

Technical Supplement for the Dmetrichuk et al. (2021) paper

(Version of: November 5, 2021)

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1. Methodology for Comparisons of Death Rates:

This document describes the statistical analysis and robustness tests of the Ontario Coroner’s Office death count data, as discussed in the Dmetrichuk et al. (2021) paper.

We investigated a total of 197966 death cases in Ontario between 2009–2020. Of these, 77655 had manner of death Homicide (n=2443) or Suicide (n=16425) or Accident (n=58787) and were included in the study. Deaths whose manner was Natural (n=114571) or Skeletal Remains (n=682) or Undetermined (n=5058) were excluded. [Cases of Medical Assistance in Dying (MAiD) between 1 Jan 2016 and 8 May 2017 inclusive (n=437) were investigated manually, and all counted as Natural except 3 as Accident and 1 as Undetermined.]

From Section 3 onward, this document considers the death rates for various manner and factor categories. Each category begins with a description of precisely which manners and factors it includes. (Some of the categories’ header names were automatically generated from its manners and factors.) We present (as blue circles) the death rates per 100,000 Ontario yearly population (from Statistics Canada Table 17-10-0005-01). We compare 2020 rates to previous 2009–2019 rates both on an annual basis, and for each of four different sub-annual date ranges: Stage 0 (March 17 – May 18), Stage 1 (May 19 – June 11), Stage 2 (June 12 – July 16), Stage 3 (July 17 – November 7), and Stage 4 (November 8 – December 31).

1.1. Statistical Analysis:

For each of the manner and factor categories, and each of the date ranges, we also present various statistical analysis of the corresponding death rates, as follows.

To look for linear trends in the pre-pandemic years 2009–2019, we present (in red) the linear regression line and slope, together with the slope’s p-value and confidence interval.

The combined 2009-2019 death rate is indicated with a green “_”.

To get a rough sense of whether the 2020 rate is substantially different from the 2009–2019 rate (i.e., is an outlier), we present the “Tukey’s fences” (orange), i.e. four times the interquartile range of the pre-2020 values.

To measure more precisely whether the 2020 rate is substantially different from the 2009–2019 rate, we use a two-sample Poisson statistical test. We present (in green) the estimated ratio (“Ratio”) of the 2020 rate over the 2009-2019 rate, together with its 95% confidence interval and p-value. We also show the estimated difference (“Diff”) between the 2020 total

count, and what that count would have been if the previous years' rate had continued, together with its 95% confidence interval as well.

In a separate analysis, we also consider an “interrupted time series” (ITS) model, which does a linear regression of the death rates against both the year and an indicator variable for the special year 2020. The resulting “ITS” quantity uses the regression coefficient for the indicator variable to measure the ratio of the 2020 rate to what its expected value *would* be if the linear trend from 2009–2019 had continued. Its corresponding p-value and 95% confidence interval indicate the uncertainty of this ratio. The ITS thus compares the 2020 rate to the previous years in a way which also takes into account the previous years' linear trend.

1.2. Robustness Tests:

To check robustness of the 2020 changes, we also consider other p-values, which compare the 2020 and 2009-2019 rates under different circumstances, as follows.

First, we consider changing the comparison year range, from 2009-2019 to 2010-2019 and 2011-2019 and so on, to see if the 2020 rate still remains substantially different. We display (in brown) the value “robY” as (a) the largest of all of the p-values over all choices of the comparison starting year (and show in brackets the starting year which gives the largest p-value), and also (b) the combined union (and hence largest) of all the corresponding 95% confidence intervals. If the robY p-value is still small, and its combined confidence interval still does not approach the value 1, that means that the 2020 rate change is still substantial regardless of which of the comparison year ranges is used, thus demonstrating robustness of the change.

Second, we consider different adjustments for cases whose manner or factor are “unclear”, as we now discuss.

1.3. Adjusting for “Unclear Cases”:

Some of the cases in the database are still preliminary, and are likely to change later.

To deal with this, we will call a case “Unclear” if (a) it has missing factor, and/or (b) it has missing manner, and/or (c) its manner is “Undetermined” and also its status is “Open”. Then the number of such cases is fairly small, but still not negligible (especially in 2020); see Section 2.4.

Some of these Unclear Cases might later add to our categories. To estimate this, we did a separate analysis comparing the latest (March 30, 2021) and earlier (August 25, 2020) data pulls. In the earlier pull, we identified all 3684 cases which were unclear at that time. We then examined each of these earlier-unclear cases in the latest pull. Of them, 894 were still unclear and hence excluded. Of the remaining 2790 cases, 195 were resolved to Suicide, so the “correction multiplier” for Suicides is given by:

$$\text{Suicides Correction Multiplier} = 195 / 2790 = 0.06989,$$

and similarly for all of the other death cause categories. (Also, 78 of the 2790 cases were later removed from the system, and hence not resolved to any category.)

Then, for each death cause, we multiplied the appropriate correction multiplier by the number of corresponding unclear in the latest data pull. We then added that figure as a correction to the raw count. This provided a best estimate of the true death counts in each category and time period, and that best estimate was used to compute the rates shown (as blue circles) in the graphs.

To indicate the uncertainty in this “unclear” correction, our graphs also show (in purple) vertical “uncertainty bars” which show 95% confidence intervals for the true rates based on this correction (specifically, the best estimate ± 1.96 times the correction standard deviation, bounded below by the observed raw count).

To check the robustness of this “unclear” correction, we then re-compute the p-value and confidence interval for the ratio of the 2020 rate compared to previous years where we take the previous years’ rates at either their lower or upper confidence interval endpoint, and simultaneously take the 2020 rate at either its lower or upper confidence interval endpoint. We then display (in brown) the value “robU” which is (a) the largest p-value over all of these endpoint choices, and also (b) the corresponding union (and hence largest) of all the corresponding 95% confidence intervals. If the robU p-value is still small, and its combined confidence interval still does not approach the value 1, that means that the 2020 rate change is still substantial over a wide range of possible resolutions of the unclear cases, thus again demonstrating robustness of the change.

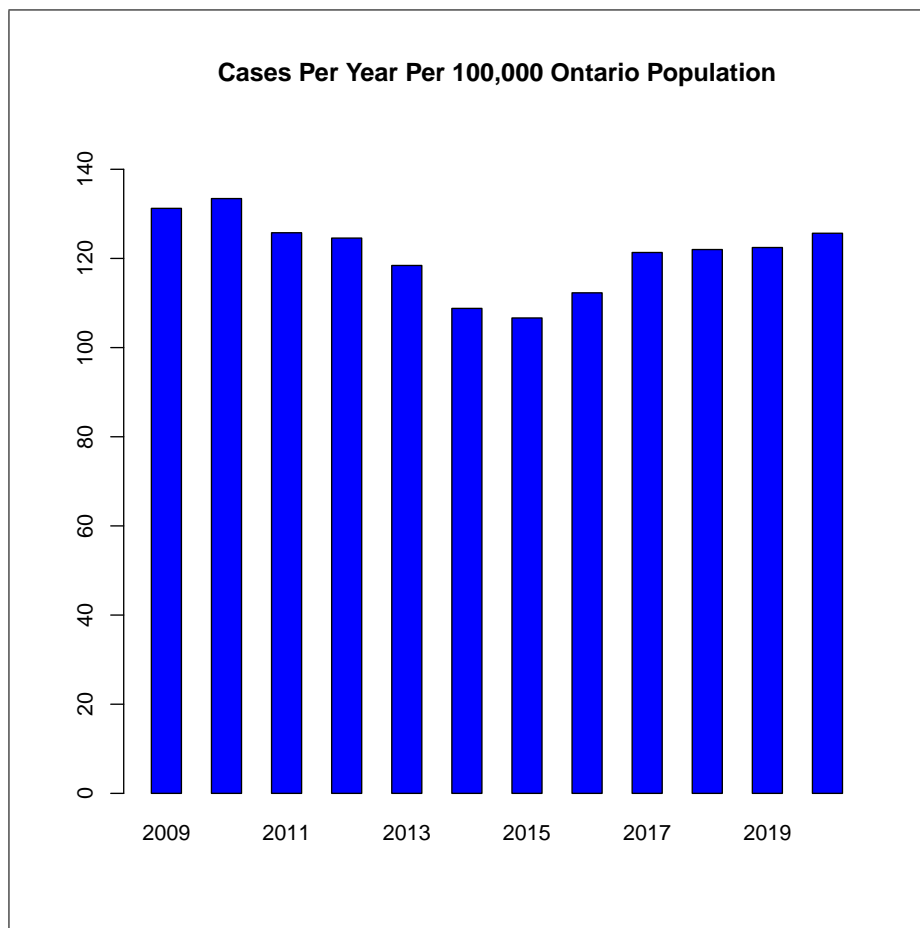
Taken together, these p-values do quite a bit of robustness / sensitivity checking. If the various p-values are all small, and the combined (union) confidence interval still does not approach the value 1, then this means the 2020 change is substantial over a wide range of different comparison methods.

2. Preliminary Computations:

Before proceeding with the detailed analysis of different causes, we consider a few preliminary counts.

