accuracy, the data from 1951-1959 was converted to account for inflation. Using the Bank of Canada's Inflation Calculation (whose data are retrieved from Statistics Canada), these financial forecasts were adjusted to approximate their worth in 1950; this streamlined the pattern identification. An ensuing content analysis of the data used graphical representations and models to represent how provincial funding — with particular respect to healthcare — changed during the polio epidemic.

A thorough discussion of the trends outlined how government priorities shifted from 1950 to 1959. Notable events, such as significant department growths or depletions, long-term trends in budget priority, and dramatic funding redistributions, were cross-referenced with the historical literature to suggest the implications; similarly, historical events (like polio case-load fluctuations) not reflected in the financial changes promoted hypotheses and potential historical explanations.

Findings

Department of Health

The archived budget reports, while somewhat abstract in isolation, reveal useful trends when compared. The Department of Health's funding is particularly pertinent to this study's examination: Figure 1

ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

illustrates the progression of funding for the Department of Health from 1950 to 1959. The values from 1951 onwards were curved with their respective rates of inflation — adjusted to reflect a sum equivalent in value to 1950 Canadian dollars, which mitigated the presence of misleading spikes in the linear model. The general upward trend over the ten-year period is attributable to total provincial revenue growth as the population increased.

Notable aspects of the Department of Health's funding include the upticks from 1951-1952 and 1957-1958, as well as the plateaus from 1952-1953 and 1956-1957. These features represent significant financial changes — all referenced sums have been adjusted to match their value in 1950 CAD. The first spike represents a stark funding gain between the two years: an increase from \$35,849,454 to \$46,322,155. Following the roughly ten and a half million-dollar upsurge is a fiscal drought, as the Department of Health gained only three million dollars from 1952 to 1953. This moderate increase generally reflects the department's yearly gain over the next four years — more dramatic change occurred again between 1957 and 1958, as

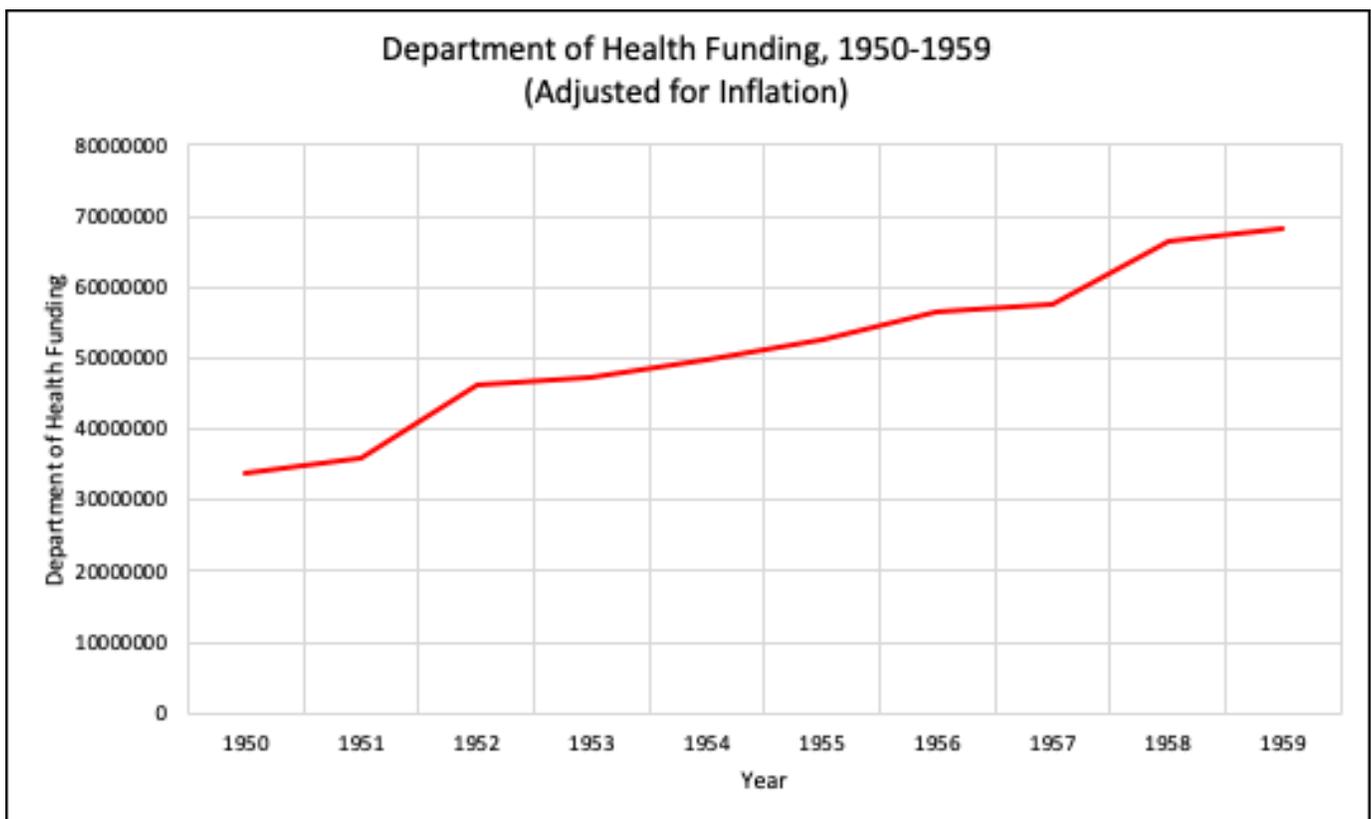
funding rose from \$56,592,221 to \$66,353,495. This second ten million-dollar increase preceded the final plateau of the decade, where the Department of Health experienced only a two million-dollar increase from 1958 to 1959.

Budgetary Makeup

On a yearly basis, the most illuminating graphics are budgetary pie charts representing the percentage of the provincial budget each department made up and proportional to one another within each year. These charts illustrate a relative “ranking” of departments against one another based on funding (and presumably, usage), and depict the evolution of budgetary priorities over the 1950s.

