Covid-19 Modelling Results, as at 22 April 2020
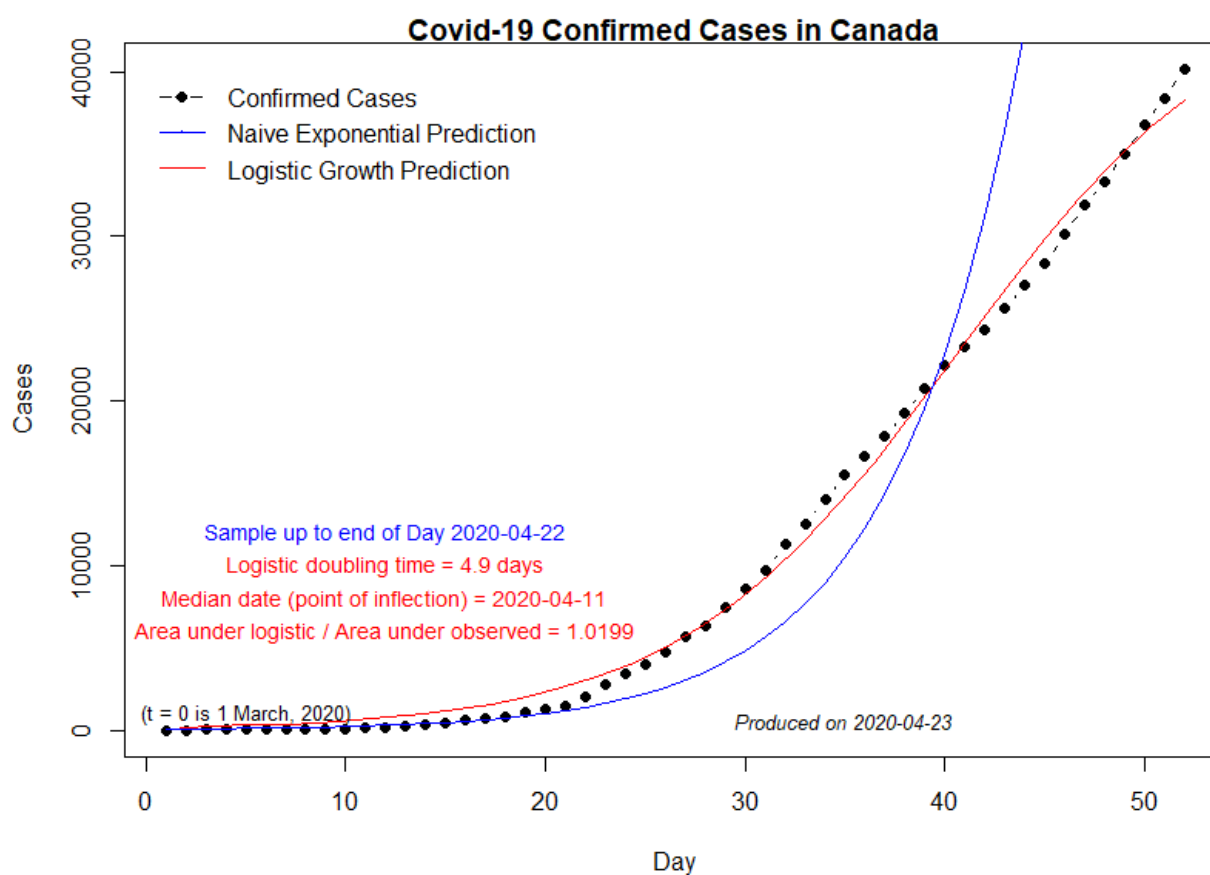
<u>**CANADA**</u>
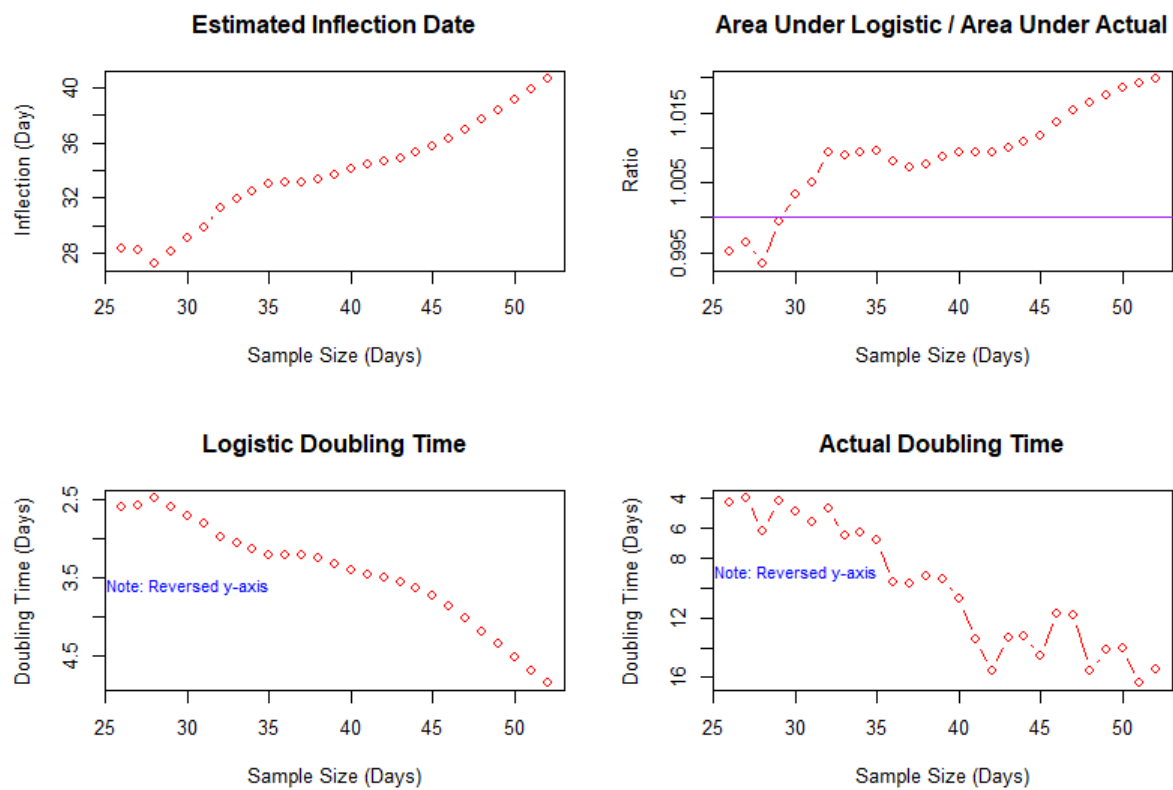
1. Total Confirmed Cases