2.1. Total Cases by Year:

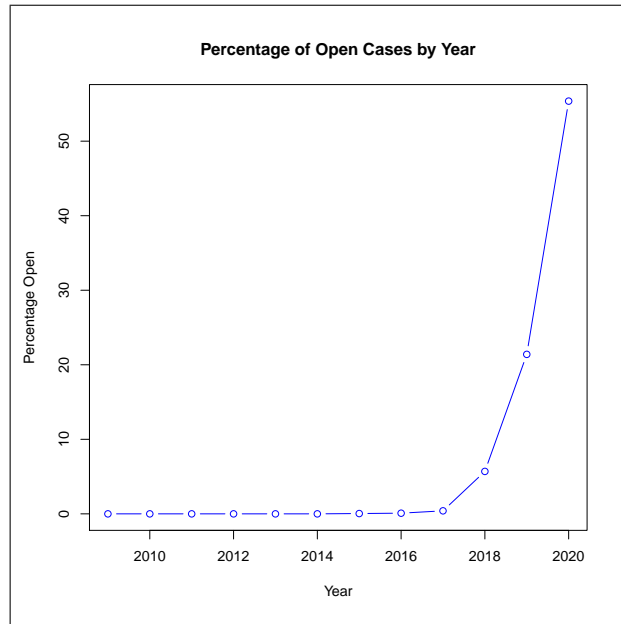
We first consider the total number of cases investigated the Coroner's Office, per 100,000 population. It remains relatively constant from year to year:



2.2. Open Cases by Year:

We next consider the percentage of cases which are “Open”, i.e. not yet with final resolution. This percentage increases substantially in recent years:

Year	QA'd	Closed	Open	Total
2009	17058 (100%)	0 (0%)	0 (0%)	17058 (100%)
2010	17527 (100%)	0 (0%)	0 (0%)	17527 (100%)
2011	16678 (100%)	0 (0%)	0 (0%)	16678 (100%)
2012	16680 (100%)	0 (0%)	0 (0%)	16680 (100%)
2013	15999 (100%)	1 (0%)	0 (0%)	16000 (100%)
2014	14815 (100%)	0 (0%)	0 (0%)	14815 (100%)
2015	14612 (100%)	0 (0%)	6 (0%)	14618 (100%)
2016	15566 (99.9%)	0 (0%)	14 (0.1%)	15580 (100%)
2017	0 (0%)	131 (0.8%)	69 (0.4%)	17072 (100%)
2018	0 (0%)	10 (0.1%)	994 (5.7%)	17456 (100%)
2019	0 (0%)	23 (0.1%)	3811 (21.4%)	17810 (100%)
2020	0 (0%)	96 (0.5%)	10252 (55.4%)	18513 (100%)



2.3. Missing Causes:

The number of cases with missing Manners of Death or Death Factor or Both is much less, but still somewhat substantial in recent years (especially 2020):

Year	Missing Manner	Missing Factor	Missing Both
2009	0 (0%)	0 (0%)	0 (0%)
2010	0 (0%)	0 (0%)	0 (0%)
2011	0 (0%)	0 (0%)	0 (0%)
2012	0 (0%)	0 (0%)	0 (0%)
2013	0 (0%)	0 (0%)	0 (0%)
2014	0 (0%)	0 (0%)	0 (0%)
2015	2 (0%)	2 (0%)	2 (0%)
2016	6 (0%)	6 (0%)	6 (0%)
2017	16 (0.1%)	16 (0.1%)	16 (0.1%)
2018	67 (0.4%)	70 (0.4%)	66 (0.4%)
2019	165 (0.9%)	159 (0.9%)	155 (0.9%)
2020	639 (3.5%)	584 (3.2%)	581 (3.1%)

Since most of the missing causes are in the year 2020, we next look at counts of missing causes for each of the four stages within 2020:

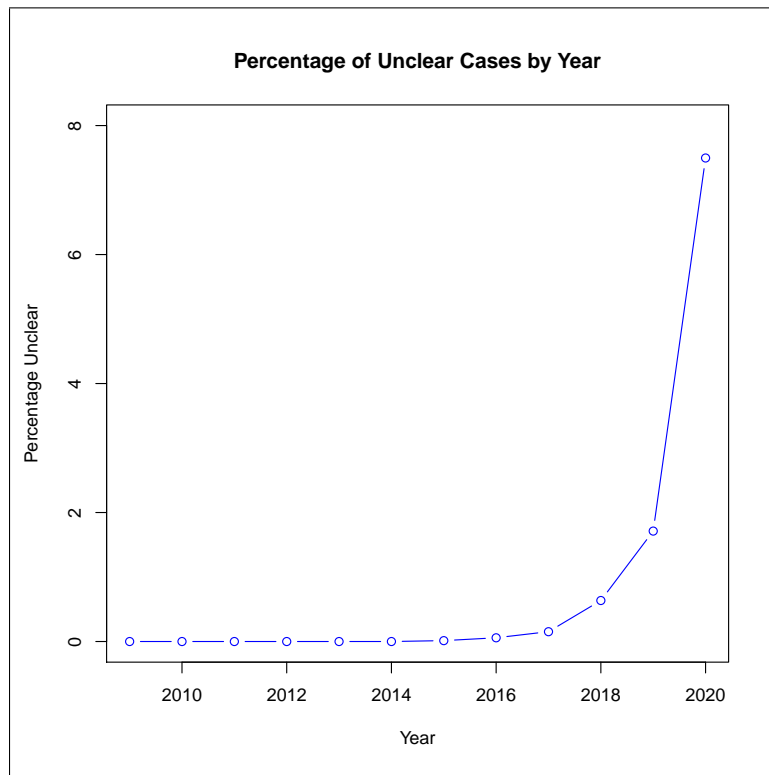
Year	Stage	Total	Missing Manner	Missing Factor	Missing Both
2020	0	3197 (100%)	58 (1.8%)	55 (1.7%)	55 (1.7%)
2020	1	1122 (100%)	21 (1.9%)	16 (1.4%)	16 (1.4%)
2020	2	1598 (100%)	33 (2.1%)	31 (1.9%)	31 (1.9%)
2020	3	5781 (100%)	206 (3.6%)	188 (3.3%)	187 (3.2%)
2020	4	3022 (100%)	263 (8.7%)	238 (7.9%)	237 (7.8%)

This indicates that, as expected, the percentage of missing causes is smaller (and hence less important) for the earlier stages, but is more important for later stages.

2.4. Unclear Cases:

Combining the above groupings, we consider the numbers of cases which are “unclear”, i.e. have a missing factor, and/or a missing manner, and/or its manner is “Undetermined” and also its status is “Open”. Then the percentage of unclear cases is very small in earlier years, but somewhat more substantial in recent years (especially 2020):

Year	Unclear Cases
2009	0 (0 %)
2010	0 (0 %)
2011	0 (0 %)
2012	0 (0 %)
2013	0 (0 %)
2014	0 (0 %)
2015	2 (0 %)
2016	9 (0.1 %)
2017	26 (0.2 %)
2018	111 (0.6 %)
2019	305 (1.7 %)
2020	1388 (7.5 %)



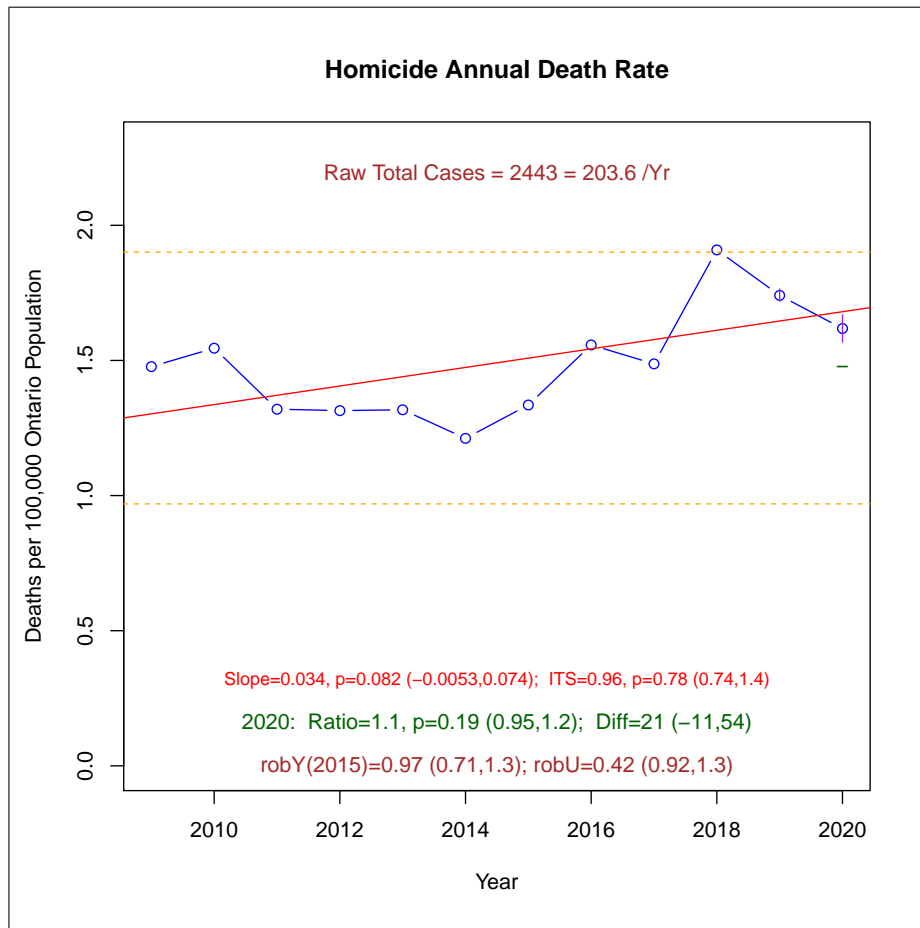
We now proceed to the analysis of the death rates over different causes and time periods.

3. HomicideAny Category:

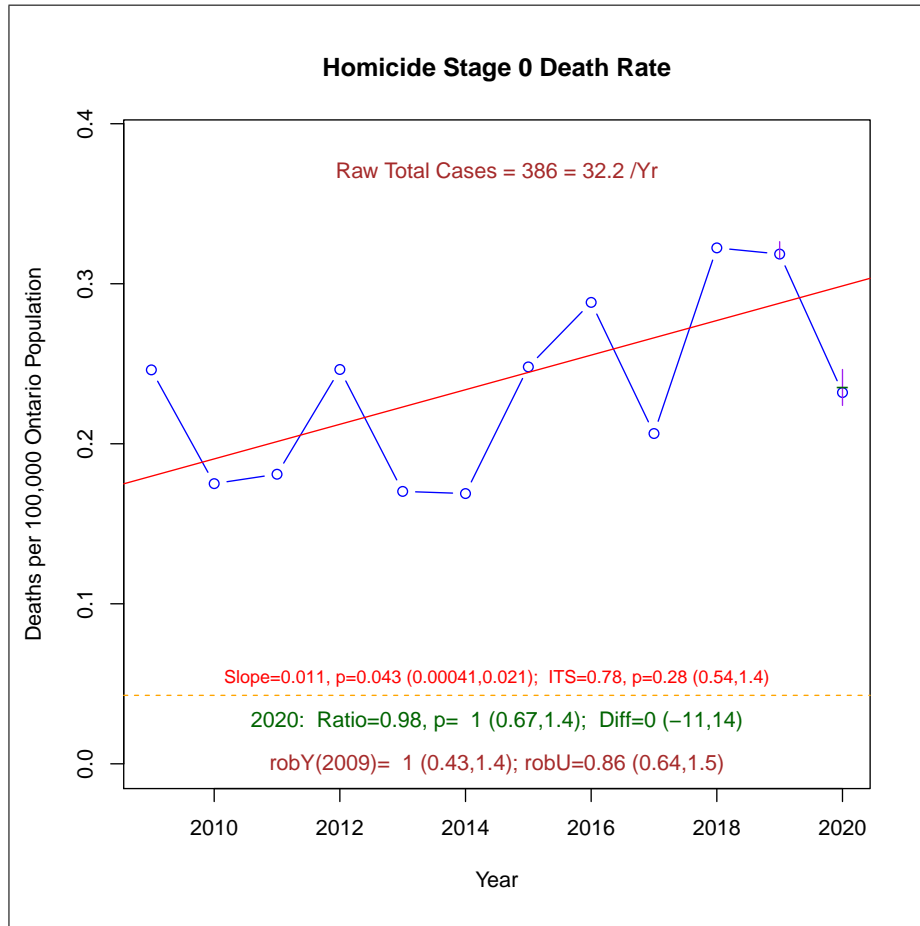
This category is defined by:
manner = "Homicide"; and factor = any.

