

The Ratio of Social and Health Spending and its Relationship to Life Expectancy

Objectives

1. To compare social spending, health spending, and life expectancy in NL and Ontario (ON).
2. To model the potential impact of keeping the ratio of health and social spending stable since 1981 (37 years) on life expectancy.
3. To use this model to predict the future impact of increasing the current ratio of social to health spending in NL.

Practice Points

1. In NL, health spending increased by 232% from 1981 to 2017 and social spending was essentially unchanged. In Canada, health spending increased by 100% and social spending by 36%.
2. Life expectancy in NL was 2.5 years lower than that for Ontario in 2017.
3. The social determinants of health contribute far more to poor health than does the health system.

Data (PI: Dr. D.J. Dutton)

Data were obtained from Dalhousie University (K. Ross), who analyzed social and health spending as outlined in annual budgets from 1981–2017, and examined its relationship with life expectancy in NL and Ontario.

Social spending did not include spending on education or justice.

The two scenarios modelled were: (1) the potential outcome for life expectancy if social to health spending had been maintained at the same ratio from 1981 to 2018, and (2) the potential life expectancy if social to health spending ratio is increased by 1% each year for the next five years and maintained at that level thereafter.

Results

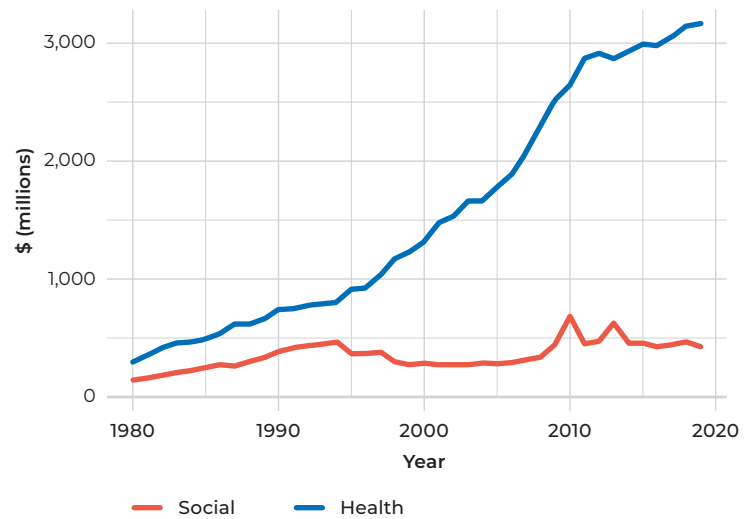
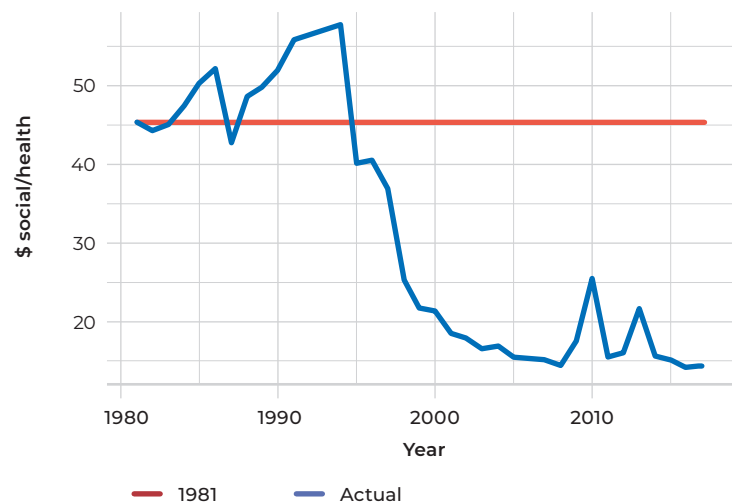


Figure 1A. Social vs. Health Spending in NL, 1980–2018

- Around 1994, the rate of rise of health spending increased and social spending actually decreased.