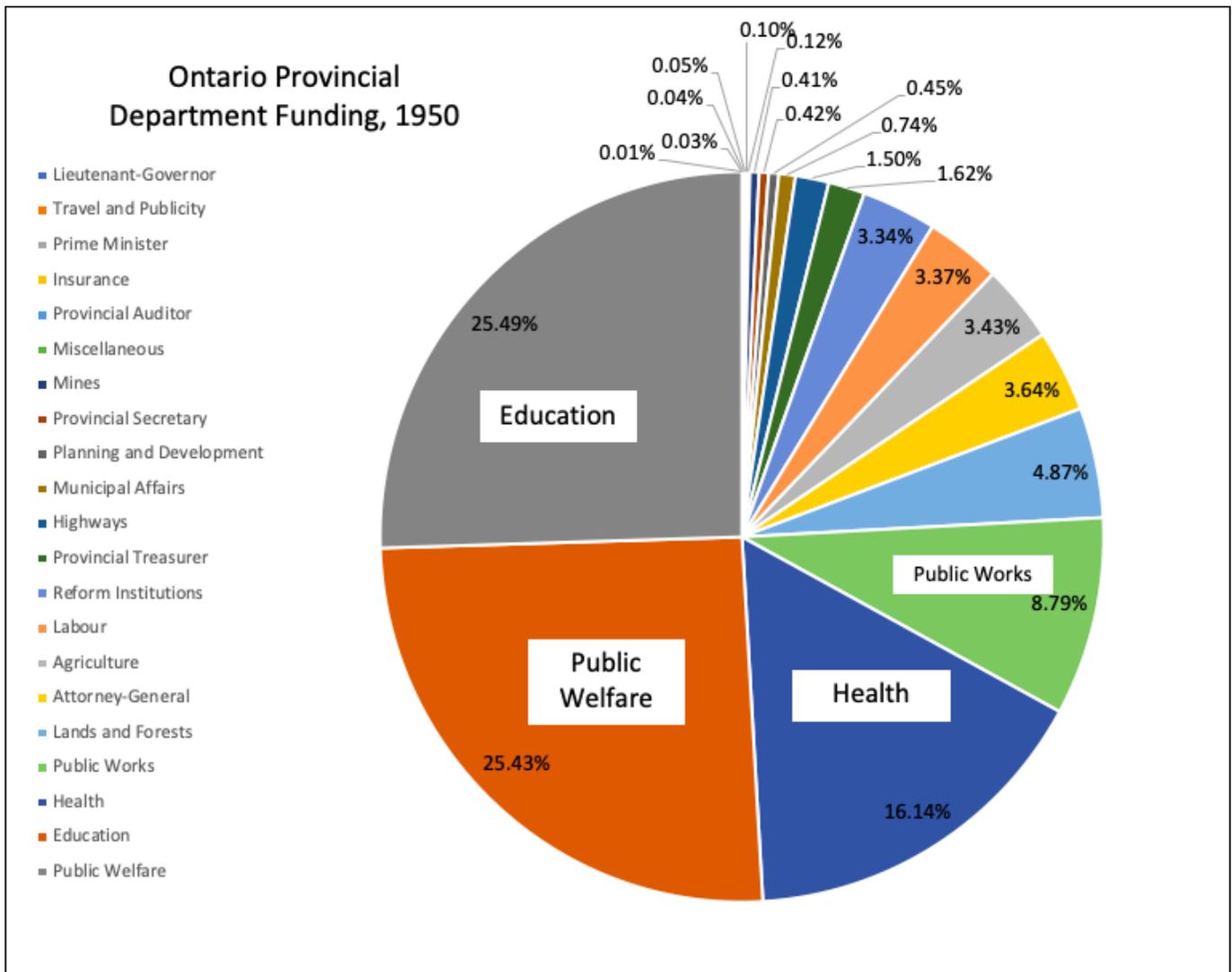
Figure 2 represents the budget-breakdown in 1950. In a distribution that changes dramatically over the next ten years, the Department of Education and the Department of Public Welfare each make up a quarter of total funding. The Department of Health is the third largest, making up 16.14% of government spending, followed by the Department of Public Works at 8.79%.

Figure 1: Department of Health Funding, 1950-1959 (Adjusted for Inflation)



ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

Figure 2: Ontario Provincial Department Funding, 1950

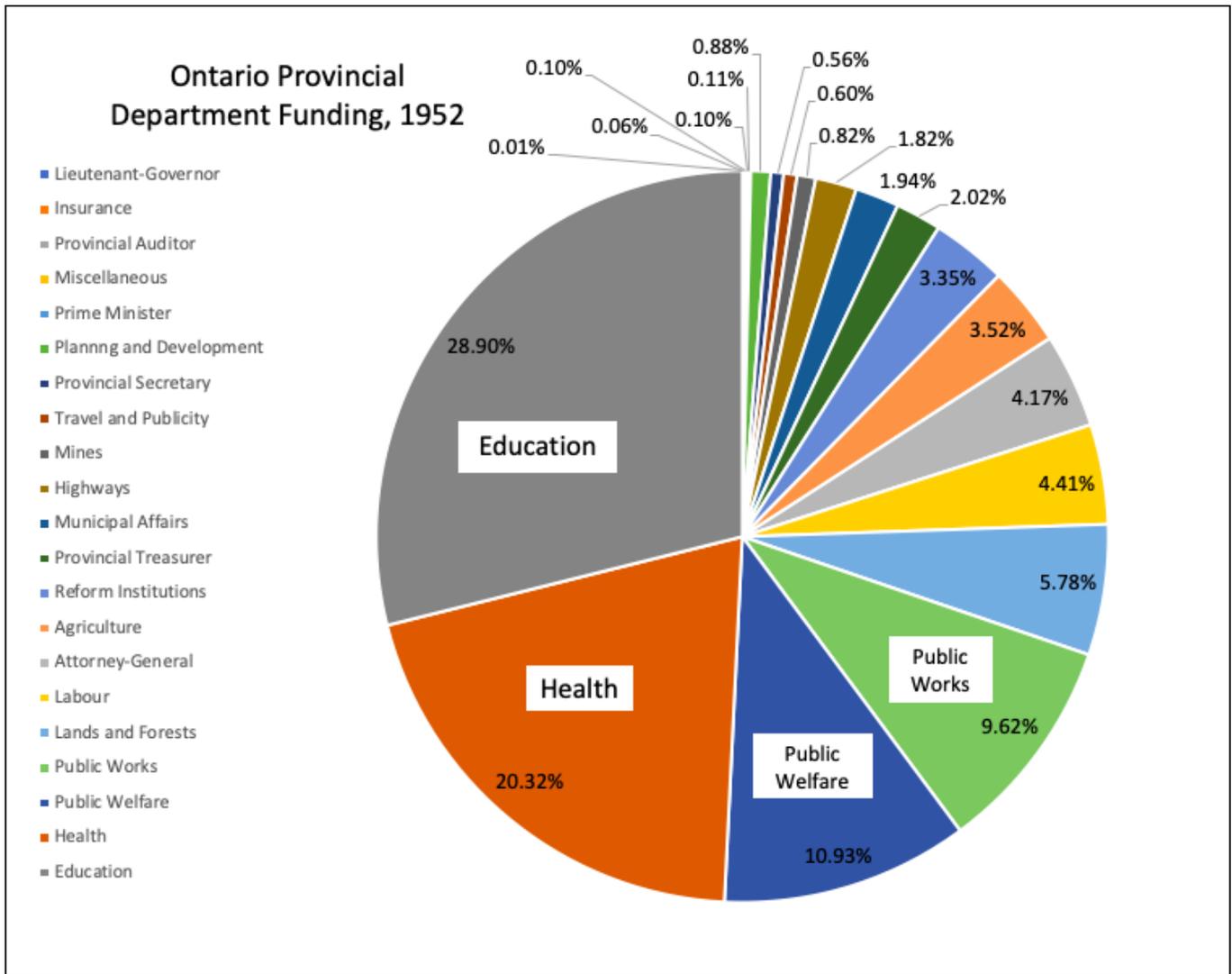


All other departments make up increasingly smaller portions of the budget, and collectively only constitute 25.25%.

This fiscal distribution carried on through 1951, with marginal increase for the Department of Health. Figure 3 shows how the distribution is disturbed in 1952, as the Department of Education grew to 28.90%, the Department of Health rose significantly to 20.32% (becoming the second largest department), and the Department of Public Works rose to 9.62%. All these increases siphoned funding from the Department of Public Welfare, which plummeted 14% to make up only 10.93% of the budget. Still, the following year brought more dramatic change: Figure 4 shows the funding distribution in 1953 and the major investment in the Department of Highways.

ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

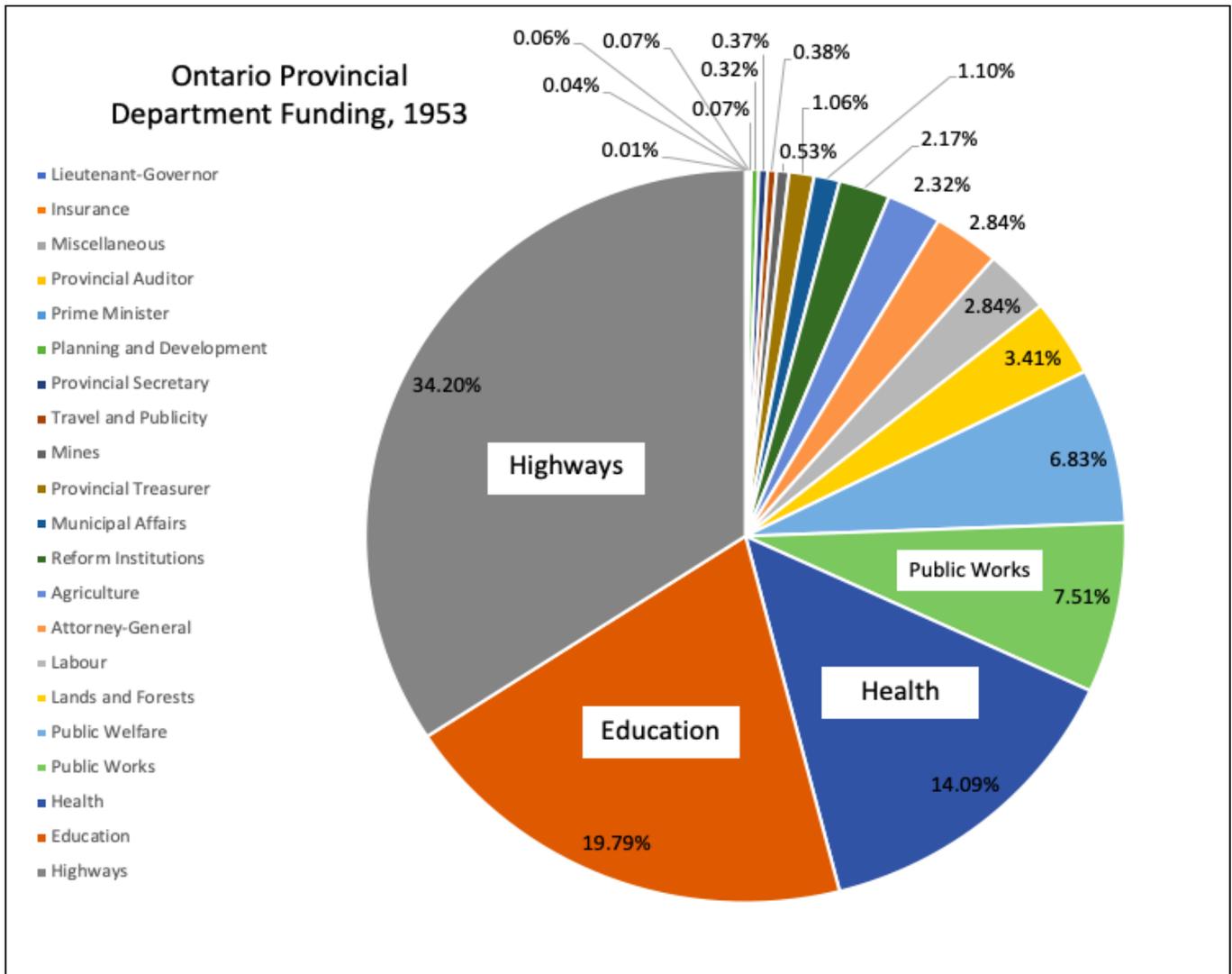
Figure 3: Ontario Provincial Funding, 1952



As figure 4 shows, the Department of Highways came from a miniscule 1.82% to make up over a third of the entire provincial budget at 34.20%. This leap established a new budgetary hierarchy, as highways remained the largest provincial investment in the following years. The rise was not without cost, as the Department of Education fell nearly 10% to 19.79%, the Department of Health dropped to 14.09%, and the Department of Public Welfare fell to 6.83%, losing its position as one of the four largest departments.

