# **Chemical & Pharmaceutical Research**

# A Comparative Analysis of Communication Strategies in Managing the COVID-19 Pandemic Crisis: Lessons from New Zealand and Sweden, Considering Population Differences

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#### ABSTRACT

Amid the unprecedented challenges posed by the COVID-19 pandemic, effective communication emerged as a linchpin in navigating the crisis and shaping public responses. This article conducts a meticulous comparative analysis of the communication strategies employed by New Zealand and Sweden, countries renowned for their distinctive approaches, while also acknowledging the significant variance in their population sizes. Leveraging empirical data, scholarly literature, and per capita normalization techniques, we delve into the impact of these strategies on critical metrics such as death tolls, economic outcomes, and social cohesion. Results indicate that clear and consistent communication contributed to lower per capita mortality in New Zealand. Meanwhile, tailoring public health messaging to sociocultural contexts and balancing individualism with collectivism appears vitally important. The findings highlight valuable lessons for crisis communication strategies suitable across diverse population settings.

### Keywords

COVID-19 pandemic, Communication strategies, New Zealand, Sweden, Death tolls, Economic impact, Social cohesion, Public trust, Policy frameworks, Messaging approaches, Public engagement, Population size.

#### Introduction

The COVID-19 pandemic created unprecedented challenges for government communication [1-4] and public health response [5-8] across the globe. However, approaches varied significantly between different nations and contexts. New Zealand and Sweden's strategies stood out as starkly contrasting cases - with New Zealand [9] enacting strict lockdowns following clear government directives, while Sweden [10] adopted a largely decentralized and non-mandatory approach focused on individual responsibility. Previous literature has extensively detailed each country's pandemic response within its own context. However, few studies have systematically compared these disparate approaches

side-by-side while also accounting for the substantial population size difference between the two nations. Moreover, recent analyses of crisis communication strategies have not explicitly contrasted Sweden and New Zealand's messaging approaches. This gap in understanding how communication strategies may relate to key public health and societal outcomes remains understudied.

#### Methodology

This comparative analysis aims to bridge this gap by directly juxtaposing New Zealand and Sweden's COVID-19 communication approaches and analyzing resultant impacts on death rates, economics, and social dynamics. Leveraging a qualitative comparative case study design guided by the research questions surrounding communication strategies' impacts and effectiveness, documentary data analysis was conducted. The data was then contextualized using scholarly literature and quantitative data from reputable databases.

# Communication Strategies in New Zealand and Sweden New Zealand

Early Pandemic (March-May 2020): New Zealand's initial COVID-19 response [11] centered on acting swiftly with heightened restrictions under the banner "Go Hard, Go Early". Prime Minister Ardern's press conferences forcefully emphasized collective vigilance amid the "once-in-a-century pandemic". The government launched the "Unite Against COVID-19" campaign in April 2020, rallying solidarity through mass coordination of emergency responses nationally. Mandatory lockdowns alongside economic stimulus packages reflected decisive crisis leadership. From the very beginning, New Zealand's government [12] prioritized clear, concise, and consistent communication with the public about the COVID-19 response. They used simple language and multiple channels to ensure directives, expectations, and rules were widely understood across the country.

A key part of their strategy was the 4-level alert system that outlined different risk scenarios and corresponding social distancing rules. Using easy-to-grasp visuals and plain descriptions, this system allowed people to understand quickly what was expected of them at each level. This clarity helped secure public trust and cooperation with restrictive policies.

Prime Minister Jacinda Ardern also framed government messaging around uniting against COVID-19, rallying people to see the response as a collective effort to protect society. By invoking a sense of shared purpose, these communications made lockdowns and personal restrictions more psychologically palatable. Ardern and key health officials provided updates through daily briefings that further built confidence in their leadership. Rules around isolation, restricted Activity Bands (for confirmed cases), and lockdown expectations were written using uncomplicated language suited for public consumption. The government avoided complex bureaucratic and policy terminology when providing safety instructions. All information was also available in 28 languages, including minority indigenous languages, through printouts as well as video translations. Beyond mainstream media broadcasts, the government utilized other far-reaching channels like social media posts, text message blasts, and a centralized COVID-19 website to disseminate safety guidelines. Recognizing gaps in their own expertise, they collaborated with scientists, academics, and creative professionals to better communicate virus transmission knowledge and prevention best practices across all communities in creative and engaging ways. By blending simple directives, collective purpose, multi-channel delivery, and visionary leadership, New Zealand set a gold standard in managing COVID-19 communications for maximum public clarity and unity.