The corresponding correction multiplier is: $29 / 2790 = 0.01039$.

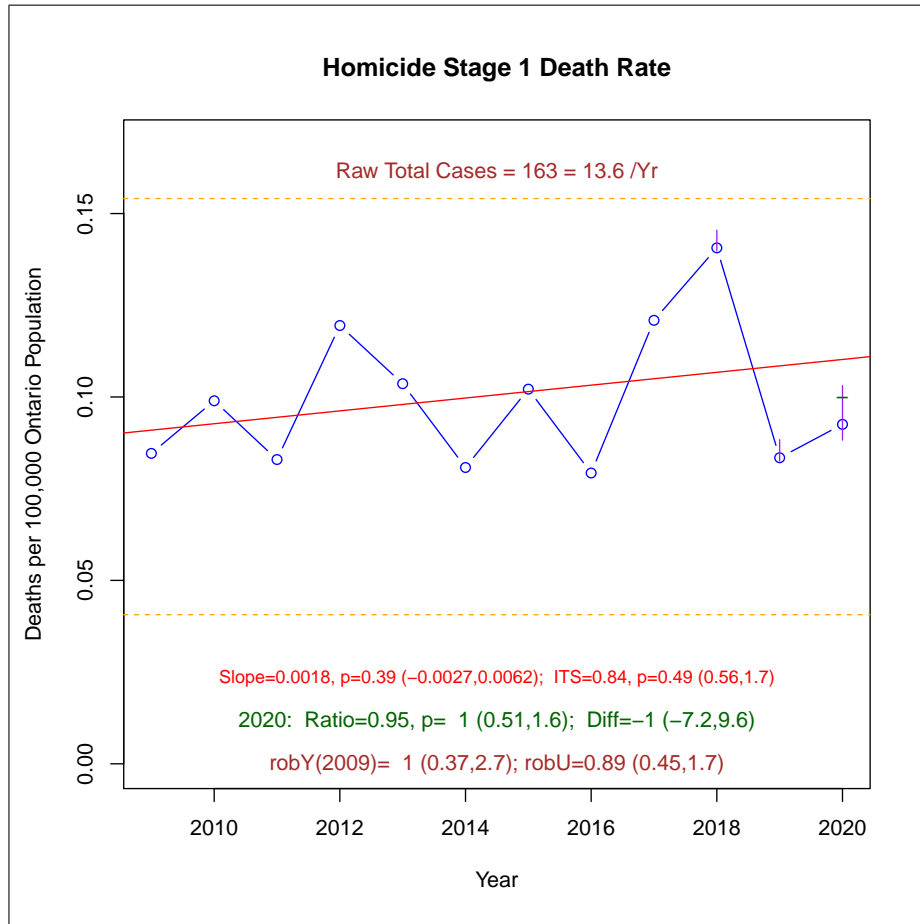
We begin with the Totals for entire years:



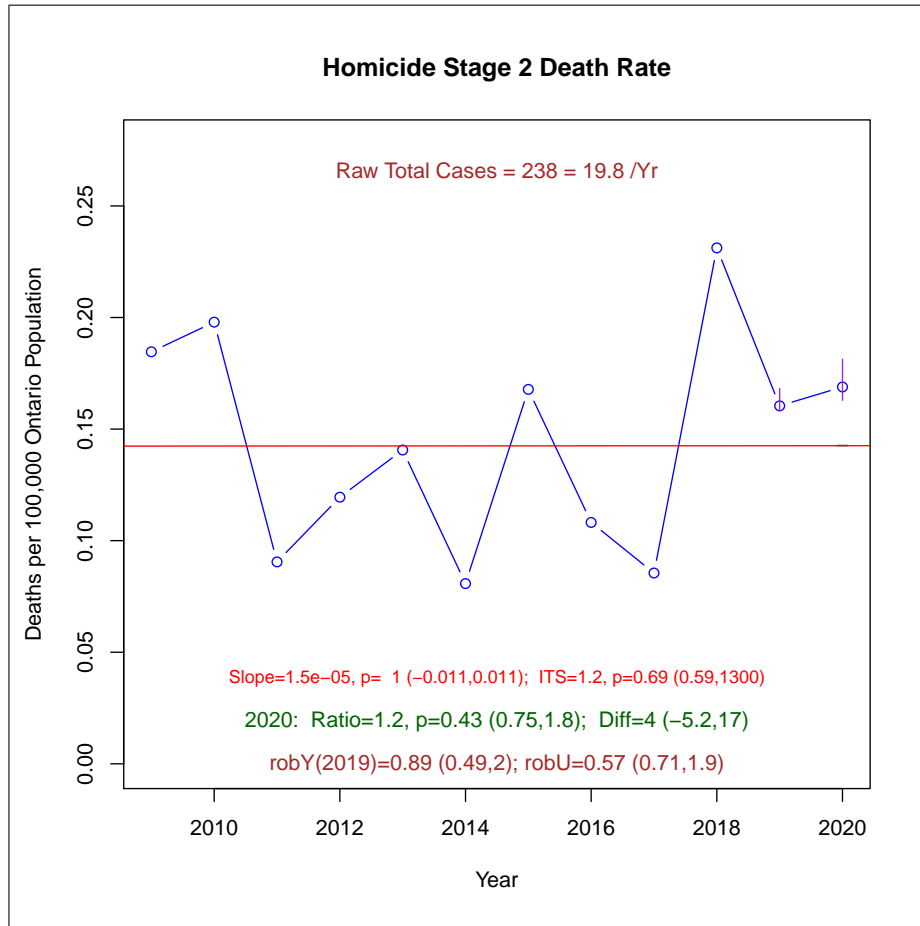
3.0. HomicideAny – Stage 0 (March 17 – May 18):



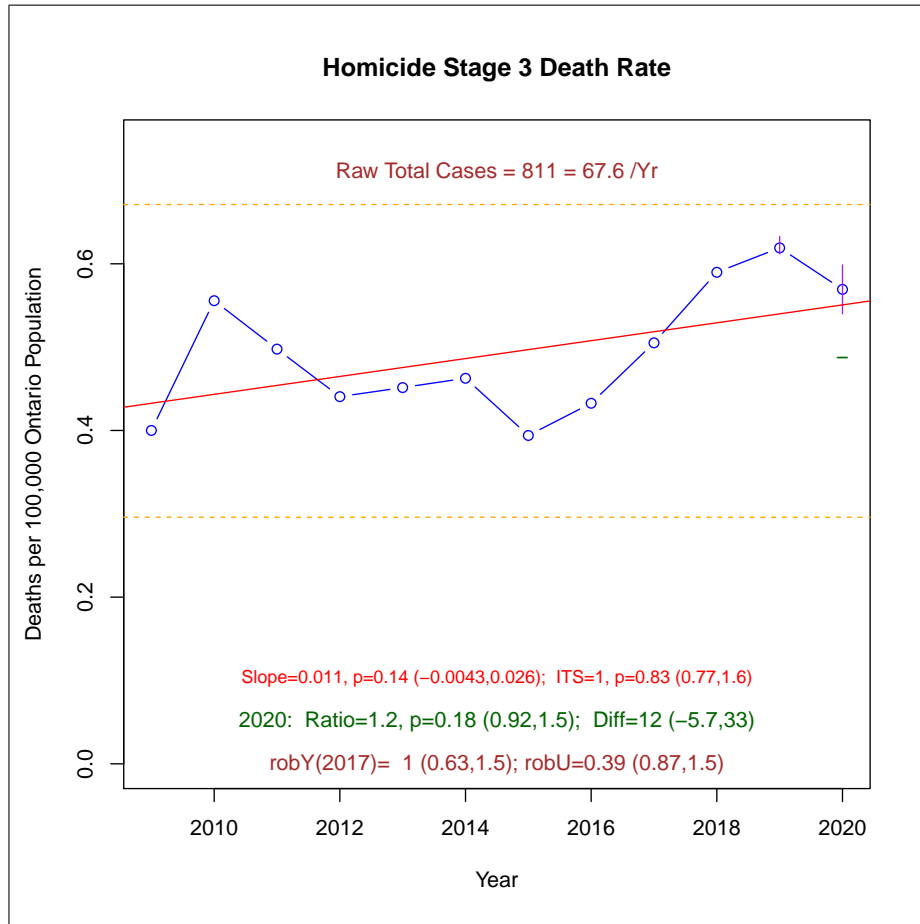
3.1. HomicideAny – Stage 1 (May 19 – June 11):