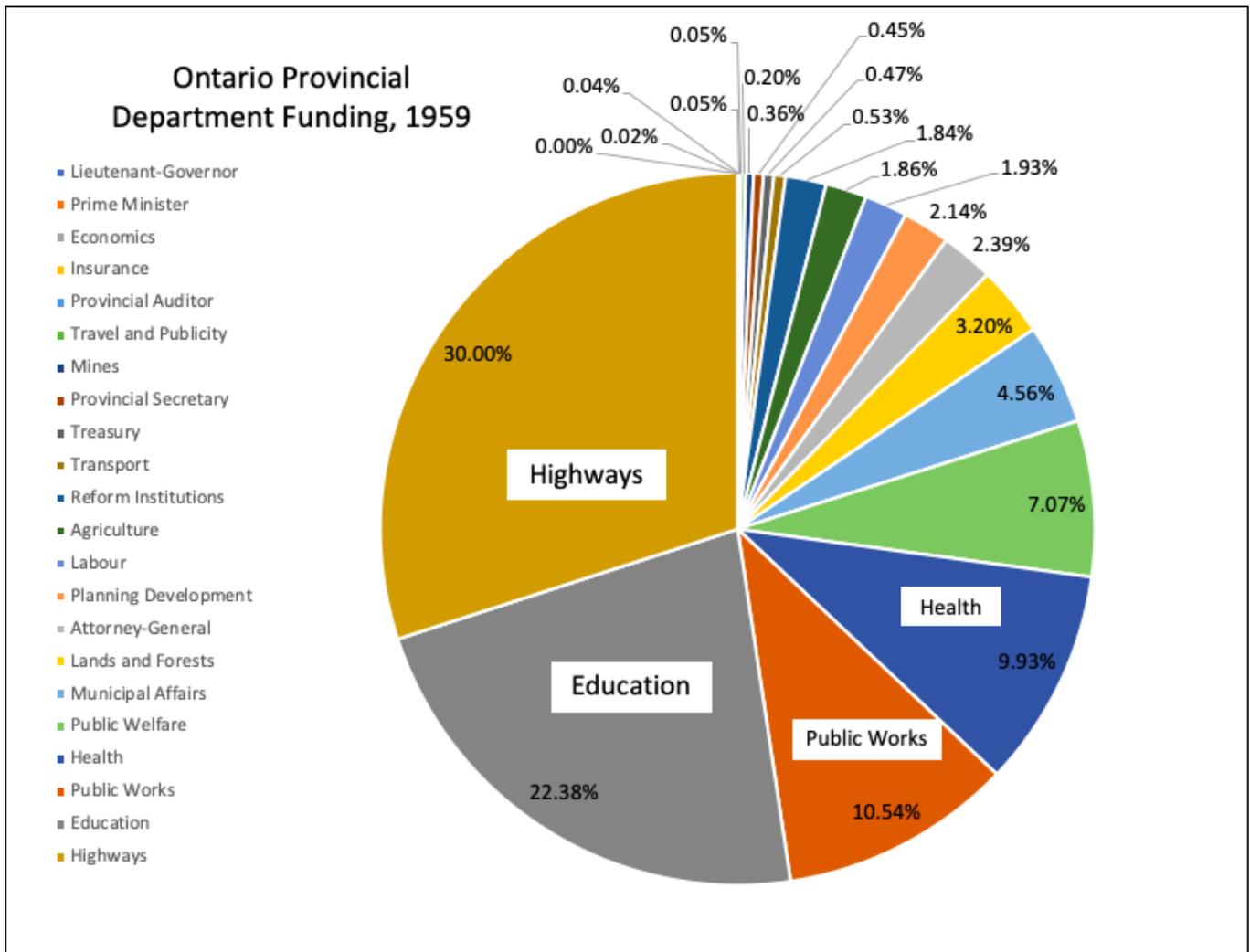
ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

Figure 4: Ontario Provincial Funding, 1953



The distribution of funding in 1953 remained largely unchanged in following years. The Department of Highways hovered around a third of the budget, reaching its zenith in 1956 at 36.23% and declining to 30% in 1959. The Department of Education rested around 20%, generally fluctuating inversely with the Department of Highways: it experienced an uptick by 2% in 1959. The Department of Health ebbs and flows with the size of the Department of Public Works, as the two sat as the third and fourth largest departments in 1953. The Department of Health made a moderate decline after 1953 — it fell to 12.24% in 1955, 10.85% in 1957, and rested around 9.93% in 1959. The Department of Public Works overtook the Department of Health twice, once in 1947 and again in 1959. Figure 5 shows the final budgetary distribution in 1959:

Figure 5: Ontario Provincial Funding, 1959



Discussion

This consolidation of provincial budgetary data revealed interesting trends: changes in departmental funding give insight into the government’s evolving legislative priorities. In 1950, the government invested over 25% of its budget in public welfare; by 1953, the Department of Public Welfare made up a miniscule 6%. This severe drop was caused by the explosive funding increase for the Department of Highways in the same year, which jumped from 1.82% to 34.20%. Though all departments had their funding curtailed, the Department of Welfare was seemingly sacrificed, and illustrates the province’s movement away from provincially-funded welfare.

The sudden expansion of the Department of Highways tells of the burgeoning Ontario transportation

program in the 1950s: the government invested heavily in long-term roads and highways within the province. This transportation program was a landmark in Ontario’s legislation, and speaks to the sociological history of the province — Ontario’s population grew by 10,000 per month, and automobiles were increasingly affordable and popular; the investment in highways and modernized roads was a proactive decision (Government of Ontario, 2013). The specific funding jump in the budgets can be attributed to the 400-series highways whose development commenced in 1953. The Department of Highways occupied a third of the budget for the rest of the decade, likely reflecting the continued expansion of Ontario transportation.

The less dramatic developments of Ontario spending have equally important implications: the yearly changes to the Department of Health’s funding have various relations to the events of the polio epidemic.

ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

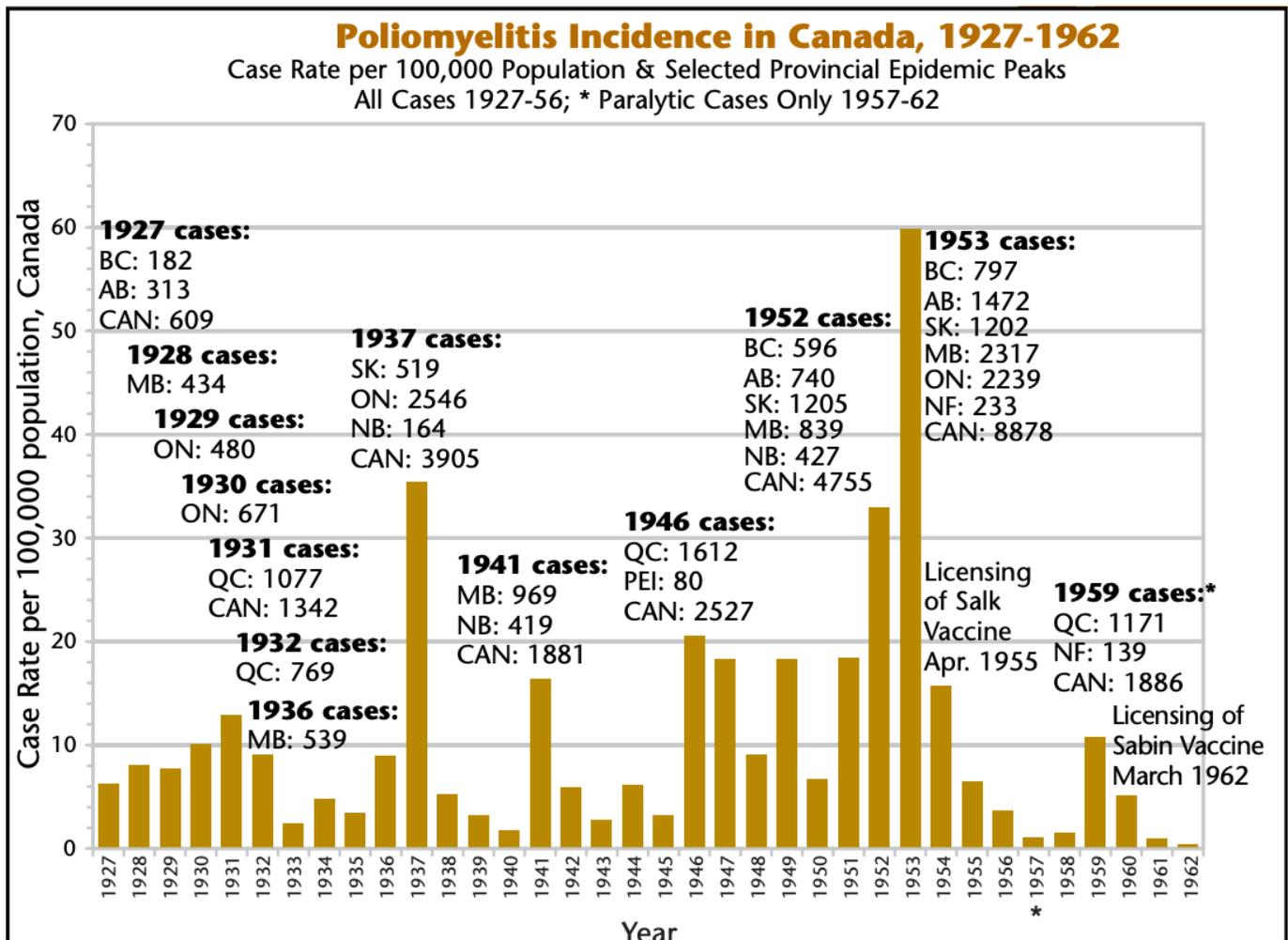
The most significant increases to the Department of Health's proportional and gross funding occurred in 1952 and 1956; these extra funds both proved necessary, as they preceded the polio case peak in 1953 and the smaller "second wave" in 1957 (Barreto & Rutty, 2002).

These fluctuations, though miniscule as compared to the Department of Highways, are potentially more insightful: the province did not have a universal healthcare program in the 1950s, which suggests funding would only be increased during particularly severe events. The Department of Health financed the general maintenance of hospitals and medical facilities, both public and private, while physicians, doctors, and treatments were covered by private healthcare insurers like the Ontario Blue Cross; indeed, over 65% of Ontarians had comprehensive hospitalization insurance during the polio epidemic (Simner, 2020). The provincial Department of Health's funding up-

ticks preceding each case-surge year are telling; since polio-specific equipment, like the 'iron lung' breathing apparatus, was purchased by the provincial government (Rutty et. al, 2005) alongside facility upgrades like increased sanitary measures, extra hospital beds, and excess personal protective equipment, the funding increases most likely reflect polio-prompted investments. This increased governmental involvement seems to indicate that private insurers alone were insufficient in mitigating polio, or at least that polio eradication was a high provincial priority.

While the Department of Health's funding varied throughout the 1950s, its overall size proportional to other departments steadily decreased. This downsizing for the Department of Health coincides with case-load drops; diminished spending and diminished illness paints Ontario's polio crisis as a managerial success. The following bar graph from Rutty et. al (2005) delineates Canada's polio cases, noting key events like the introduction of vaccines, and high-

Figure 6



lighting provincial case spikes throughout the 20th century. After 1953, the distinct lack of Ontario case surges suggests swift and successful control of the epidemic — effective enough to warrant the decline in the Department of Health's proportional funding.

Though these sections of the data link neatly to the historical events, others have more complicated relationships. Unexpectedly, the data from this study contradict a primary claim by Rutty et. al (2005). The scholars' work, *Conquering the Crippler: Canada and the Eradication of Polio*, is the definitive text on the history of polio in Canada. Renowned in the academic community and a staple in the Canadian Journal of Public Health, the comprehensive work follows the national eradication of the disease in the 20th century. Rutty and his co-authors attribute the successful pre-vaccine control of the epidemic to three factors, first among them federal and provincial "disease management and the provision of social supports for polio victims and their families." This claim should be reflected in the provincial budgets: the referenced initiatives likely would descend from the provincial departments of health and public welfare, so respective funding increases would be expected. Yet the data reveal that throughout the polio epidemic in the 1950s, the Department of Health declined in proportional funding and the Department of Welfare experienced a severe budgetary drop. The conflict runs deeper, as Rutty et. al (2005) claims the situation began to stabilize in 1953 after the case spike prompted greater governmental involvement; conversely, by 1953, Ontario's Department of Health dropped 6% in their proportional budget with only a marginal increase in their gross funding (likely from the growing population's added government revenue), and the Department of Public Welfare had nearly disappeared from the budget after falling 18% in proportional funding in three years.

