

Advancing Health Equity in Health Care

All-Cause Mortality

Highlights

- All-cause mortality rates are unchanging over time for the general population.
- The inequality gap is very high but showing signs of decreasing over time for the general population.
- The Disparity Rate Ratio is significantly increasing over time.
- The gap between those living in areas of highest and lowest deprivation is widening.
- From 1995 to 2009, 41% of deaths occurred for people living in the highest areas of deprivation, compared to 11% in the areas of lowest deprivation.
- Click [here](#) to learn more about data sources and methods.

Between January 1, 1995 and December 31, 2009 there were 18,068 deaths among Saskatoon residents. There were 9,184 deaths among men and 8,884 deaths among women. In the city as a whole all cause mortality decreased by 3% from 6.1 to 5.9 deaths per 1000 people between 1995 and 2009 (*Figure 1 and Figure 2*). *Figure 3* shows the disparity rate ratio and disparity rate difference for all cause mortality rates. The disparity rate ratio increased by 3% from 2.28 in 1995 to 2.34 in 2009. The disparity rate difference increased by 17% from 4.6 in 1995 to 5.4 in 2009.

Figure 1: Crude All Cause Mortality Rate per 1000 Population by Quintile of Deprivation, Saskatoon, 1995 to 2009.

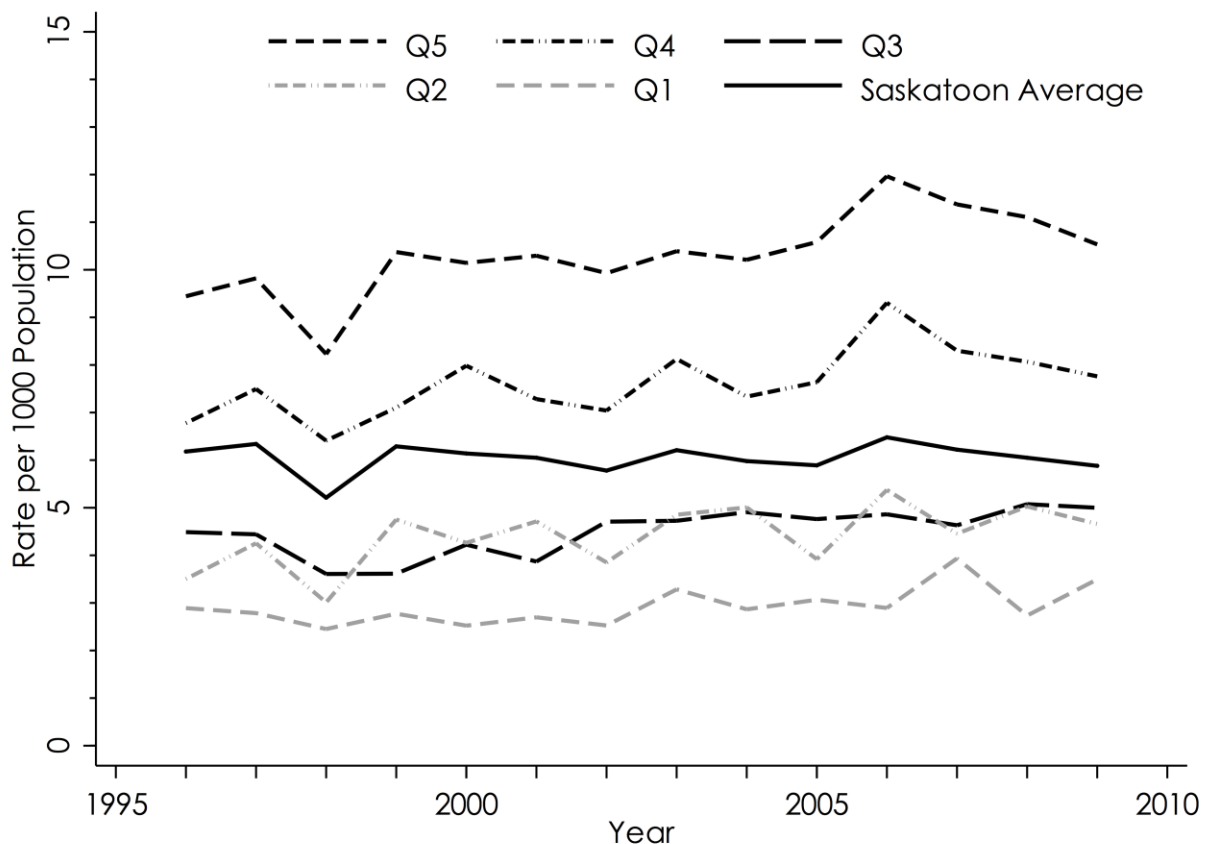
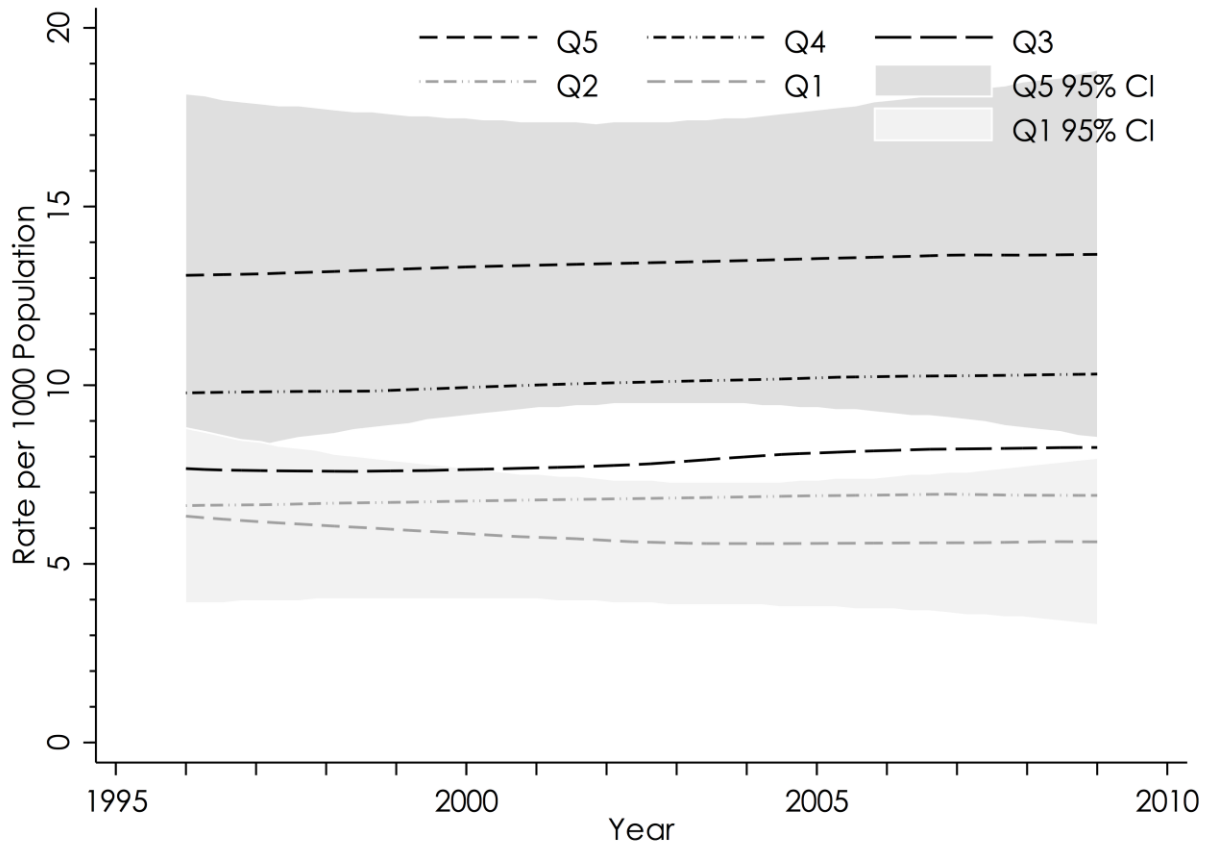
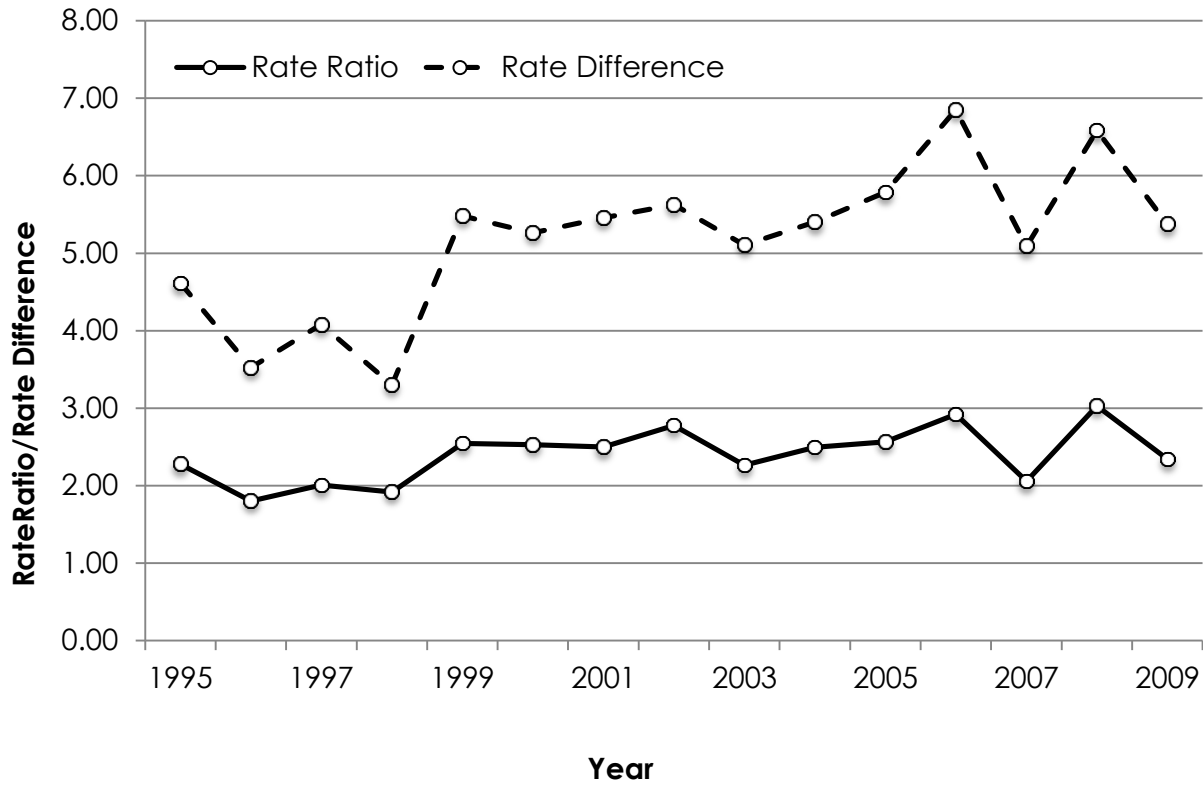