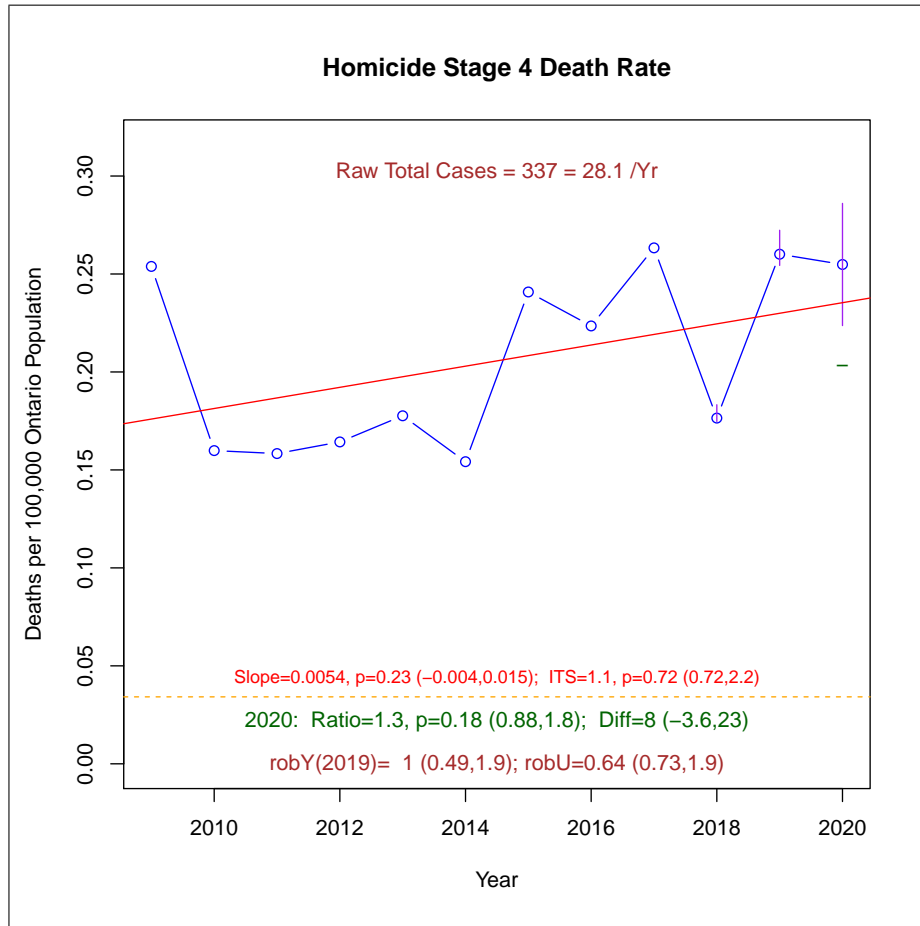
3.2. HomicideAny – Stage 2 (June 12 – July 16):



3.3. HomicideAny – Stage 3 (July 17 – November 7):



3.4. HomicideAny – Stage 4 (November 8 – December 31):

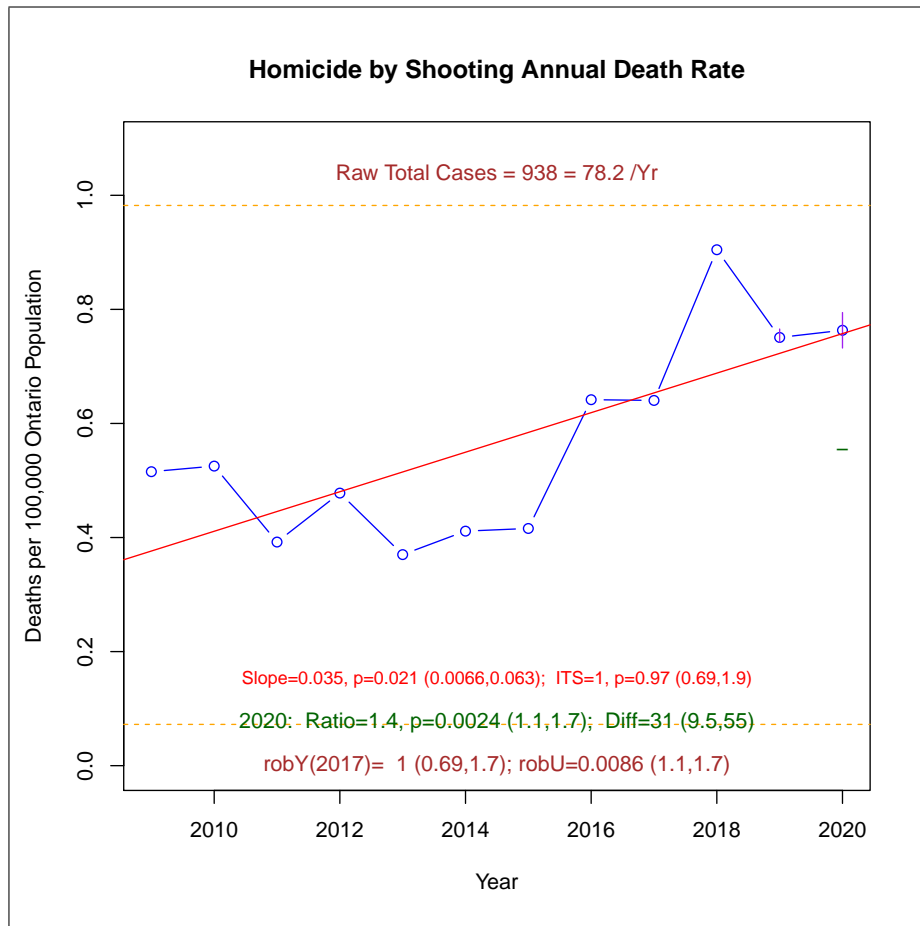


4. HomicShootShootShootShoot Category:

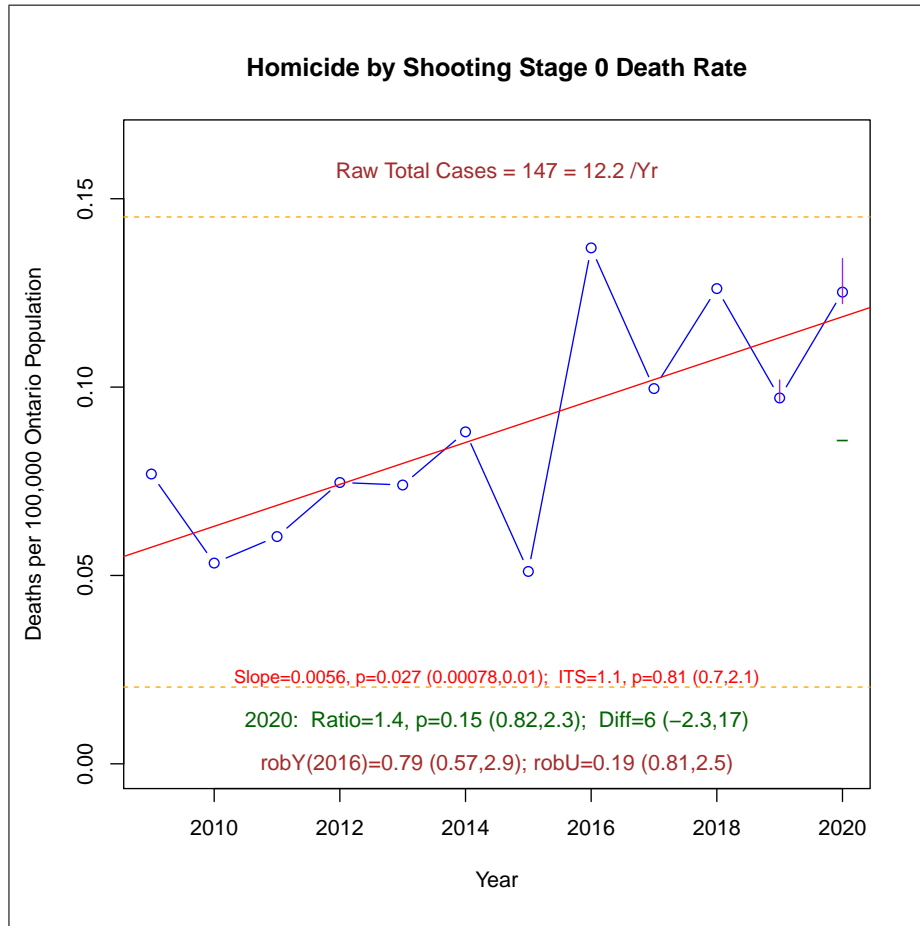
This category is defined by:
 manner = “Homicide”; and factor = “Shooting - Handgun” or “Shooting - Rifle” or “Shooting - Shotgun” or “Shooting - Weapon not specified/other”.

The corresponding correction multiplier is: $11 / 2790 = 0.00394$.

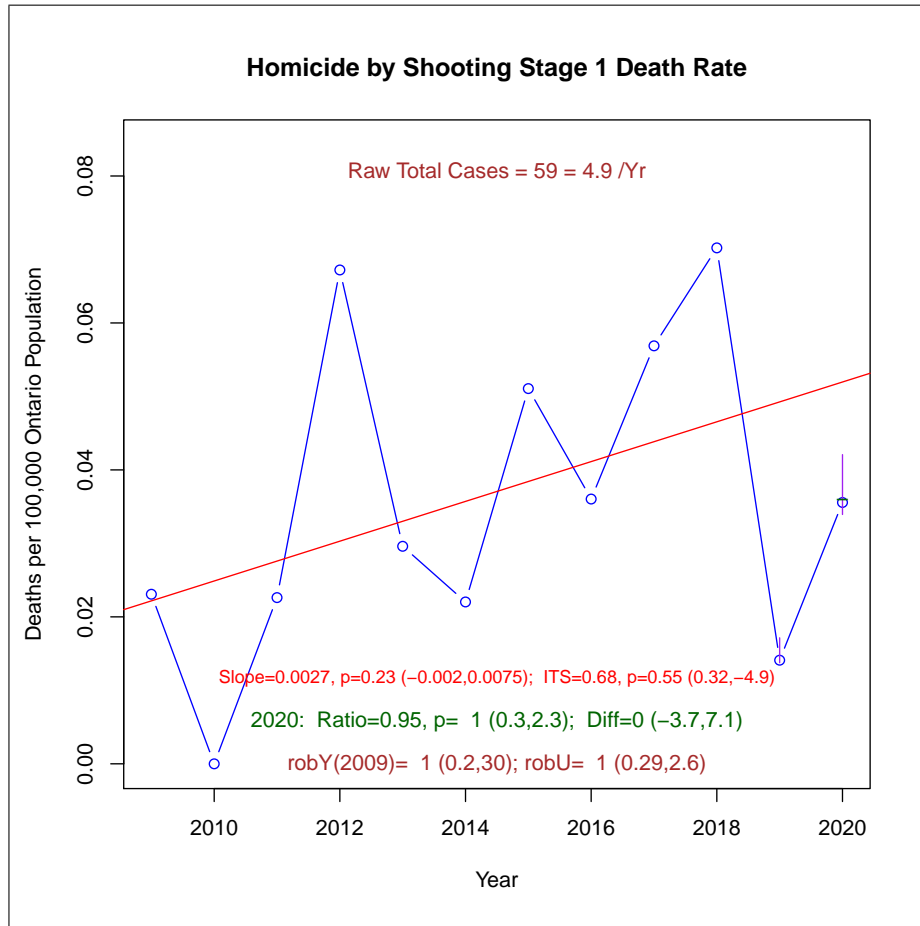
We begin with the Totals for entire years:



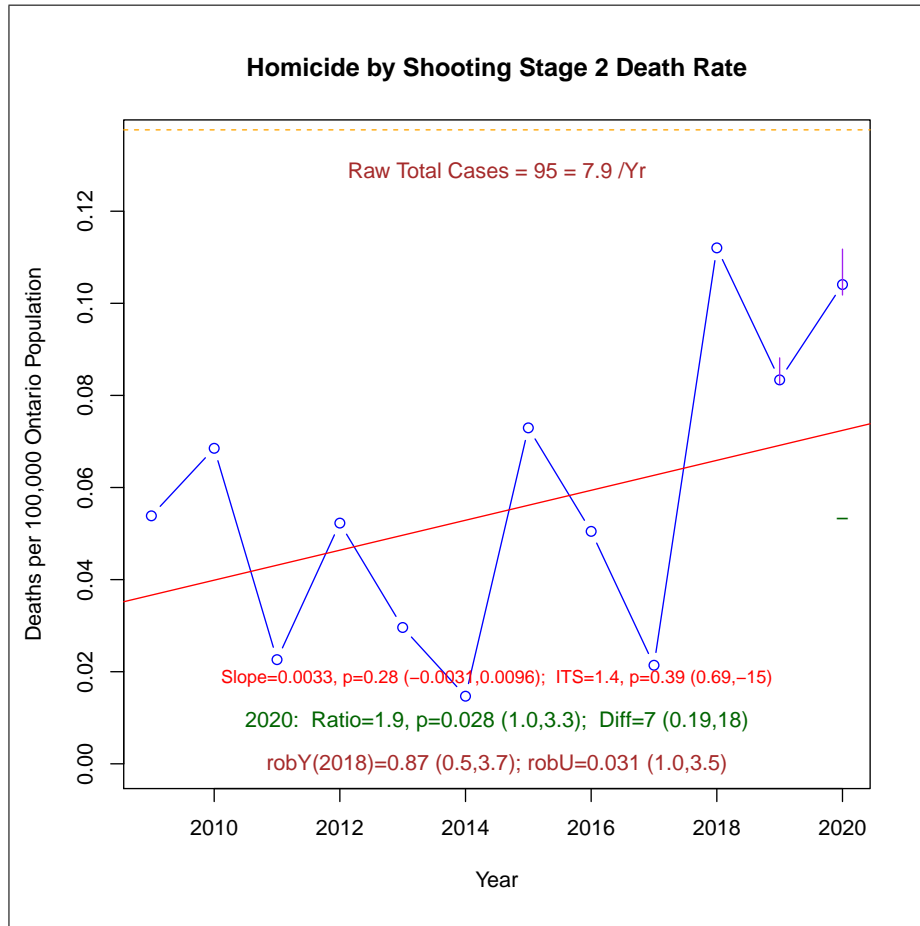
4.0. HomicShootShootShootShoot – Stage 0 (March 17 – May 18):



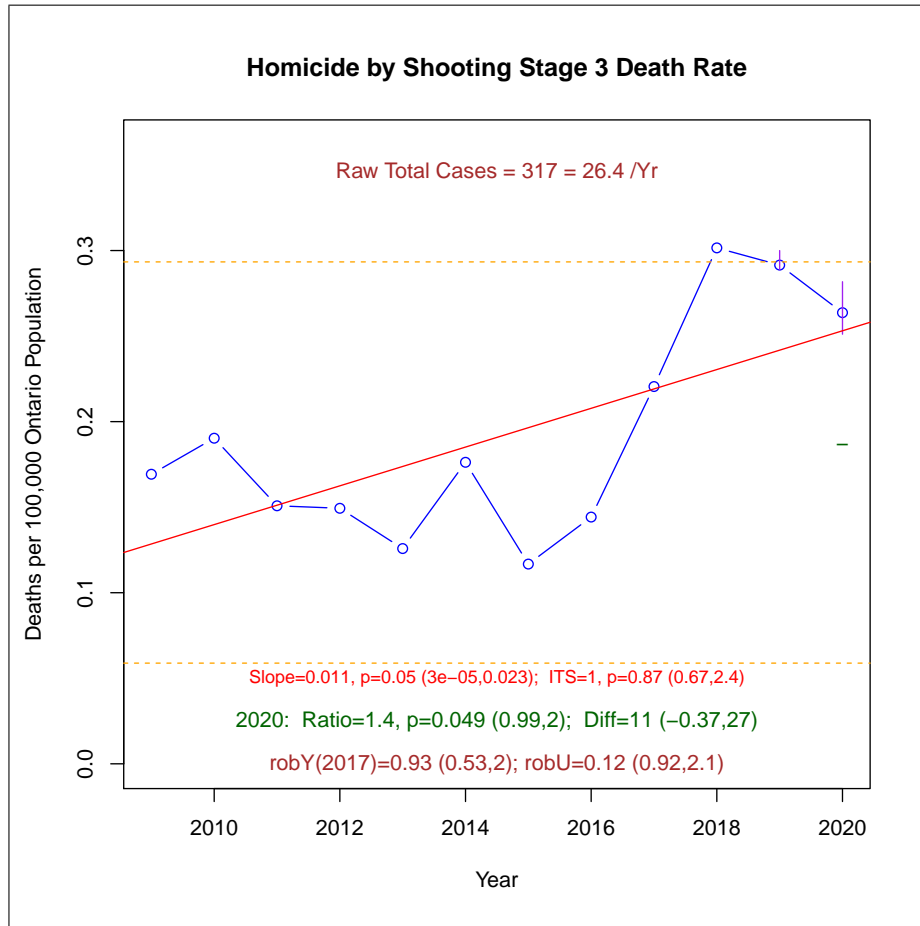
4.1. HomicShootShootShootShoot – Stage 1 (May 19 – June 11):



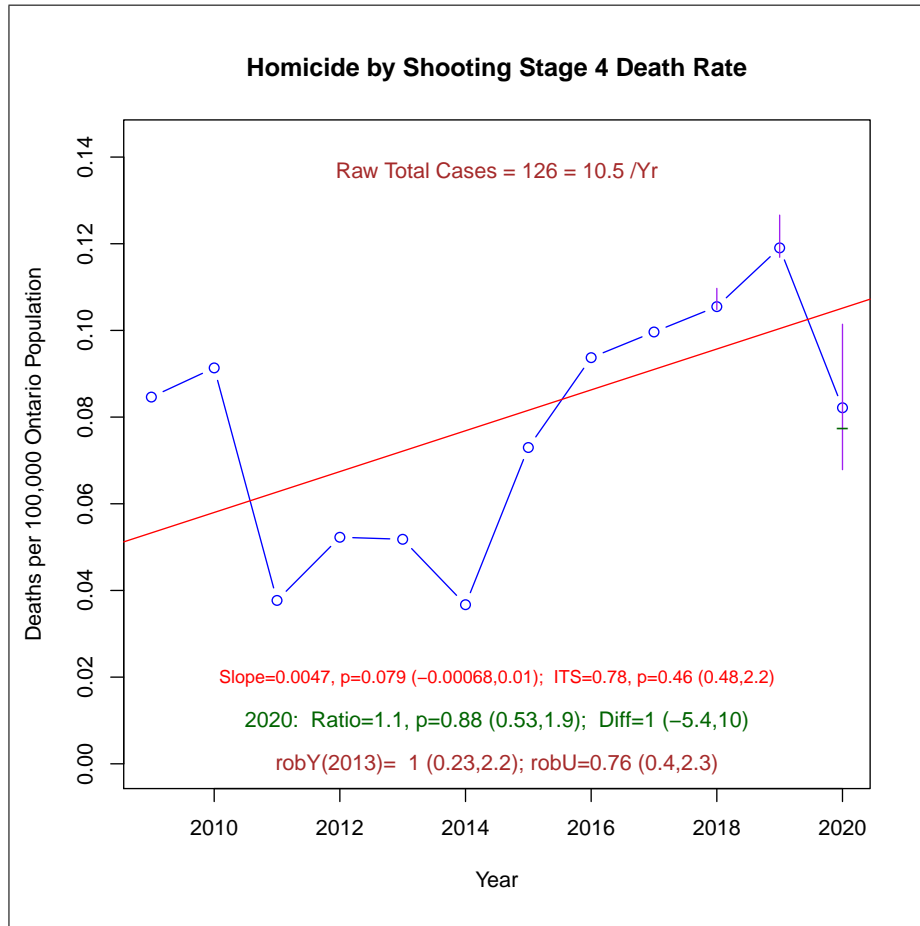
4.2. HomicShootShootShootShoot – Stage 2 (June 12 – July 16):