Later Pandemic: As vaccination coverage widened, New Zealand maintained cautious reopening guided by a "Transition Framework". The messaging [13] emphasis evolved from unifying public sacrifice to rewarding community protection efforts with regained social freedoms. However, the unified communication apparatus persisted, with centralized collection and dissemination of public health data to enable localized outbreak response coordination as the country cautiously reopened.

#### Sweden

Early Pandemic: Swedish authorities [14] pursued an outlier strategy, predominantly relying on voluntary social distancing without widespread closures or legal mandates. Messaging centered on open-ended "recommendations" regarding limiting contacts and travel, emphasizing civic responsibility within a Nordic tradition of high public trust in state institutions.

In examining Sweden's communication strategy regarding the COVID-19 pandemic, Prime Minister Stefan Löfven emphasized individual responsibility and societal solidarity in his speech on March 22, 2020. The Prime Minister framed the crisis in terms of its impact on lives, health, and jobs, stressing the need for collective action to limit the spread of the virus and protect vulnerable groups, particularly older individuals. Unlike some other European countries, Sweden's strategy aimed to adapt to living with the virus rather than aiming for its eradication. This approach focused on implementing measures that individuals could sustain over the long term, as a prolonged lockdown was deemed unsustainable.

The communication strategy relied primarily on recommendations and guidelines from the Public Health Agency of Sweden, with fewer regulatory measures imposed. Recommendations included staying at home when experiencing symptoms, practicing social distancing, and maintaining good hygiene practices. Prime Minister Löfven underscored the importance of individual adherence to these guidelines as an expression of solidarity and a fundamental aspect of Swedish society's trust-based relationship with the government. Furthermore, Prime Minister Löfven addressed the economic impact of the pandemic, acknowledging its significant repercussions on businesses, jobs, and the overall Swedish economy. He emphasized the role of employers and employees, recognizing them as essential components of Swedish society and pledging support to mitigate the consequences of the crisis for working individuals and companies. Additionally, speeches by King Carl Gustav XVI echoed the themes of public health, individual responsibility, and the economic impact of the pandemic. The King emphasized moral responsibility and the need for individuals to prioritize the health and well-being of others over personal desires, particularly in the context of religious services and social gatherings. However, it's notable that the speeches did not explicitly delineate whether the actions of industry and government aimed to curb the spread of the virus or mitigate its consequences. While acknowledging the threat posed by the pandemic to Swedish society, the speeches did not specify the precise aspects of society under threat or the nature of these threats.

Overall, Sweden's communication strategy [15] emphasized individual responsibility, societal solidarity, and the pragmatic adaptation to living with the virus, reflecting a nuanced approach to crisis management amidst the complexities of public health and socio-economic considerations. As other nations introduced sweeping restrictions in March 2020, Sweden resisted uniform approaches amid a commitment to factoring broader health determinants and diverse regional imperatives.



Figure 1: Comparison of COVID-19 Mortality Rates per 100,000 Population between New Zealand and Sweden for the Years 2020, 2021, and 2022. The bar chart illustrates the substantial difference in mortality rates, with New Zealand consistently reporting lower rates compared to Sweden across all three years. Mortality rates are normalized per 100,000 population to allow for direct comparison between the two countries. Refer to the Appendix for the Python code used to generate the bar graph.

# **Appendix:**

```
import matplotlib.pyplot as plt
М
    # Data
    years = [2020, 2021, 2022]
    NZ_mortality_rates = [0.05, 0.10, 2.14] # Mortality rates in New Zealand per 100,000 population
    Sweden_mortality_rates = [8.42, 13.48, 5.02] # Mortality rates in Sweden per 100,000 population
    # Plotting
    bar_width = 0.35
    index = range(len(years))
    fig, ax = plt.subplots()
    bar1 = ax.bar(index, NZ_mortality_rates, bar_width, label='New Zealand')
    bar2 = ax.bar([i + bar_width for i in index], Sweden_mortality_rates, bar_width, label='Sweden')
    # Adding labels, title, and legend
    ax.set_xlabel('Year')
    ax.set_ylabel('Mortality Rate per 100,000 population')
    ax.set_title('Mortality Rates Comparison: New Zealand vs Sweden')
    ax.set_xticks([i + bar_width / 2 for i in index])
    ax.set_xticklabels(years)
    ax.legend()
    # Adding text labels for each bar
    def add_labels(bars):
        for bar in bars:
            height = bar.get_height()
            ax.annotate('{}'.format(height),
                         xy=(bar.get_x() + bar.get_width() / 2, height),
xytext=(0, 3), # 3 points vertical offset
                         textcoords="offset points",
                         ha='center', va='bottom')
    add_labels(bar1)
    add_labels(bar2)
    plt.tight_layout()
    plt.show()
```