Figure 2: Adjusted All Cause Mortality Rate per 1000 Population by Deprivation Area, Saskatoon, 1995 to 2009.



Note: Model is a negative binomial regression and includes age, sex, year, quintile of deprivation and a year*quintile of deprivation interaction term as dependent variables. The model is offset by the log of population size and robust standard errors were estimated.

Figure 3: Age and Sex Standardized All Cause Mortality Rate Ratio and Rate Differences between the Highest and Lowest Quintiles of Deprivation, Saskatoon, 1995 to 2009.



The Lorenz curve for all years combined shows that 41% of all cause mortality occurs among residents in areas of highest deprivation, representing 24% of the total population of Saskatoon. In contrast, 11% of all cause mortality occurs for those residing in areas of least deprivation, representing 23% of the population.

Figure 4: Age and Sex Adjusted Lorenz Curve for All Cause Mortality, Saskatoon, 1995 to 2009

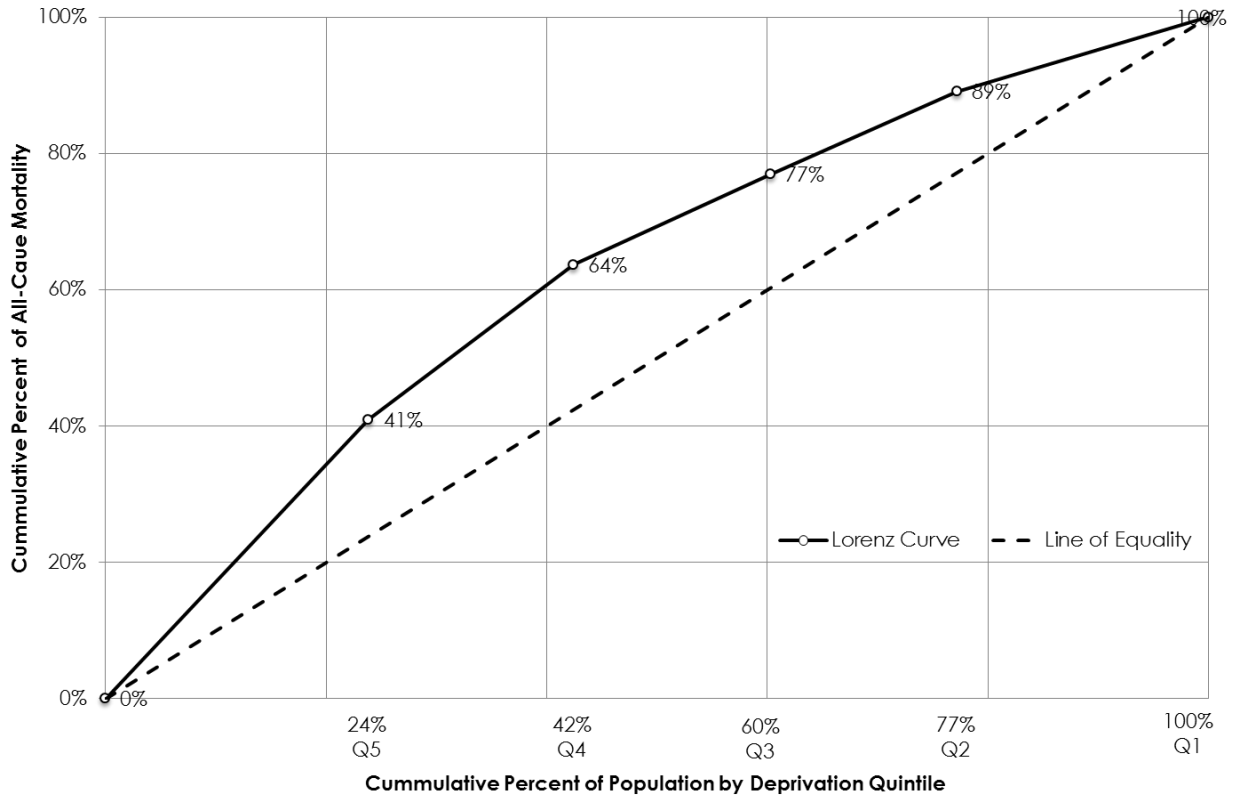


Figure 5 shows that the Gini coefficient for all cause mortality was 0.28 (95% CI: 0.24 to 0.32) in 1995 with a non significant decrease to 0.23 (95% CI: 0.20 to 0.27) in 2009. A Gini coefficient ranging from 0.28 to 0.23 represents a high degree of inequality for all cause mortality.

Figure 5: Age and Sex Adjusted Gini Coefficients for All Cause Mortality, Saskatoon, 1995 to 2009.