My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Canadian_Covid-19_Cases.R

The code will automatically download the latest data from my github account.

The chart below shows results based on *data from 2 March to 22 April inclusive*.

Estimated Inflection Date

Area Under Logistic / Area Under Actual

Logistic Doubling Time

Note: Reversed y-axis

Actual Doubling Time

Note: Reversed y-axis

Projected Cases, Up to 1 Week Ahead

○ Confirmed Cases
— Logistic Growth Prediction

2020-04-29 = 42727 cases

Sample up to end of 2020-04-22

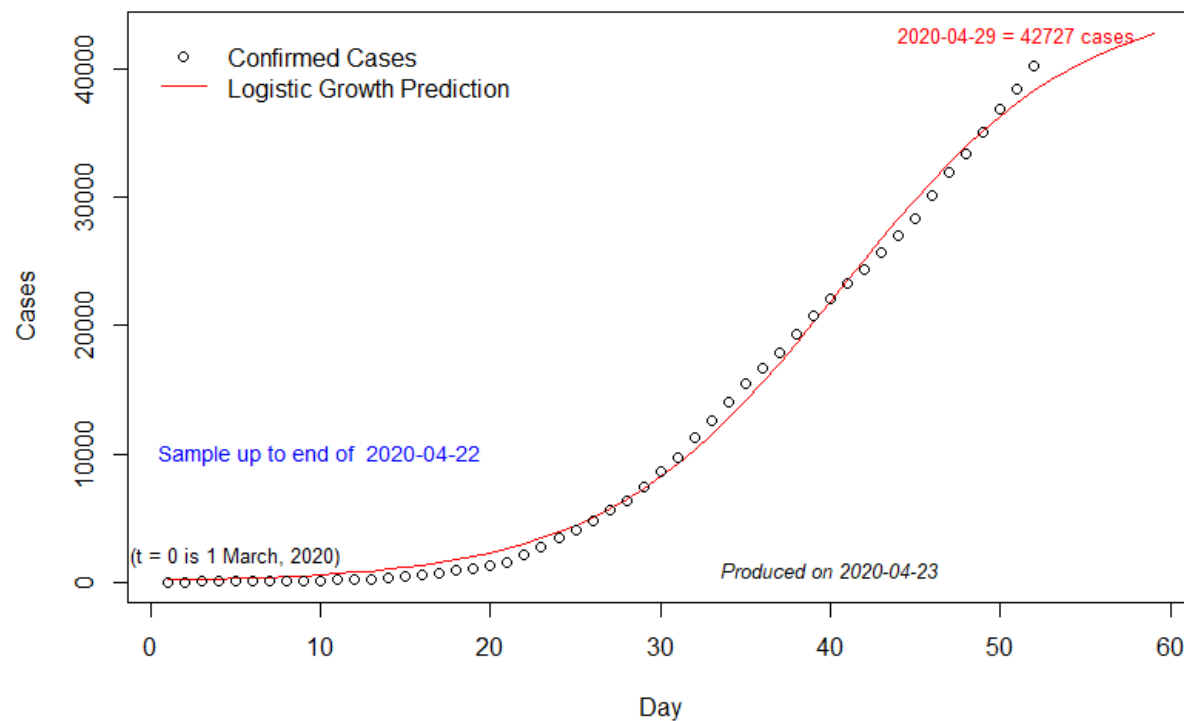(t = 0 is 1 March, 2020)

Produced on 2020-04-23

Table 1: Projected Covid-19 Cases in Canada

(Projections are in Blue; Actual Values are in Brackets)

Sample end (projection made): 20 April

21 Apr	22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr
35811 [38422]	36536 [40190]	37181	37753	38258	38702	39091

Sample end (projection made): 21 April

22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr
37447 [40190]	38196	38867	39464	39994	40463	40877