Despite the stark clash, the claim in *Conquering the Crippler* could have excluded Ontario, which was not specifically named in that study; funding for the referenced programs could have come from other sources. For example, the Canadian Foundation for Poliomyelitis, widely known as the Ontario March of Dimes Campaign, raised millions of dollars for polio victim rehabilitation, support for their families, and vaccine research (Gerl, 2016). Similarly, Toronto's Connaught Medical Laboratory — the centre for the province's

public health network — could have provided the disease control efforts that *Conquering the Crippler* references; the lab received some provincial funding but was bolstered by charitable donations, American research funding, and Canadian federal grants (Marks, 2011). Both of these programs would have eased the financial burden on the provincial government, and possibly account for lack of provincial budgetary increase, yet Rutty's reference to "several provincial governments" without explicit reference of Ontario leaves the answer uncertain. This ambiguity could be resolved with future research into the specific financial relationship between the provincial government, Ontario March of Dimes, and the Connaught Medical Lab.

Conclusions

While the specific funding changes have a variety of implications — affirming some notions while contradicting others — the overall trend in the government data bears the most interesting insight: from a budgetary perspective, the Ontario government was not impaired by the polio epidemic. The Department of Health's proportional funding marks the success: it did not dominate the budget during the crisis. Even during the case-spike years in 1953 and 1959, healthcare funding did not significantly disrupt the hierarchy of budget distribution. The funding for the Department of Health, experiencing a net decline of 6.21% from 1950 to 1959, coincided with the final downward trend of polio cases in Canada: the late fifties were the last surge-period for polio in Canada (Rutty et. al, 2005). The correlation suggests the decade was both a medical and fiscal success for the provincial government.

The financial constancy is likely a result of how many institutions were involved in the polio effort — the presence of multiple organizations distributed the cost of the epidemic without severely depleting any one of them. While the provincial government oversaw most of the polio containment measures and financed medical facility maintenance, private insurance paid for most Ontarians' hospitalization (Simner, 2020). Even as the country began its gradual shift to government-funded healthcare, the federal government financed 50% of hospital care through

the Hospital Insurance and Diagnostic Services Act of 1957, which further reduced the provincial burden (Blankenau, 2001). The Ontario March of Dimes covered swaths of polio rehabilitation in the province, and similarly contributed to vaccine development at the Connaught Lab. Vaccine distribution ultimately ended the epidemic, and its funding largely came from the Canadian federal government and American investors, both public and private (Rutty & Sullivan, 2010).

Generally, the annual financial stability and overall diminishment of the Department of Health indicates that a provincial government can control an epidemic without incurring substantial deficits. Specifically, the historical context provides a more nuanced conclusion: while vaccine development is obviously paramount, epidemic control can be best financially weathered when borne by multiple institutions. Ranking the efficacy of each organization involved in the Ontario polio epidemic — charitable campaigns, private insurance, and federal grants — is beyond the scope of this study, but their presence in general provided the cost distribution that enabled Ontario's budgetary constancy and allowed it to simultaneously invest in long-term transportation projects. Mitigating budget inflation is essential, as excess funding in one sector can deplete resources for other vital departments; as Ontario's 1950s financials indicate, the presence of robust, prepared, semi- and fully-independently financed medical entities could potentially lighten provincial containment costs in future epidemics.

Implications and Future Directions

Taken at face value, these conclusions bode well for current and future disease control in Ontario — since the polio-era data reveal a decade of financial stability (even at the apex of the crisis), future success might be achieved with a similar governmental approach. Yet critical differences exist between polio and the contemporary crisis with COVID-19, both with the diseases themselves and the configuration of healthcare. Firstly, the scales of the illnesses differ: Ontario's polio caseload peaked at 2239 cases, whereas COVID-19 infections as of April 26, 2021 stand at 452,126, and projections could see the total rise higher (Rutty et. al,

2005; Public Health Ontario, 2021). Adjusted for population growth, polio affected 0.045% of Ontarians in 1953; COVID-19 infects 3.10% of the province today (Statistics Canada, 2018; Statistics Canada, 2021). Despite COVID-19's greater transmission, it is much less virulent than polio — scholars Hamborsky, Kroger, & Wolfe (2015) note polio's remarkably high fatality rate of 5-10%, whereas COVID-19 is fatal for only 1.75% of Ontario infections (Statistics Canada, 2021). Future research should consider how this disparity between transmissibility and lethality determines necessary containment and treatment measures — and to what extent this would alter demand for funding and resources. Such an investigation would assess the current efficacy of the Ontario government's prevention measures; determining if aspects of the polio approach could be applied today has the potential to optimize expenditures (thereby reducing provincial debt).

Another critical factor is the disparity between the polio-era budget and current healthcare funding: generally speaking, the Department of Health occupied between 10% and 20% of the Ontario budget in the 1950s, whereas the 2021 Ontario budget vests the Health Sector with 35% of the expenses (Government of Ontario, 2021). This variance is largely caused by the Ontario Hospital Insurance Plan: since 1966, Ontario has facilitated a universal healthcare program, and now covers the costs of doctors and most medical treatments, which had been funded by private insurance in the 1950s (Government of Ontario, 2021; Simner, 2020). The increased healthcare expenses are also caused by the provincial government's proactive spending, investing \$3.2 billion in excess personal protective equipment, intensive care beds, and general expanded hospital occupancy and capacity (Government of Ontario, 2021). While largely preparatory, this investment is also compensating for the strain on resources from the start of the pandemic. This situation differs from the polio epidemic, as while initial shortages of iron lungs struck the province, Ontario was relatively equipped to combat polio (Rutty et. al, 2005), whereas COVID-19's sudden and extensive spread across the province pressured existing systems. Future research could still find promise examining the development of Ontario's medical infrastructure (like the 1986 privatization of the Connaught Medical Lab) to compare contemporary resources and capabilities

with those of the polio epidemic. As the government makes proactive investments, scholarly inquiry would be effective in suggesting how Ontario's network should (or should not) be remodeled to mitigate the severity of future epidemics.