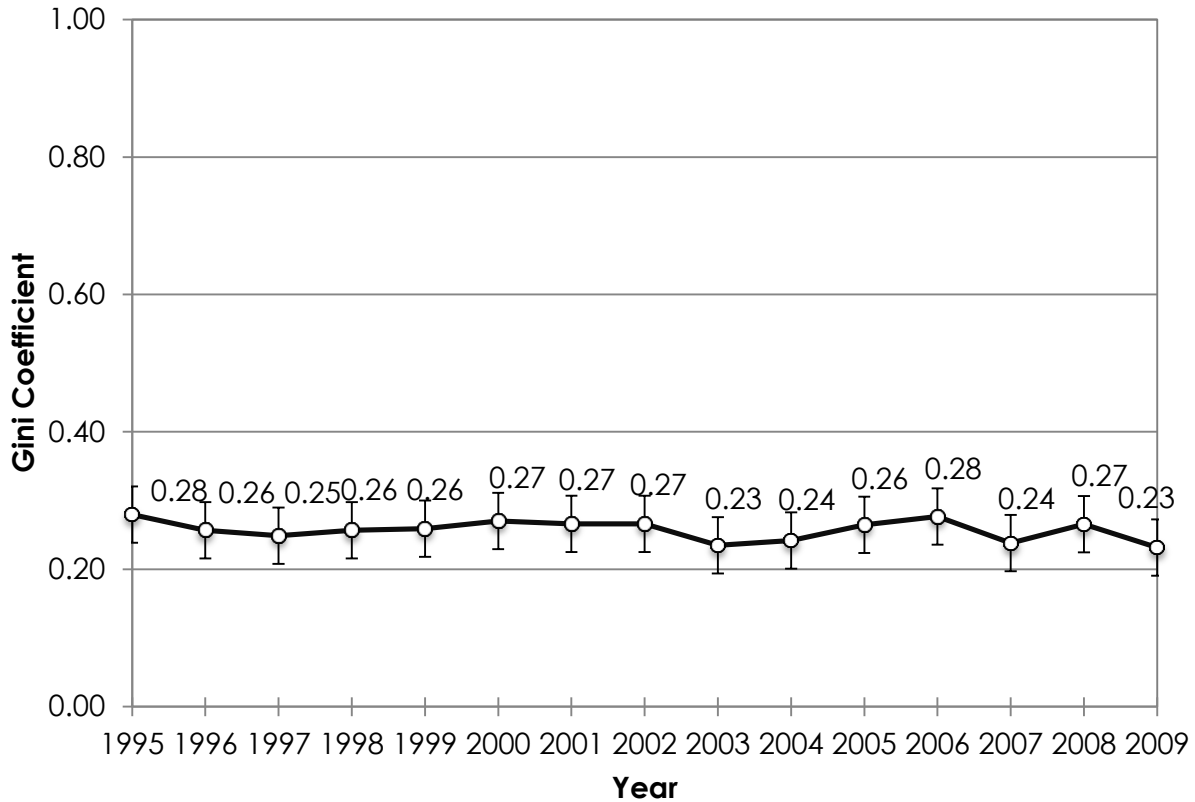


Table 1: All Cause Mortality Rate Ratios for Sex, Age, Quintile of Deprivation, Saskatoon, 1995 and 2009.

All Cause Mortality		Robust				
Rates	RR	Std. Err.	z	P>z	[95% Conf. Interval]	
Sex						
Male	1.00	-	-	-	-	-
Female	0.49	0.01	-34.81	0.00	0.47	0.51
Age Category						
0 to 14	1.00	-	-	-	-	-
15 to 29	0.97	0.09	-0.35	0.73	0.81	1.16
30 to 44	1.78	0.16	6.54	0.00	1.50	2.12
45 to 64	7.97	0.62	26.59	0.00	6.84	9.29
65+	127.23	8.87	69.54	0.00	110.99	145.85
Deprivation Quintiles						
Q5	1.00	-	-	-	-	-
Q4	0.85	0.06	-2.47	0.01	0.74	0.97
Q3	1.17	0.16	1.16	0.25	0.90	1.52
Q2	0.95	0.12	-0.44	0.66	0.75	1.20
Q1	1.03	0.20	0.14	0.89	0.70	1.51
Year						
1995	1.00	-	-	-	-	-
1996	0.91	0.09	-0.88	0.38	0.74	1.12
1997	0.96	0.11	-0.33	0.74	0.77	1.21
1998	0.79	0.06	-3.09	0.00	0.69	0.92
1999	1.01	0.10	0.08	0.93	0.83	1.22
2000	0.97	0.08	-0.34	0.74	0.83	1.14
2001	0.96	0.10	-0.38	0.70	0.79	1.17
2002	0.97	0.11	-0.24	0.81	0.78	1.21
2003	0.97	0.08	-0.34	0.73	0.82	1.15
2004	0.95	0.08	-0.68	0.50	0.80	1.11
2005	0.98	0.10	-0.22	0.83	0.80	1.20
2006	1.04	0.09	0.50	0.61	0.88	1.24
2007	1.00	0.08	-0.02	0.99	0.86	1.16
2008	0.98	0.07	-0.35	0.73	0.85	1.12
2009	0.92	0.07	-1.19	0.23	0.79	1.06

Note: Model is a negative binomial regression and includes age, sex, year, quintile of deprivation and a year*quintile of deprivation interaction term as dependent variables. The model is offset by the log of population size and robust standard errors were estimated.