Sample end (projection made): 22 April

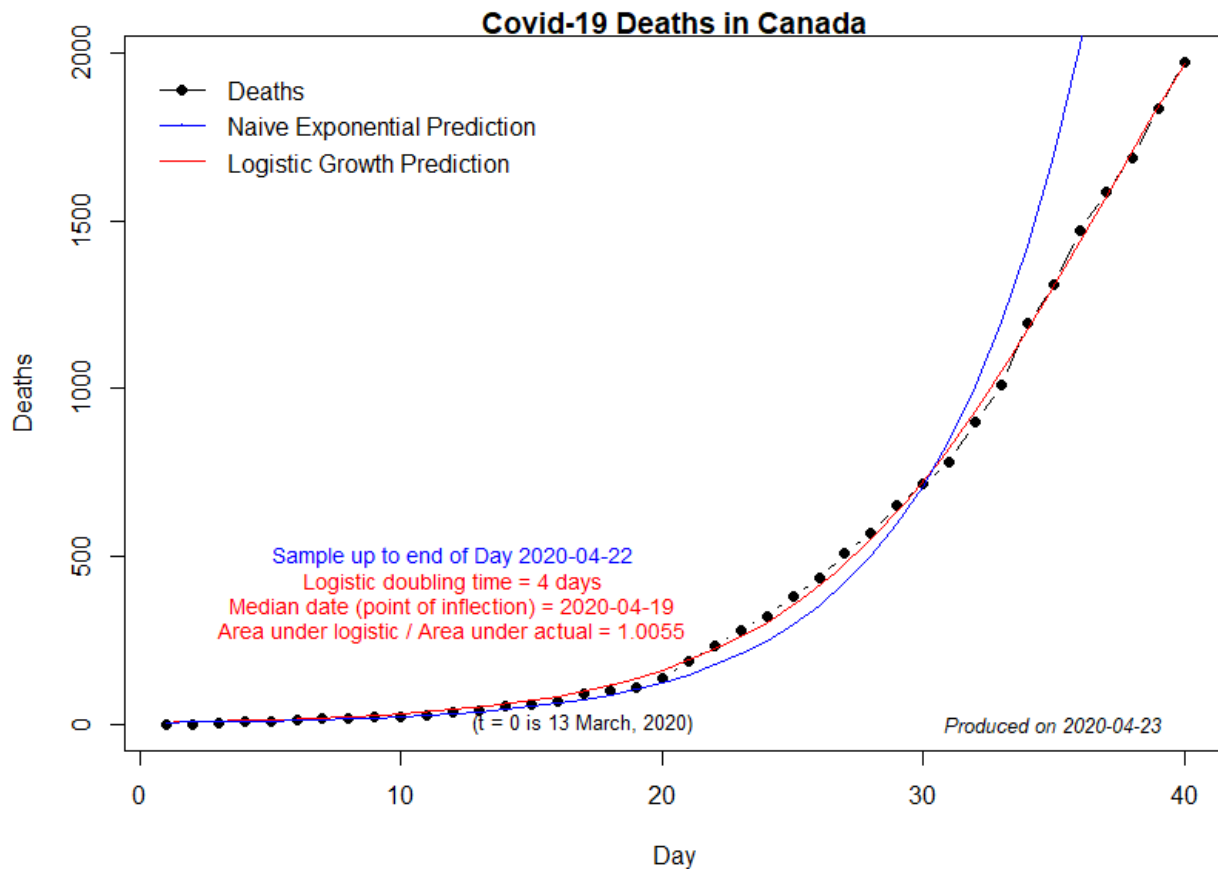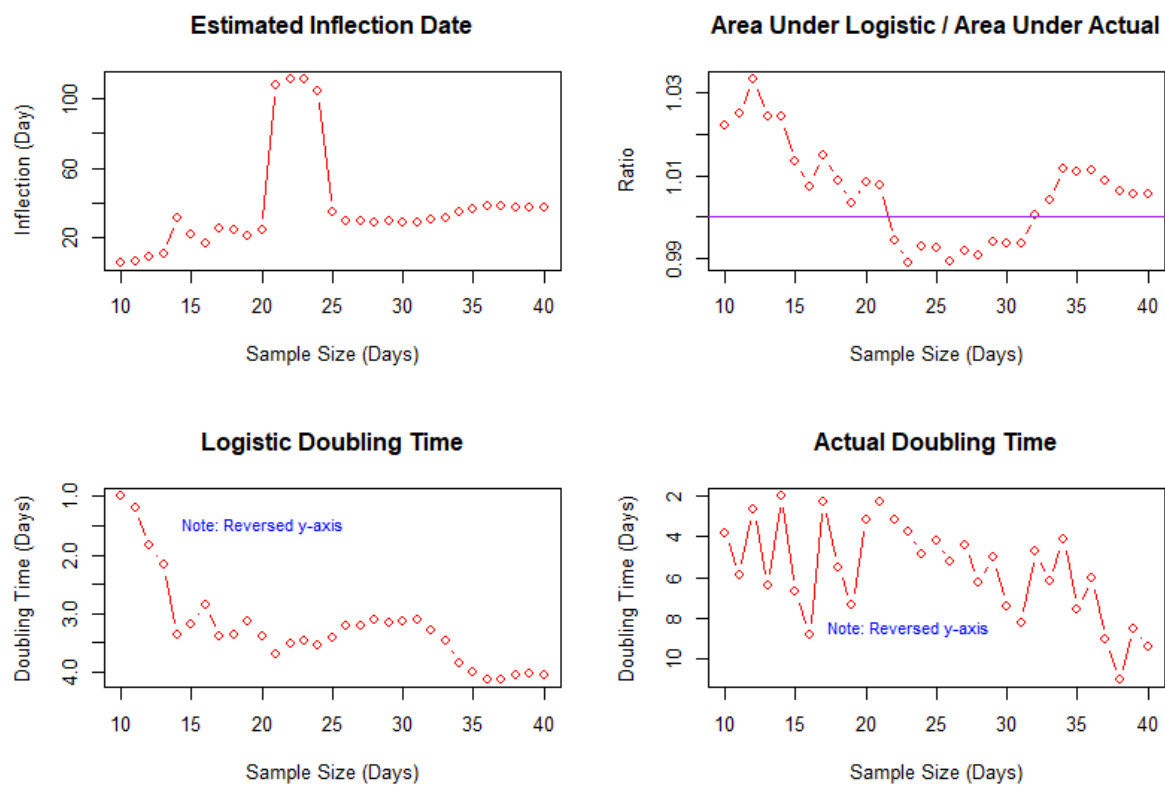| 23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr
39135	39911	40609	41234	41791	42287	42727