4.3. HomicShootShootShootShoot – Stage 3 (July 17 – November 7):



4.4. HomicideShootShootShootShoot – Stage 4 (November 8 – December 31):



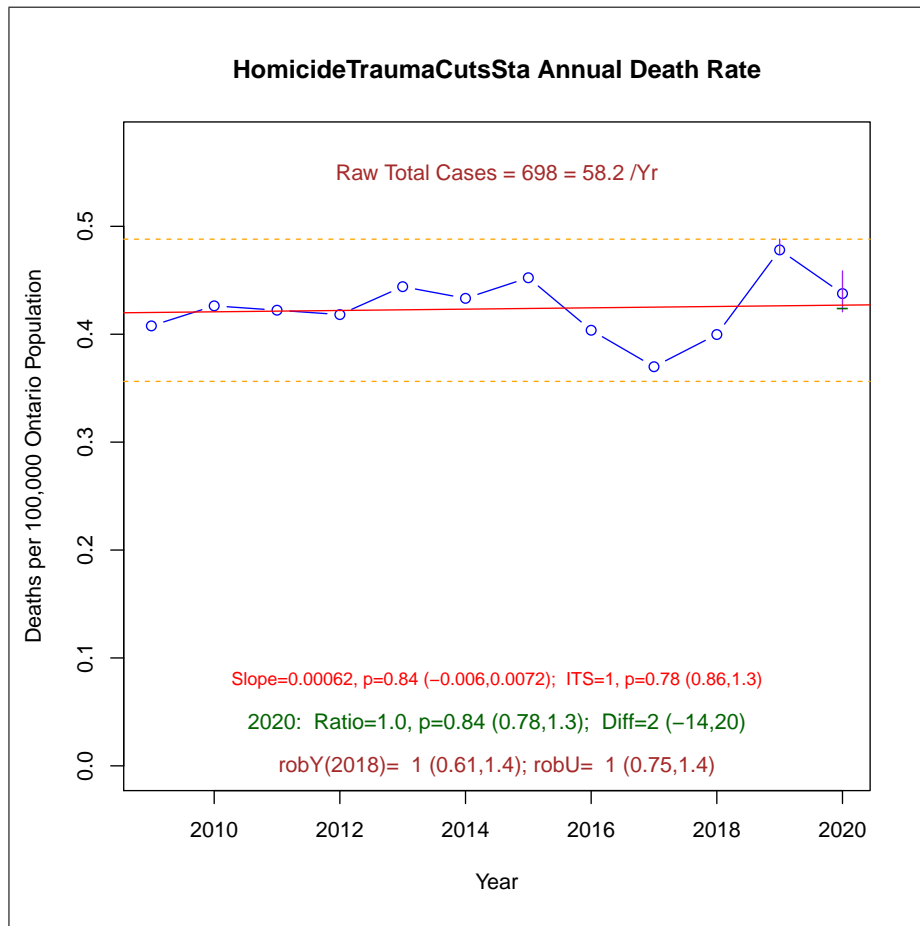
5. HomicideTraumaCutsSta Category:

This category is defined by:

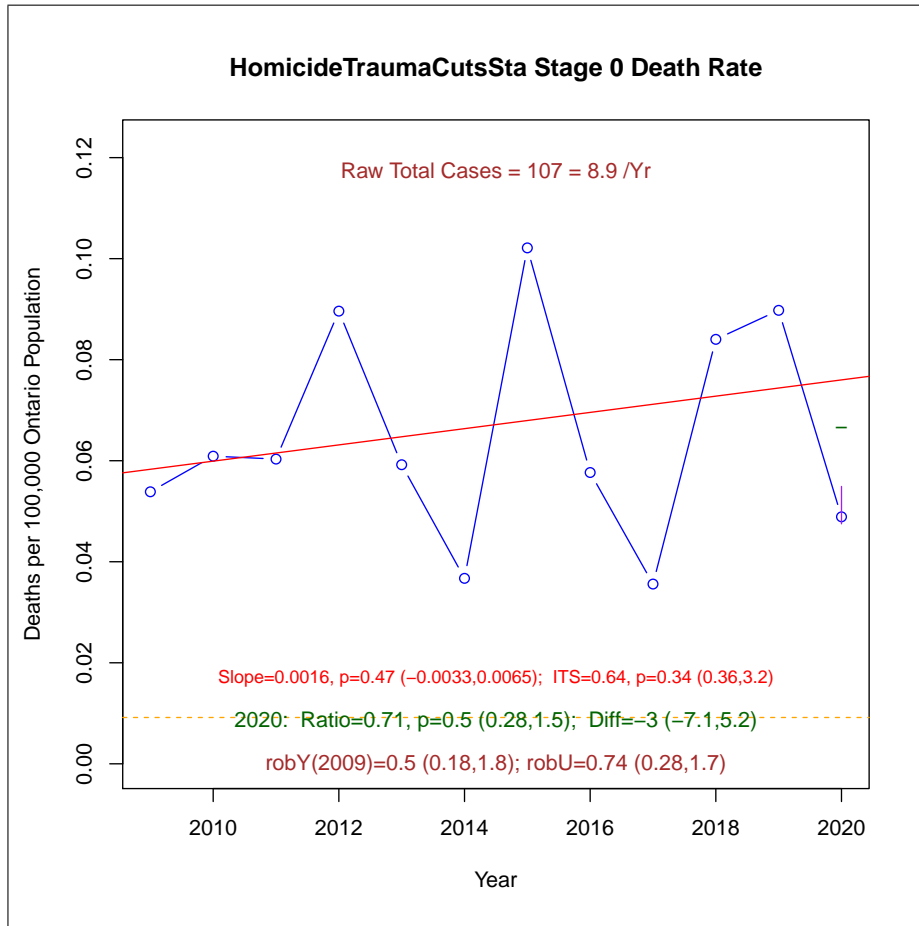
manner = "Homicide"; and factor = "Trauma - Cuts, Stabs".

The corresponding correction multiplier is: $5 / 2790 = 0.00179$.

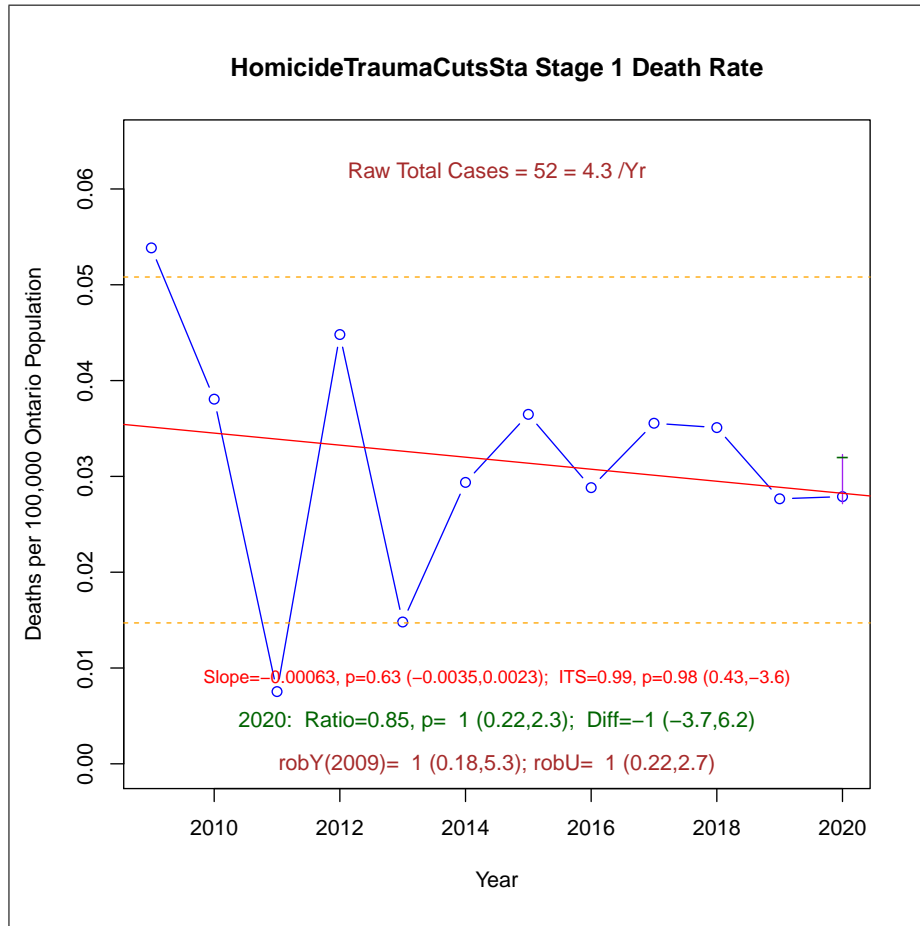
We begin with the Totals for entire years:



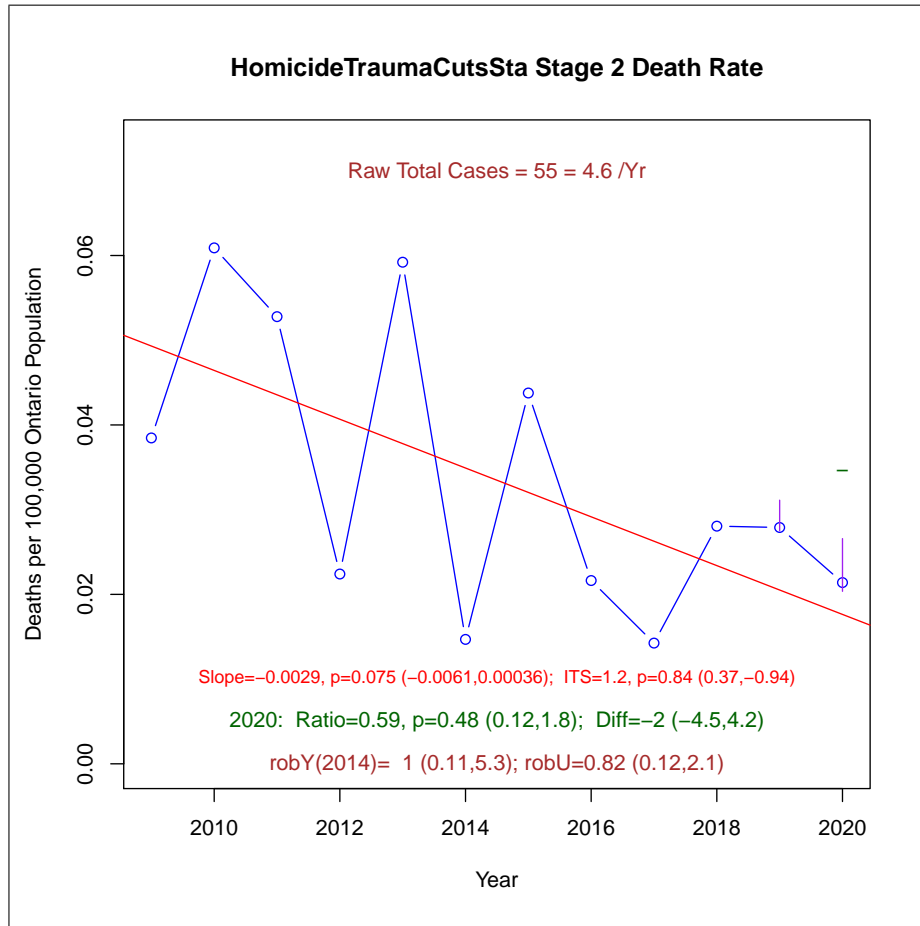
5.0. HomicideTraumaCutsSta – Stage 0 (March 17 – May 18):