Figure 1: Above is the Python code used to generate the bar graph comparing COVID-19 mortality rates per 100,000 population between New Zealand and Sweden for the years 2020, 2021, and 2022:

Later Pandemic: By winter 2020, amid global second waves, Sweden's resistance to binding mitigation policies became increasingly untenable as COVID-19 strained healthcare capacities. Messaging subtly shifted towards stressing collectivism and protection of vulnerable communities, cautiously expanding binding restrictions around indoor gatherings and events to sustain hospital capacities without reneging Sweden's core pandemic strategy. Authorities increasingly targeted higher compliance among young adults while balancing pandemic fatigue and intrusions upon Swedish self-determination sentiments.

#### **Impact on Death Tolls**

Assessing the impact of communication strategies on mortality outcomes necessitates careful normalization for population size. The comparison of New Zealand [16] and Sweden's [17] mortality rates per 100,000 population across the years 2020, 2021, and 2022 reveals intriguing insights into the effectiveness of their respective approaches. In 2020, New Zealand reported a remarkably low mortality rate of 0.05 deaths per 100,000 population, contrasting starkly with Sweden's higher rate of 8.42 deaths per 100,000 population. Similarly, in 2021, New Zealand maintained a low mortality rate of 0.10 deaths per 100,000 population, while Sweden experienced a substantially higher rate of 13.48 deaths per 100,000 population. The trend continued into 2022, with New Zealand reporting 2.14 deaths per 100,000 population compared to Sweden's 5.02 deaths per 100,000 population.

This code utilizes the Matplotlib library to create a bar graph visualizing the mortality rates for each country across the specified years. The data is presented with text labels atop each bar for clarity.

The visual representation of these mortality rates through a bar graph underscores the significant disparity between the two countries [18]. New Zealand's consistently lower mortality rates suggest that its clear messaging and early implementation of lockdown measures likely played a pivotal role in mitigating the spread of the virus and reducing fatalities on a per capita basis. However, it is imperative to consider Sweden's larger and potentially more urbanized population concentration, as well as demographic factors such as age distribution and prevalence of relevant comorbidities, which may have influenced mortality outcomes. Further multivariate analysis, accounting for health system capacities and population health profiles across both countries, could provide deeper insights into the complex interplay of factors affecting pandemic mortality. By unraveling these nuances, policymakers and public health officials can glean valuable lessons to inform future crisis management strategies and enhance societal resilience in the face of similar health emergencies.

#### **Economic Impact**

Assessing the economic effects of the pandemic requires analyzing metrics beyond headline GDP figures to capture nuanced distinctions.

#### New Zealand

New Zealand [19] enacted among the most aggressive fiscal stimulus responses globally, cushioning COVID-19 recessionary headwinds through landmark wage subsidy schemes covering up to 1.8 million workers, low-interest business loans, corporate tax cuts, and sector-specific tourism industry support. From March-December 2020, New Zealand marshalled stimulus equating to 45% of GDP - ballooning deficits to protect incomes and jobs. Their fiscal firepower stemmed from pre-pandemic budget surpluses. Direct household transfers reached NZ\$13,000 per capita in 2020. However, border closures still crushed tourism revenues (-75% in 2020) and constrained migrant labor in horticulture and viticulture. Supply chain disruptions also re-routed agricultural exports from high-end restaurants towards supermarkets and food banks. But effective virus containment supported reversing some restrictions faster than Sweden in pursuit of COVID-Zero strategies. The actual situation has improved as shown in Table 1.

**Table 1:** New Zealand - The Real GDP growth rate (annual)<sup>1</sup> in the years' interval:

2019 - 2020 decreased from 2,4% to $-0.7%$ ,
2020 - 2021 increased from - 0,7% to 5,2%
2021 - 2022 decreased form 5,2% to 2,9%
2022 - 2023 decrease from 2,9% to 2,7%
In 2024 the Real GDP growth rate (annual) is expected to decrease to about 1,1%.