2. Total Number of Deaths

My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Canadian_Covid-19_Deaths.R

The code will automatically download the latest data from my github account.

The chart below shows results based on *data from 14 March to 22 April inclusive*.

Estimated Inflection Date

Area Under Logistic / Area Under Actual

Logistic Doubling Time

Note: Reversed y-axis

Actual Doubling Time

Note: Reversed y-axis

Projected Deaths, Up to 1 Week Ahead

2020-04-29 = 2672 deaths

Deaths
Logistic Growth Prediction

Sample up to end of 2020-04-22

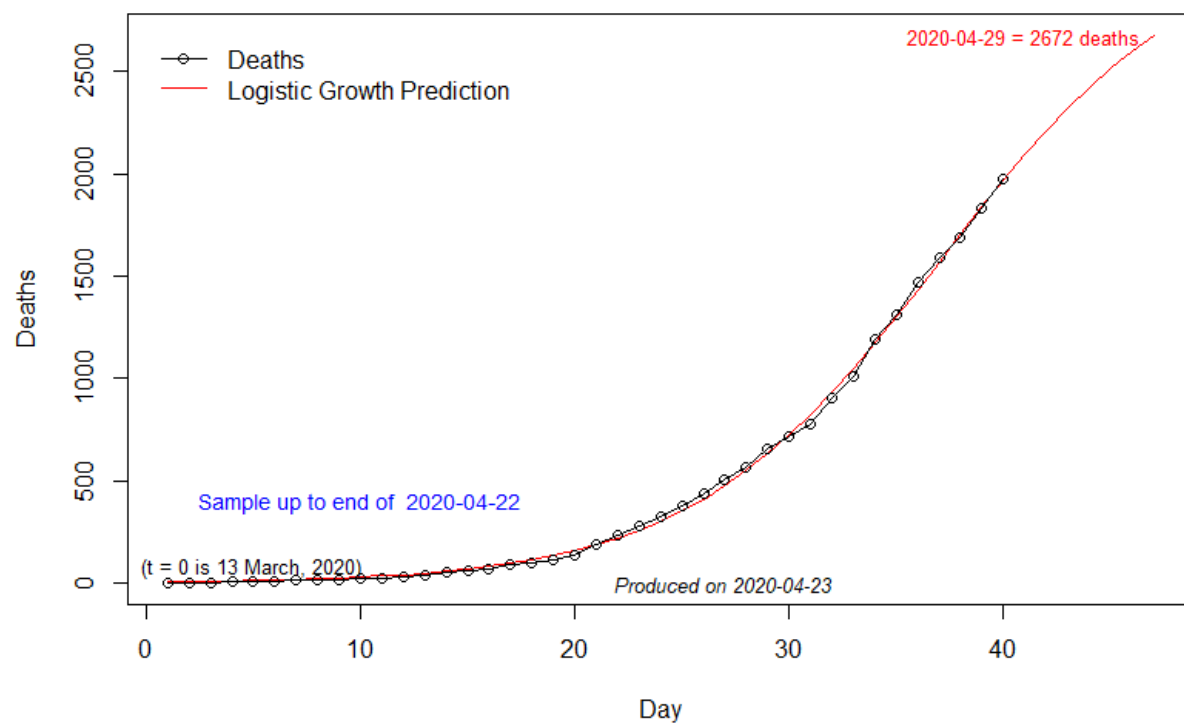(t = 0 is 13 March, 2020)

Produced on 2020-04-23

Table 2: Projected Covid-19 Deaths in Canada

(Projections are in Red; Actual Values are in Brackets)

Sample end (projection made): 20 April

21 Apr	22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr
1842 [1834]	1972 [1974]	2097	2215	2325	2427	2520

Sample end (projection made): 21 April

22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr
1966 [1974]	2089	2205	2313	2413	2504	2586