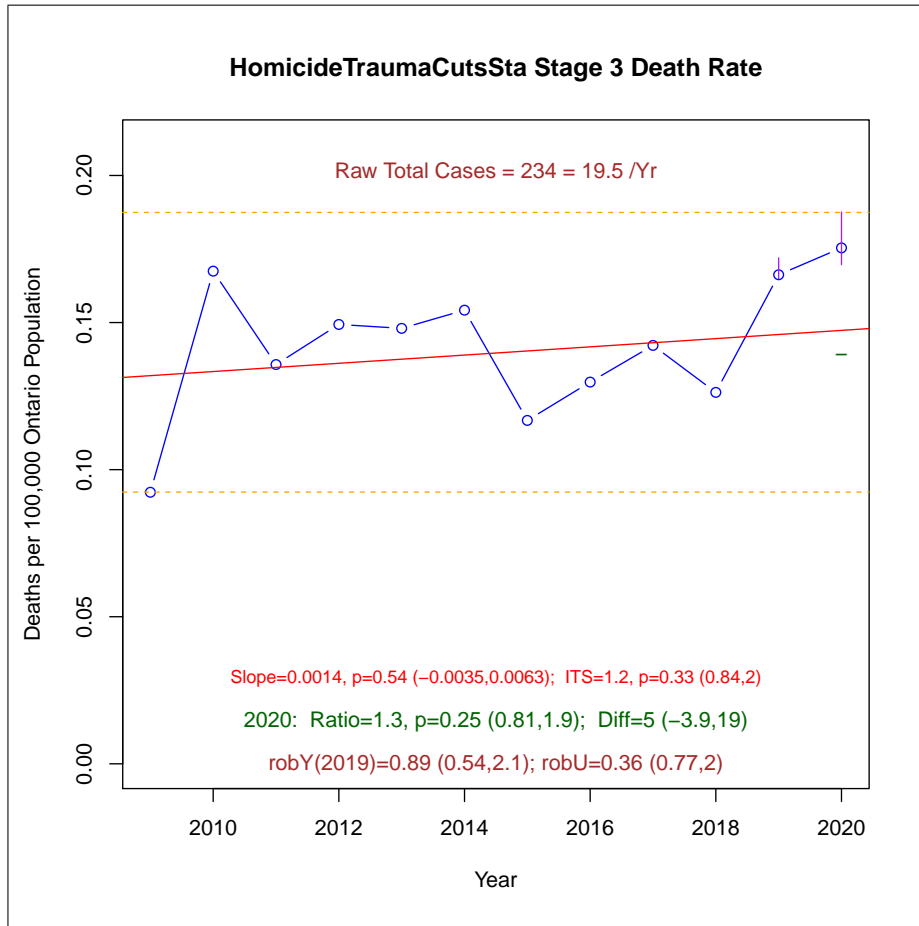
5.1. HomicideTraumaCutsSta – Stage 1 (May 19 – June 11):



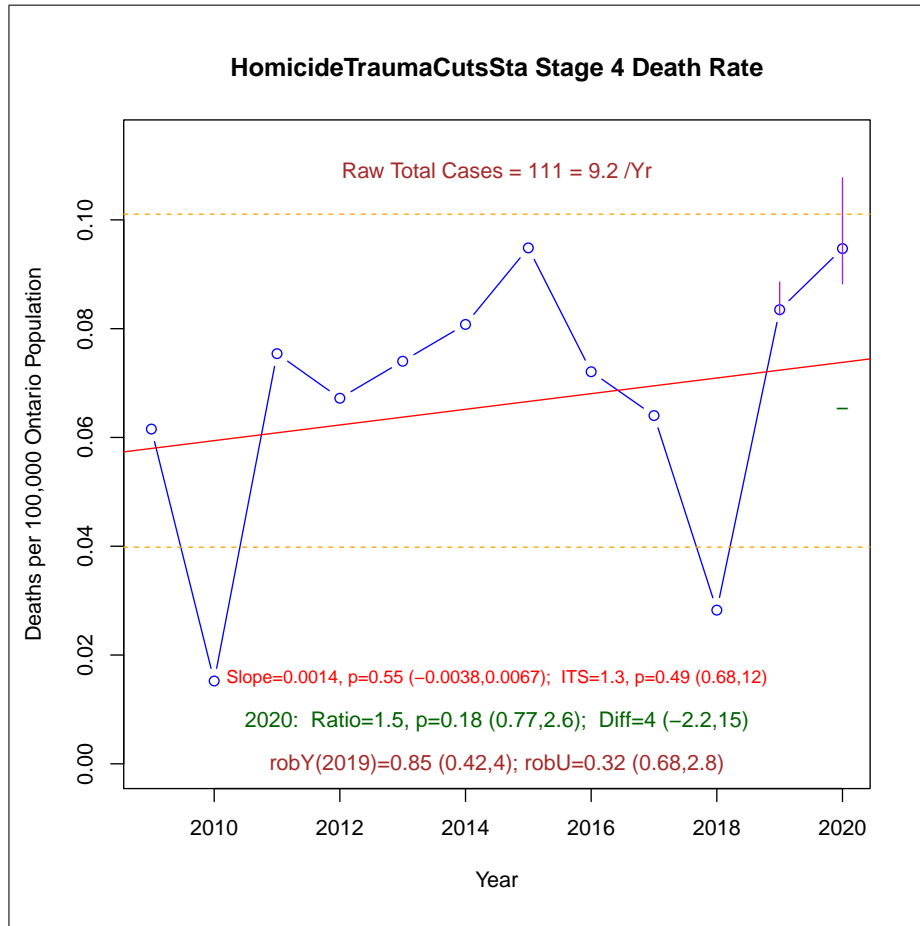
5.2. HomicideTraumaCutsSta – Stage 2 (June 12 – July 16):