Limitations

As noted, this study's mixed-methodology has demonstrable benefits, but qualitatively analyzing empirical data has its drawbacks: for conclusions to be meaningful, the data must be precise and extensive. This study relied on primary source material — beyond the main Committee of Supply reports, the Journals of the Legislative Assembly record numerous minor instances of financial grants and defrayals in any given session. These small grants varied yearly, whereas the Committee of Supply reports are detailed and consistent, and specifically catalogue funding to each department's branches alongside supplemental finance. This study only analyzed the latter, for reasons of clarity and efficiency — though the minor grants and defrayals were deemed to be negligible for their consistently small sums, their exclusion could have limited the scope of the findings.

In terms of analysis, this study was constricted by the limits of the budgetary trends. Non-empirical records, like bill proposals and hearings, would have provided similar insight into the Ontario government's priorities and justification for their choices. Other financial records, like health insurance rates, the self-sufficiency of existing medical infrastructure, direct federal grants to hospitals and medical facilities, and the influence of non-governmental institutions could reevaluate this study's findings.

Lastly, this study focused on the polio epidemic, while other significant historical events and political agendas also occurred in the 1950s: the noted Ontario transportation program is one facet of a larger societal mechanization — another viable lens for analysis would be industrial, as 1950 saw the connection of the Enbridge pipeline from Edmonton to Ontario, ushering in a new era of fuel usage in the province (Scott, 2013). This angle or any other historical slant could shed further light on Ontario's budgetary phenomena in the 1950s and even dispel misinterpreted claims.

While these limitations open avenues for further

research, this study's investigation of Ontario's financials in the polio epidemic is revealing. It delineates the province's financial stability during the epidemic, and underscores the vitality of layered medical institutions and funding in dispersing costs and limiting provincial debt. This study takes a useful step into the domain of retrospective budgetary analysis and adds new material to the repertoire of the academic community.

References

- Arya, S. C., & Agarwal, N. (2010). Polio immunity in Ontario: CMAJ. *Canadian Medical Association Journal*, 182(16), 1762-3. Retrieved from <https://search.proquest.com/scholarly-journals/polio-immunity-ontario/docview/767276277/se-2?accountid=36317>
- Battles, H. T. (2017). Differences in polio mortality by socioeconomic status in two southern Ontario counties, 1900-1937. *Social Science History*, 41(2), 305-332. doi:<http://dx.doi.org/10.1017/ssh.2017.1>
- Barreto, L., & Rutty, C. J. (2002). The speckled monster: Canada, smallpox and its eradication. *Canadian Journal of Public Health*, 93(4), I1-20, I1-20. Retrieved from <https://search.proquest.com/scholarly-journals/speckled-monster-canada-smallpox-eradication/docview/231994562/se-2?accountid=36317>
- Bank of Canada (2021). *Inflation Calculator*. Retrieved February 23, 2021, from <https://www.bankofcanada.ca/rates/related/inflation-calculator/>
- Bilgel, F., & Tran, K. C. (2013). The determinants of Canadian provincial health expenditures: Evidence from a dynamic panel. *Applied Economics*, 45(2), 201. Retrieved from <https://search.proquest.com/scholarly-journals/determinants-canadian-provincial-health/docview/895205941/se-2?accountid=36317>
- Blankenau, J. (2001). The fate of national health insurance in Canada and the United States: A multiple streams explanation. *Policy Studies Journal*, 29(1), 38-55. doi:<http://dx.doi.org/10.1111/j.1541-0072.2001.tb02073.x>
- Butler-Jones, D. (2009). A reflection on public health in Canada: Applying lessons learned for the next century of public health practitioners. *Canadian Journal of Public Health*, 100(3), 165-8. Retrieved from <https://search.proquest.com/docview/232009696?accountid=36317>
- Creswell, John W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California : SAGE.
- Dahlby, B., & Smart, M. (2015). The structure and presentation of provincial budgets. *The School of Public Policy Publications (SPPP)*, 8. doi:<http://dx.doi.org/10.11575/sppp.v8i0.42527>
- Deber, R., & Swan, B. (1999). Canadian health expenditures: Where do we really stand internationally?: CMAJ. *Canadian Medical Association Journal*, 160(12), 1730-4. Retrieved from <https://search.proquest.com/scholarly-journals/canadian-health-expenditures-where-do-we-really/docview/204792458/se-2?accountid=36317>
- Di Matteo, L., & Di Matteo, R. (1998). Evidence on the determinants of Canadian provincial government health expenditures: 1965-1991. *Journal of Health Economics*, 17(2), 211-228. doi:[http://dx.doi.org/10.1016/S0167-6296\(97\)00020-9](http://dx.doi.org/10.1016/S0167-6296(97)00020-9)
- Duncan, L., Katholiki, G., Birch, S., Jinette, C., Wang, L., & Boyle, M. H. (2019). Children's mental health need and expenditures in Ontario: Findings from the 2014 Ontario child health study. *Canadian Journal of Psychiatry*, 64(4), 275-284. doi:<http://dx.doi.org/10.1177/0706743719830036>
- Dupre, R. (1993). Was the Quebec government spending so little?: A comparison with Ontario, 1867-1969. *Journal of Canadian Studies*, 28(3), 45-61. doi:<http://dx.doi.org/10.3138/jcs.28.3.45>
- Ercolano, S., & Romano, O. (2018). Spending for the environment: General government expenditure trends in Europe. *Social Indicators Research*, 138(3), 1145-1169. doi:<http://dx.doi.org/10.1007/s11205-017-1695-0>
- Gerl, E. (2016). Out of the back rooms. *Journalism History*, 42(3), 122-129. Retrieved from <https://www.proquest.com/scholarly-journals/out-back-rooms/docview/1838426433/se-2?accountid=36317>
- Government of Ontario. (2013). *History of ministry of transportation*. Retrieved March 24, 2021, from <http://www.mto.gov.on.ca/english/about/mto-100/#1950s>
- Government of Ontario. (2021). *Ontario's Action Plan: Protecting People's Health and Our Economy – 2021 Ontario Budget*. Retrieved April 28, 2021, from <https://budget.ontario.ca/2021/pdf/2021-ontario-budget-en.pdf>
- Government of Ontario. (2021). *What OHIP covers*. Retrieved June 24, 2021, from <https://www.ontario.ca/page/what-ohip-covers>
- Hamborsky, J., Kroger, A., & Wolfe, C. (2015). *Epidemiology and prevention of vaccine-preventable diseases (8th ed.)*. United States: U.S. Dept. of Health & Human Services, Centers for Disease Control and Prevention.
- Henstra, D. (2011). The dynamics of policy change: A longitudinal analysis of emergency management in Ontario, 1950-2010. *Journal of Policy History : JPH*, 23(3), 399-428. doi:<http://dx.doi.org/10.1017/S0898030611000169>
- Ho-tung Li, A., Palmer, K. S., Taljaard, M., Paterson, J. M., Brown, A., Huang, A., . . . Ivers, N. (2020). Effects of quality-based procedure hospital funding reform in Ontario, Canada: An interrupted time series study. *PLoS One*, 15(8) doi:<http://dx.doi.org/10.1371/journal.pone.0236480>
- Hutchison, B., Torrance-Rynard, V., Hurley, J., Birch, S., Eyles, J., & Walter, S. D. (2003). Equity in health care funding: Comparison of expenditures in Ontario to allocations based on population need. *St. Louis: Federal Reserve Bank of St. Louis*. Retrieved from <https://search.proquest.com/>