Sample end (projection made): 22 April

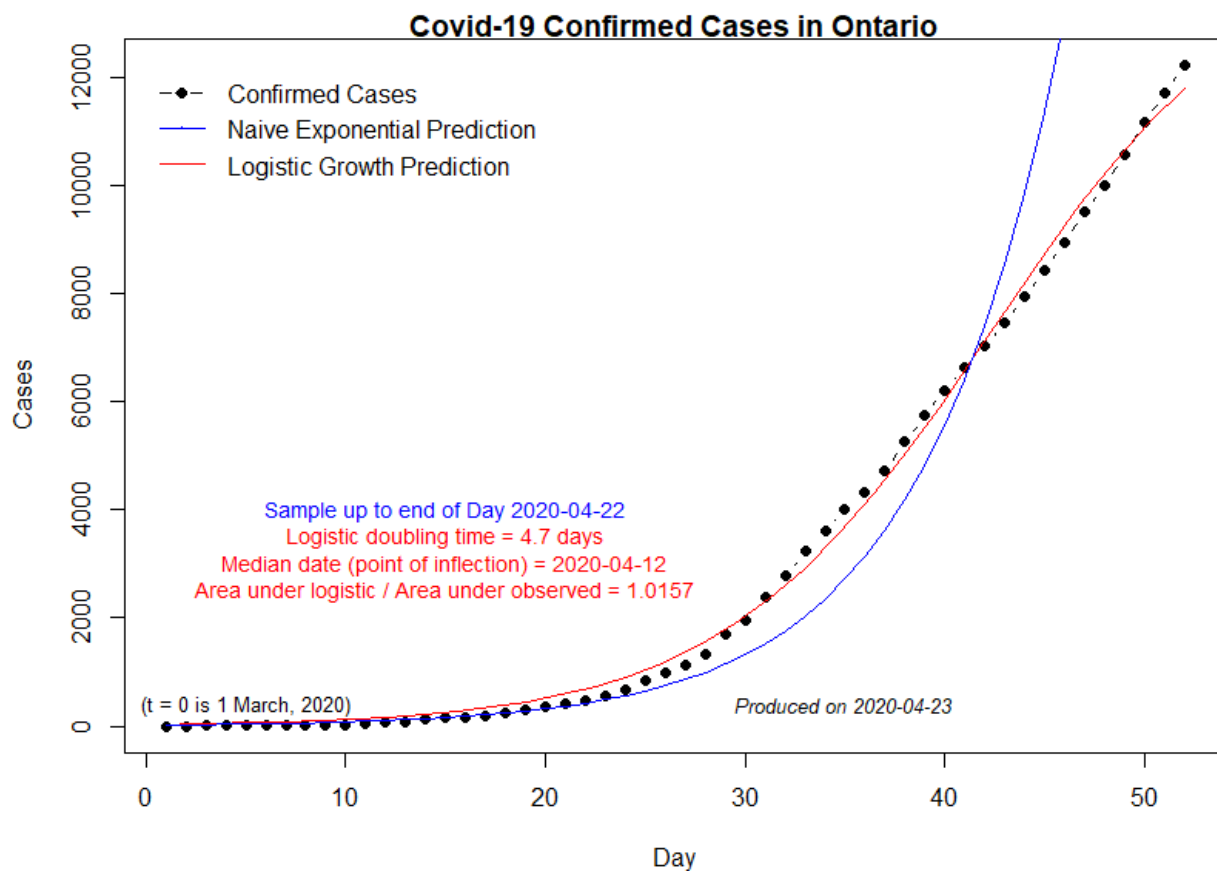| 23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr
2094	2211	2321	2422	2514	2597	2672

ONTARIO

1. **Total Confirmed Cases**

My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Ontario_Covid-19_Cases.R

The code will automatically download the latest data from my github account.

The chart below shows results based on *data from 2 March to 22 April inclusive*.
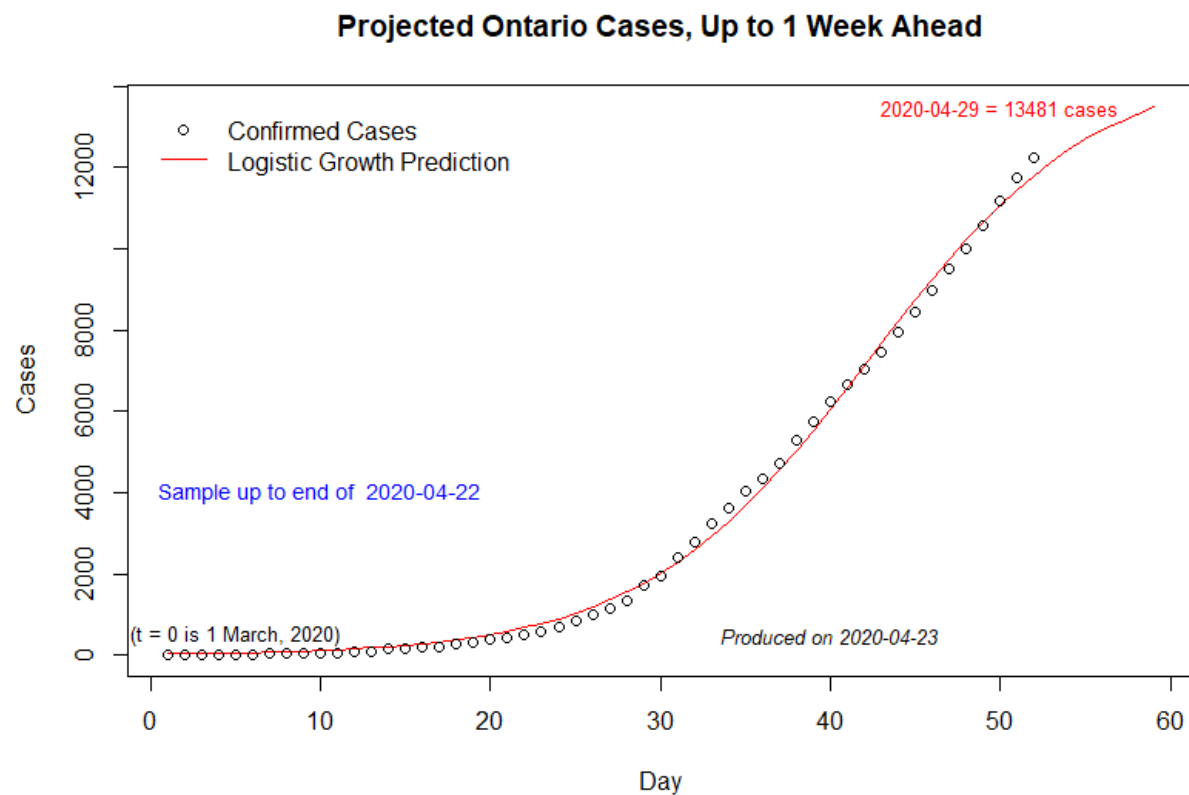
Estimated Inflection Date