* The horizontal line represents the ratio of social:health spending in 1981

Figure 1B. The Ratio of Social to Health Spending in NL Since 1981

- The ratio of social to health spending was 0.45 in 1981; by 2000 it had fallen to 0.20 and in 2008 it was 0.15.

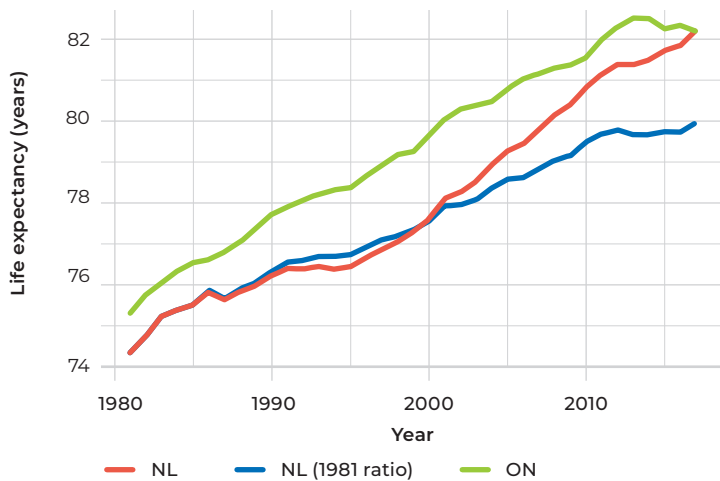


Figure 2. Actual Life Expectancy in NL and Ontario, and Predicted Life Expectancy in NL if Social to Health Spending Ratio had Remained the Same

- Life expectancy at baseline in 1981 was 74.4 in NL and 75.3 in ON. By 2017, it was 79.9 in NL and 82.2 in ON. The further divergence in actual life expectancies started around 1993.
- Modelling predicts that if the ratio of social to health spending had stayed at 0.45 during the past 37 years the difference in life expectancy between NL and ON would have been abolished.

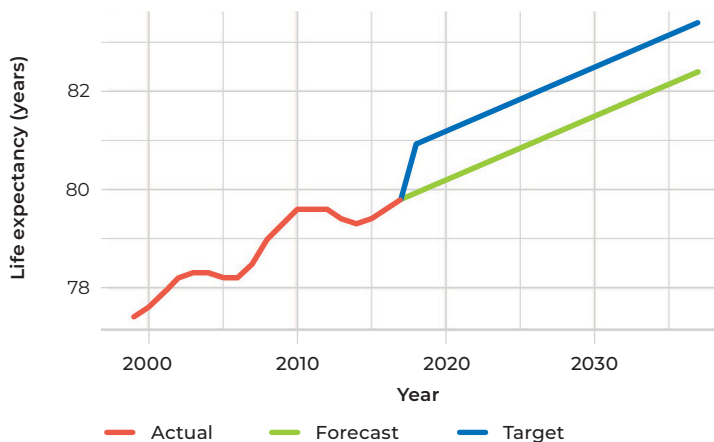


Figure 3. Forecast of Life Expectancy if Social to Health Spending Ratio Increased in the Next Decade

- If the ratio of social to health spending was increased by 1% for the next five years and then maintained at that level thereafter, the model predicts this would result in an improvement in life expectancy of 12 months.

Conclusions

1. The ratio of social to health spending in NL has decreased in the past 22 years as a result of very substantial increases in health spending and flat social spending.
2. Actual improvement in life expectancy in NL was less when compared to Ontario during this time and the difference in life expectancy between the two provinces increased.
3. Modelling suggests that if the ratio of social to health spending had been maintained at 0.45 since 1981, life expectancy in NL would be the same as in Ontario.
4. Modelling suggests that increases in social spending with an increase in the ratio of social:health spending would lead to improved life expectancy.
5. Limitations of the modelling are: the predictions are based on the information available for the model, assumptions made to obtain the prediction, and failure to include accompanying events that could explain the results.

The potential of demographic change caused by the cod moratorium to explain the differences in life expectancy is examined in the next summary.