ONTARIO'S PROVINCIAL FUNDING AND ITS RELATION TO THE POLIO EPIDEMIC

- [working-papers/equity-health-care-funding-comparison/docview/1698507131/se-2?accountid=36317](https://search.proquest.com/docview/1698507131/se-2?accountid=36317)
- Iglehart, J. K. (2000). Revisiting the Canadian health care system. *The New England Journal of Medicine*, 342(26), 2007-2012. Retrieved from <https://search.proquest.com/docview/223936289?accountid=36317>
- MacDougall, H. (2007). Toronto's health department in action: Influenza in 1918 and SARS in 2003. *Journal of the History of Medicine and Allied Sciences*, 62(1), 56-89. Retrieved from <https://search.proquest.com/docview/201274298?accountid=36317>
- Manuel, D. G., Bennett, C., Perez, R., Wilton, A. S., Rohit, D. A., Laporte, A., & Henry, D. A. (2019). Burden of health behaviours and socioeconomic position on health care expenditure in Ontario. *F1000Research*, 8. doi:<http://dx.doi.org/10.12688/f1000research.18205.2>
- Marks, H. M. (2011). The 1954 Salk poliomyelitis vaccine field trial. *Clinical Trials*, 8(2), 224-34. doi:<http://dx.doi.org/10.1177/1740774511399110>
- Mulder, D. S. (2001). Current health care crisis: A Canadian perspective. *Archives of Surgery*, 136(2), 169-71. Retrieved from <https://search.proquest.com/scholarly-journals/current-health-care-crisis-canadian-perspective/docview/232555099/se-2?accountid=36317>
- Priscilla, M. L., Nasciben, L. B., Ana Marli, C. S., Itria, A., Hillegonda Maria, D. N., & Patrícia Coelho de Soárez. (2017). Vaccines are different: A systematic review of budget impact analyses of vaccines. *Vaccine*, 35(21), 2781-2793. doi:<http://dx.doi.org/10.1016/j.vaccine.2017.03.088>
- Public Health Ontario. *COVID-19 in Ontario: January 15, 2020 to April 26, 2021*. Retrieved April 28, 2021, from <https://www.publichealthontario.ca/-/media/documents/ncov/epi/covid-19-daily-epi-summary-report.pdf?la=en>
- Ruckert, A., Caldbick, S., & Labonté, R. (2015). Equity in times of austerity: Ontario's revenue crisis in historical perspective. *Canadian Review of Social Policy*, (72), 1-34. Retrieved from <https://search.proquest.com/scholarly-journals/equity-times-austerity-ontarios-revenue-crisis/docview/1758654852/se-2?accountid=36317>
- Rutty, C. J., Barreto, L., Rob, V. E., & Gilchrist, S. (2005). Conquering the crippler: Canada and the eradication of polio/Pour invalider la polio: Le Canada et l'éradication de la polio. *Canadian Journal of Public Health*, 96(2), 12-24. Retrieved from <https://search.proquest.com/docview/232001931?accountid=36317>
- Rutty, C. J., Sullivan, S.C. (2010). *This is public health: A Canadian history*. Canadian Public Health Association. doi: https://www.cpha.ca/sites/default/files/assets/history/book/history-book-print_all_e.pdf
- Silva, D. S., Gibson, J. L., Robertson, A., Bensimon, C., Sahní, S., Maunula, L., & Smith, M. J. (2012). Priority setting of ICU resources in an influenza pandemic: A qualitative study of the Canadian public's perspectives. *BMC Public Health*, 12, 241. doi:<http://dx.doi.org/10.1186/1471-2458-12-241>
- Simner, Marvin L. (2020). The story behind the Ontario Health Insurance Plan and its impact on the public sector. *History Publications*, 392. <https://ir.lib.uwo.ca/historypub/392>
- Statistics Canada. *Archived - population of Canada and the provinces, annual, 1926 - 1960 (x 1,000)*. Retrieved April 28, 2021, from <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610028001&cubeTimeFrame.startYear=1953&cubeTimeFrame.endYear=1954&referencePeriods=19530101%2C19540101>
- Statistics Canada. *Population and Dwelling Count Highlight Tables, 2016 Census*. Retrieved April 28, 2021, from <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/pd-pl/Comprehensive.cfm>
- Scott, D. N. (2013). Situating sarnia: «unimagined communities» in the new national energy debate. *Journal of Environmental Law and Practice*, 25, 81-111. Retrieved from <https://search.proquest.com/scholarly-journals/situating-sarnia-unimagined-communities-new/docview/1668005130/se-2?accountid=36317>
- Xie, X., & Wang, Y. (2019). Evaluating the efficacy of government spending on air pollution control: A case study from Beijing. *International Journal of Environmental Research and Public Health*, 16(1) doi:<http://dx.doi.org/10.3390/ijerph16010045>