Area Under Logistic / Area Under Actual

Logistic Doubling Time

Note: Reversed y-axis

Actual Doubling Time

Note: Reversed y-axis

Projected Ontario Cases, Up to 1 Week Ahead

- ○ Confirmed Cases
- — Logistic Growth Prediction

2020-04-29 = 13481 cases

Sample up to end of 2020-04-22

(t = 0 is 1 March, 2020)

Produced on 2020-04-23

Table 3: Projected Covid-19 Cases in Ontario

(Projections are in Blue; Actual Values are in Brackets)

Sample end (projection made): 20 April

21 Apr	22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr
11037 [11735]	11318 [12245]	11569	11793	11991	12165	12318

Sample end (projection made): 21 April

22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr
11591 [12245]	11879	12139	12370	12576	12759	12919

Sample end (projection made): 21 April

23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr
12127	12419	12682	12918	13129	13316	13481

2. Total Number of Deaths

My R code for Covid-19 modelling is at

https://raw.githubusercontent.com/DaveGiles1949/r-code/master/Ontario_Covid-19_Deaths.R

The code will automatically download the latest data from my github account.

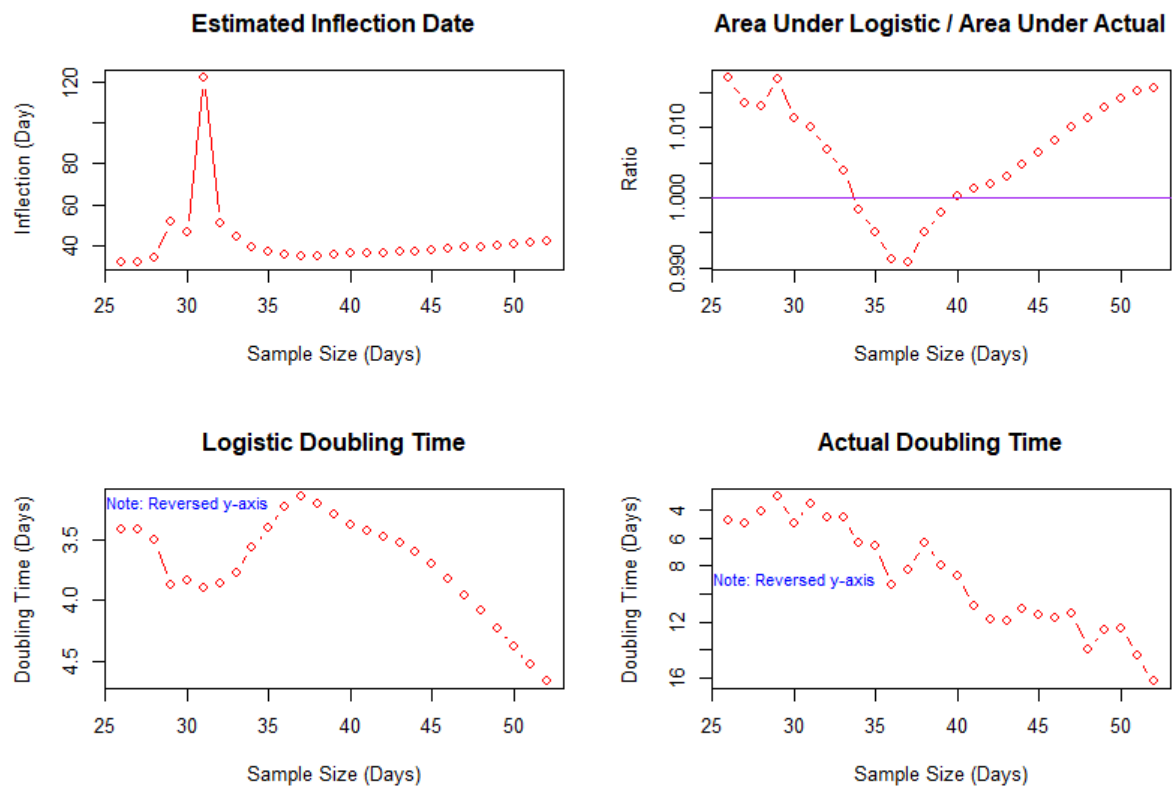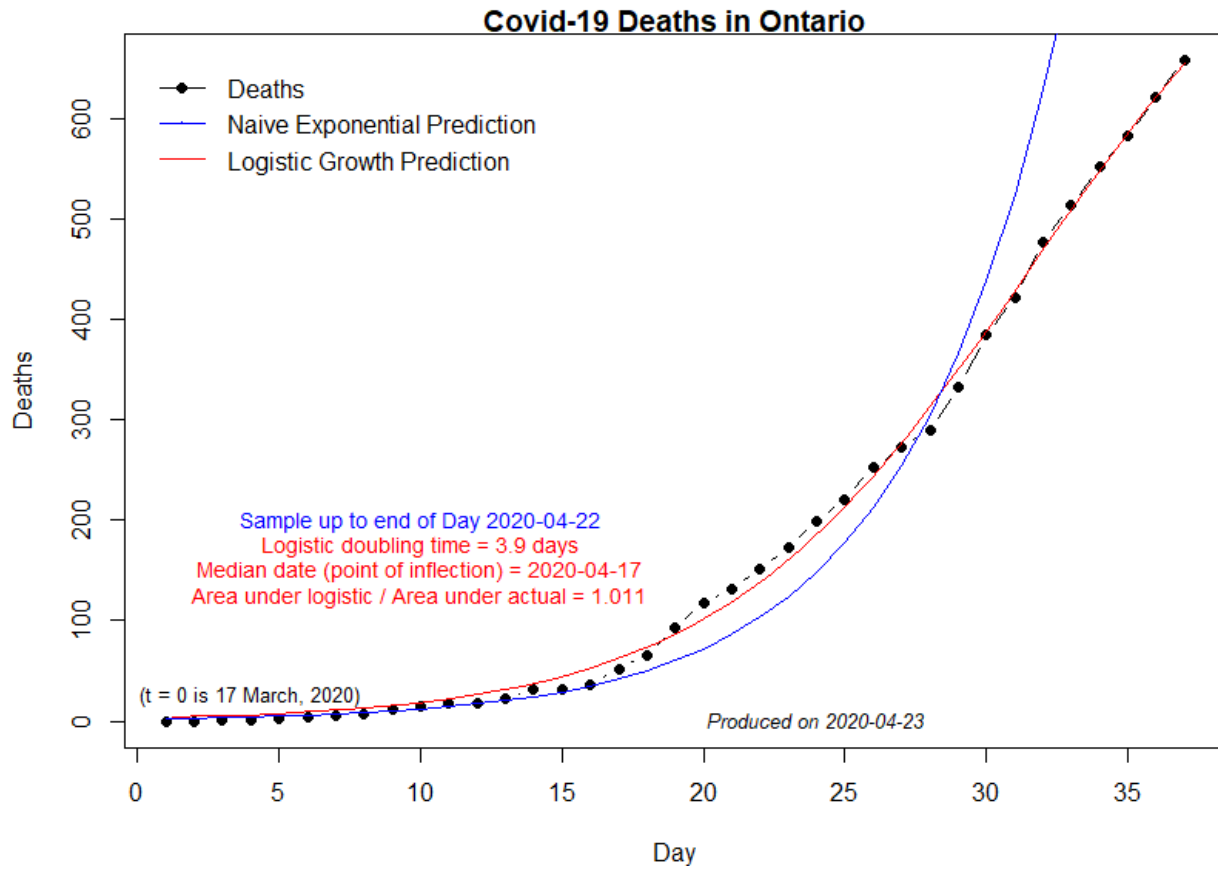The chart below shows results based on *data from 17 March to 22 April inclusive*.
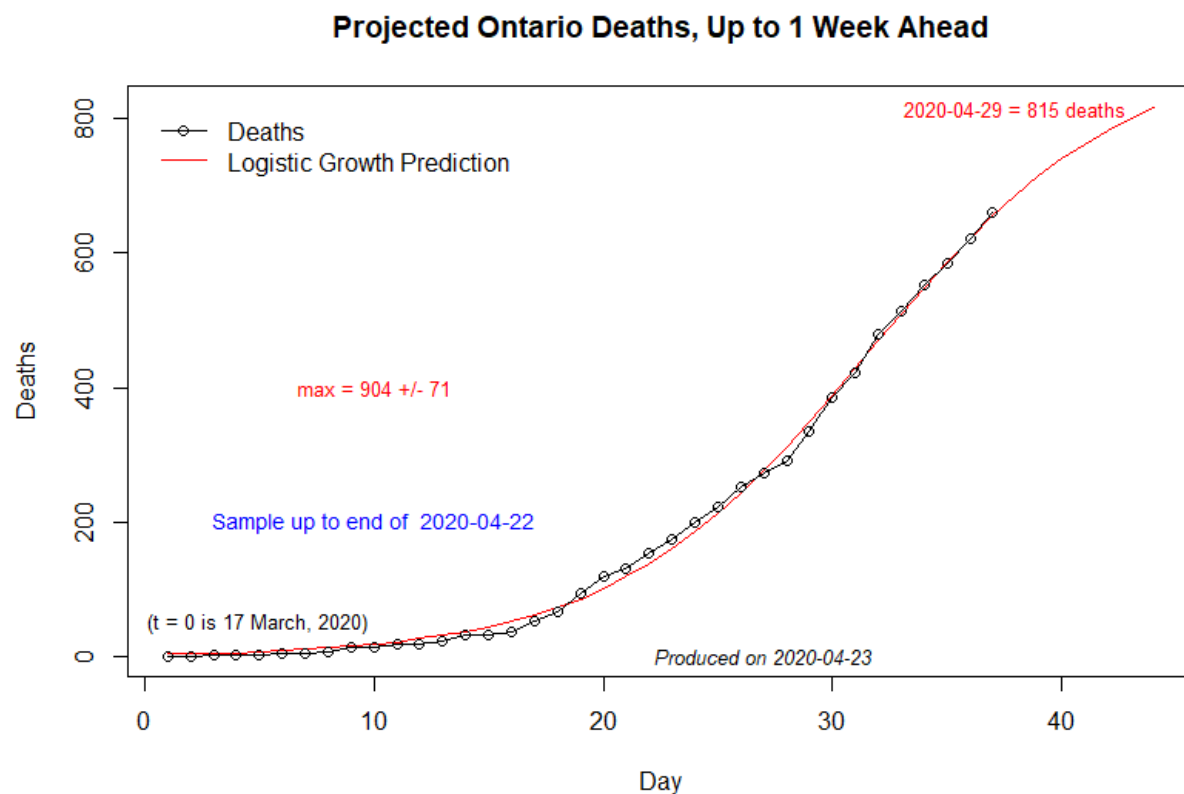
Estimated Inflection Date