#### Sweden

Sweden's light-touch pandemic restrictions may have generated smaller output losses across less-impacted sectors like manufacturing and construction through 2020. However, overall GDP still contracted at among the sharpest rates in Europe that year (-4.7%). Service sectors relying on social proximity suffered comparable declines to locked-down neighbors.

Sweden [20] balanced evaporating tax revenues with offering firms deferrals on value-added taxes and social security contributions plus expanded unemployment support rather than direct bailouts. This followed their 1990s financial crisis template. But loosening the fiscal purse is complicated by practices of budgetary prudence and Sweden's aging crisis - limiting capacities for stimulus without deep structural reforms. Additionally, Sweden's limited international travel curbs did less to contain imported cases and new variants like Denmark and Norway's stricter policies. This uncertainty constrained Sweden's economic rebound pace more than regional peers through 2021.

The situation in terms of GDP growth rate has improved as shown in Table 2.

<sup>&</sup>lt;sup>1</sup> See The World Bank Data – Available at:

https://data.worldbank.org/indicator/NY.GDP.MKTP. KD.ZG?end=2022&locations=NZ&start=2019

**Table 2:** Sweden - The Real GDP growth rate  $(annual)^2$  in the years' interval:

2019 - 2020 decreased from 2% to – 2.2%, 2020 – 2021 increased from – 2,2% to 6,1% 2021 - 2022 decreased from 6.1% to 2.8% 2022 - 2023 decreased from 2,8% to – 0,7%

In 2024 the Real GDP growth rate (annual) is expected to increase to about 0.4% showing a slight recovery of the Sweden Economy after the past year downturn.

Ultimately, both countries suffered severe disruptions transmitted through global supply chain linkages, underscoring deep international connectedness regardless of domestic health policies. Comparing sector-specific metrics like unemployment durations, small business viability post-recovery, household fiscal positions and trade flows across years could illuminate instructive contrasts between these crisis response approaches.

#### Conclusion

While direct comparisons based solely on raw figures may be misleading due to population size variations, a nuanced analysis incorporating per capita data, multifaceted factors, and qualitative assessments can yield substantive insights on communication strategies. However, this study has certain limitations in the depth of economic analysis and examination of demographic nuances across the two countries. Further research could build upon these findings by assessing specific communication interventions, expanding the comparative approach across more nations, and longitudinally tracking economic and social impacts. By perpetuating a culture of inquiry and leveraging diverse experiences, we can forge a more resilient future in the face of global health challenges.

#### **Key Lessons**

Clear and consistent communication: New Zealand's emphasis on clear and consistent messaging engendered public trust and compliance with preventive measures, contributing to lower per capita death tolls. This underscores the pivotal role of effective communication in shaping public behavior during crises. Tailoring strategies to context: Both New Zealand and Sweden's approaches resonated with their respective cultural values and contexts, underscoring the need for strategies to be adaptable and contextually sensitive. Balancing individual responsibility and collective action: New Zealand's emphasis on community solidarity proved effective, while Sweden encountered challenges in fostering consensus amidst its emphasis on individual responsibility. Striking a delicate balance between these aspects remains imperative. Considering population size: Comparative analyses across countries with divergent population sizes necessitate nuanced approaches, incorporating per capita data and qualitative insights to derive meaningful conclusions.

# **Moving Forward**

The COVID-19 pandemic presents a pivotal opportunity for policymakers and communication practitioners globally to glean

<sup>2</sup> See The World Bank Data – Available at

https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2022&locations=SE&start=2019 insights from the experiences of New Zealand and Sweden. By integrating lessons tailored to specific contexts and populations, countries can bolster their preparedness and response capacities for future health emergencies. Effective communication remains the cornerstone of crisis management, facilitating public trust, nurturing social cohesion, and mitigating the impact of health crises.

## **Further Research**

This study paves the way for future research avenues, including:

- In-depth analysis of specific communication interventions in both nations.
- Comparative studies examining communication strategies across countries with diverse population sizes and cultural contexts.
- Longitudinal assessments of the economic and social ramifications of disparate communication approaches.
- By perpetuating a culture of inquiry and leveraging diverse experiences, we can forge a more resilient future in the face of global health challenges.

#### Data/Methods

Mortality rates were derived from Our World in Data's COVID-19 country profiles for New Zealand and Sweden based on official public health reports. Economic data was obtained from governmental data in New Zealand's Treasury COVID-19 Economic Response reports and Sweden's databases on GDP changes during 2020-2024

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