Area Under Logistic / Area Under Actual

Logistic Doubling Time

Note: Reversed y-axis

Actual Doubling Time

Note: Reversed y-axis

Projected Ontario Deaths, Up to 1 Week Ahead

Deaths
Logistic Growth Prediction

2020-04-29 = 815 deaths

max = 904 +/- 71

Sample up to end of 2020-04-22

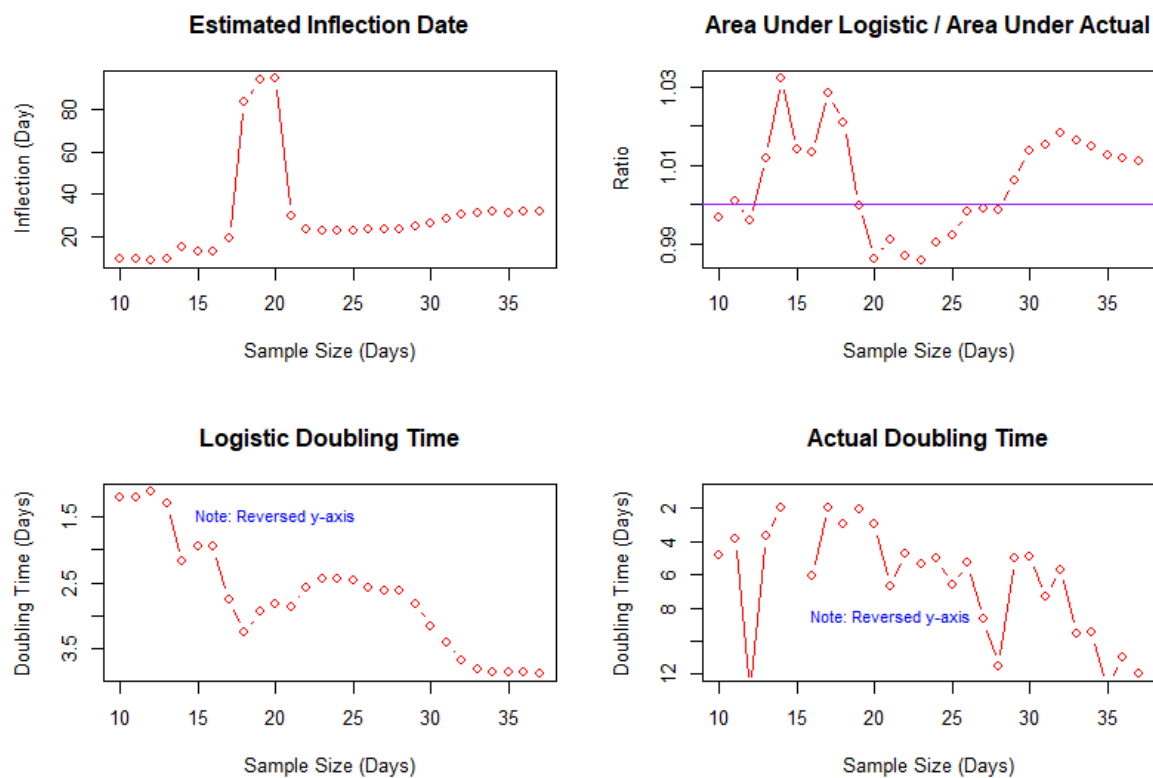(t = 0 is 17 March, 2020)

Produced on 2020-04-23

Table 4: Projected Covid-19 Deaths in Ontario

(Projections are in Red; Actual Values are in Brackets)

Sample end (projection made): 20 April

21 Apr	22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr
619	651	681	709	733	755	774
[622]	[659]					

Sample end (projection made): 21 April

22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr
653	683	711	735	758	777	794
[659]						

Sample end (projection made): 22 April

23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr
686	714	740	762	782	800	815