5.3. HomicideTraumaCutsSta – Stage 3 (July 17 – November 7):



5.4. HomicideTraumaCutsSta – Stage 4 (November 8 – December 31):

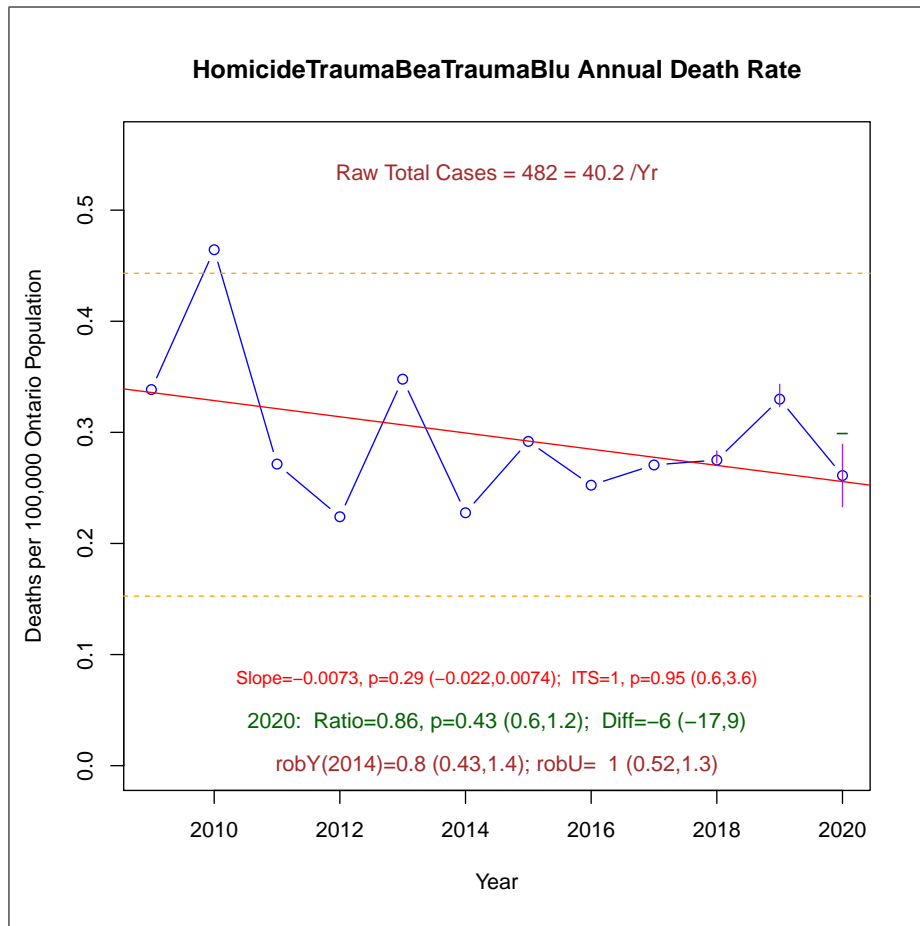


6. HomicideTraumaBeaTraumaBlu Category:

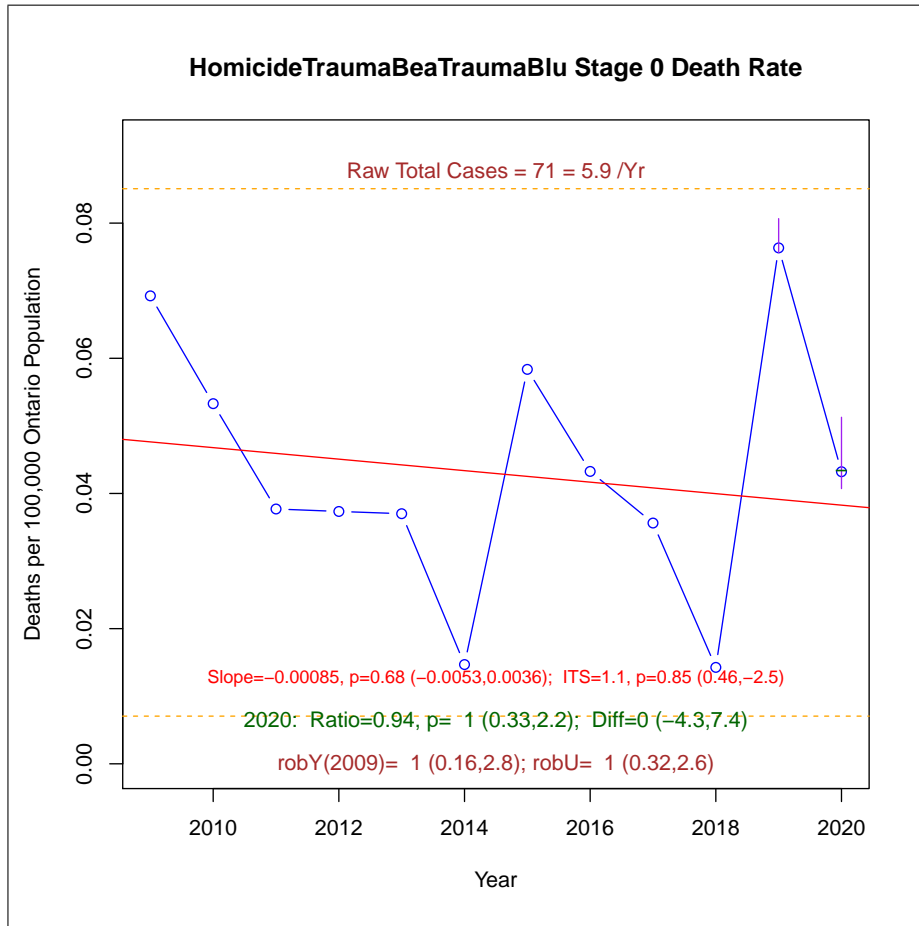
This category is defined by:
manner = “Homicide”; and factor = “Trauma - Beating / Assault” or “Trauma - Blunt Force”.

The corresponding correction multiplier is: $9 / 2790 = 0.00323$.

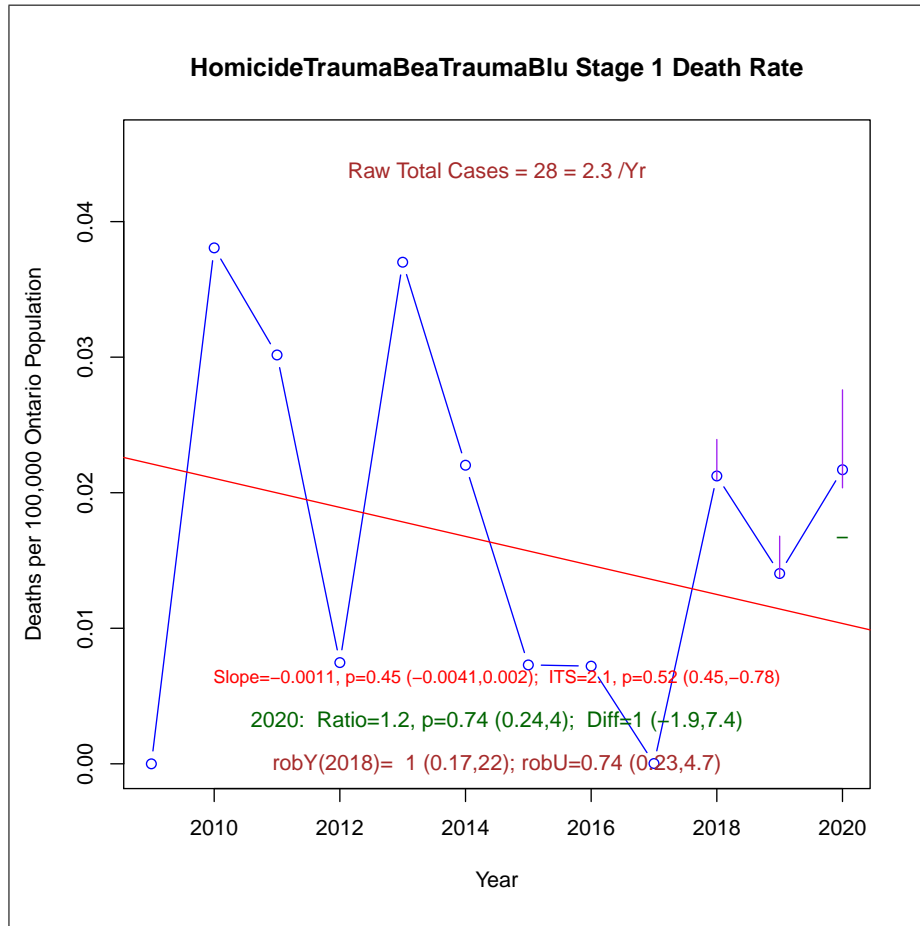
We begin with the Totals for entire years:



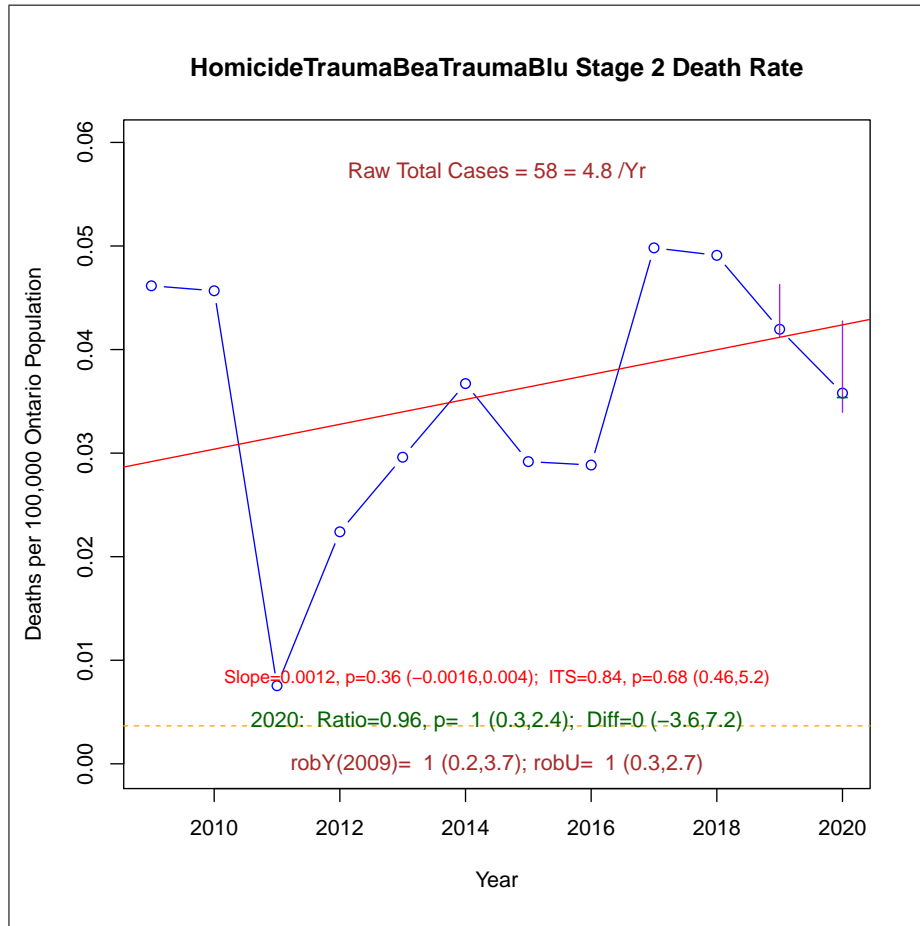
6.0. HomicideTraumaBeaTraumaBlu – Stage 0 (March 17 – May 18):



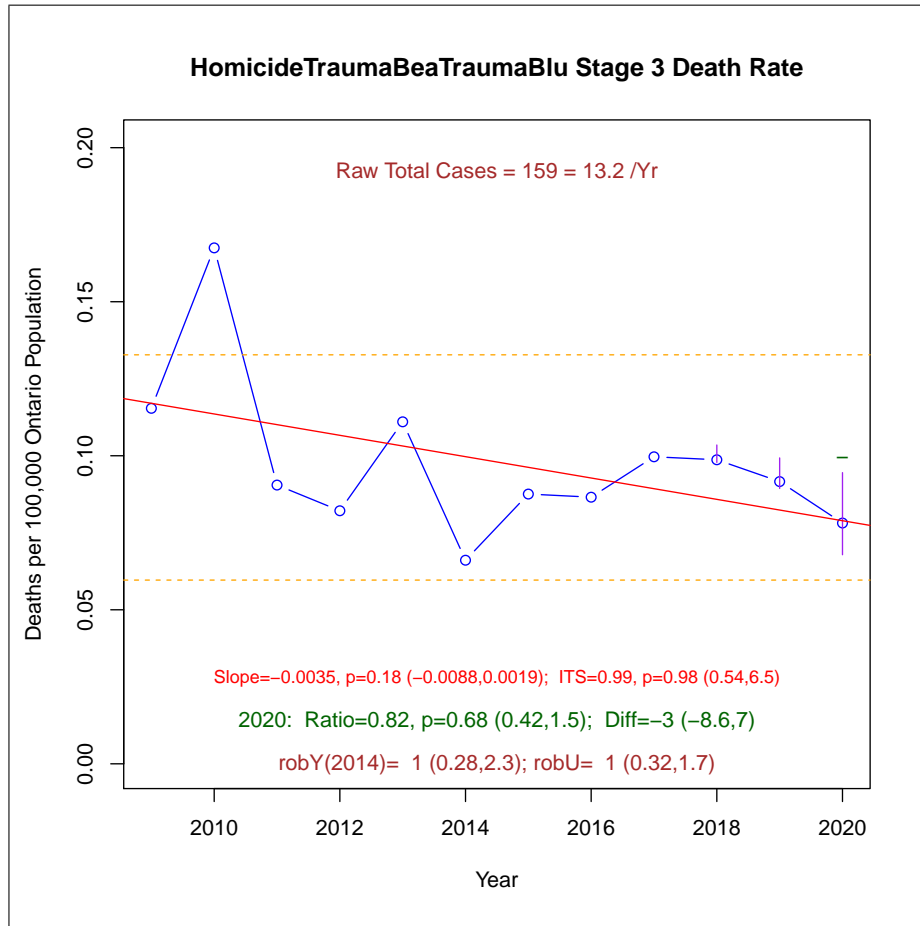
6.1. HomicideTraumaBeaTraumaBlu – Stage 1 (May 19 – June 11):



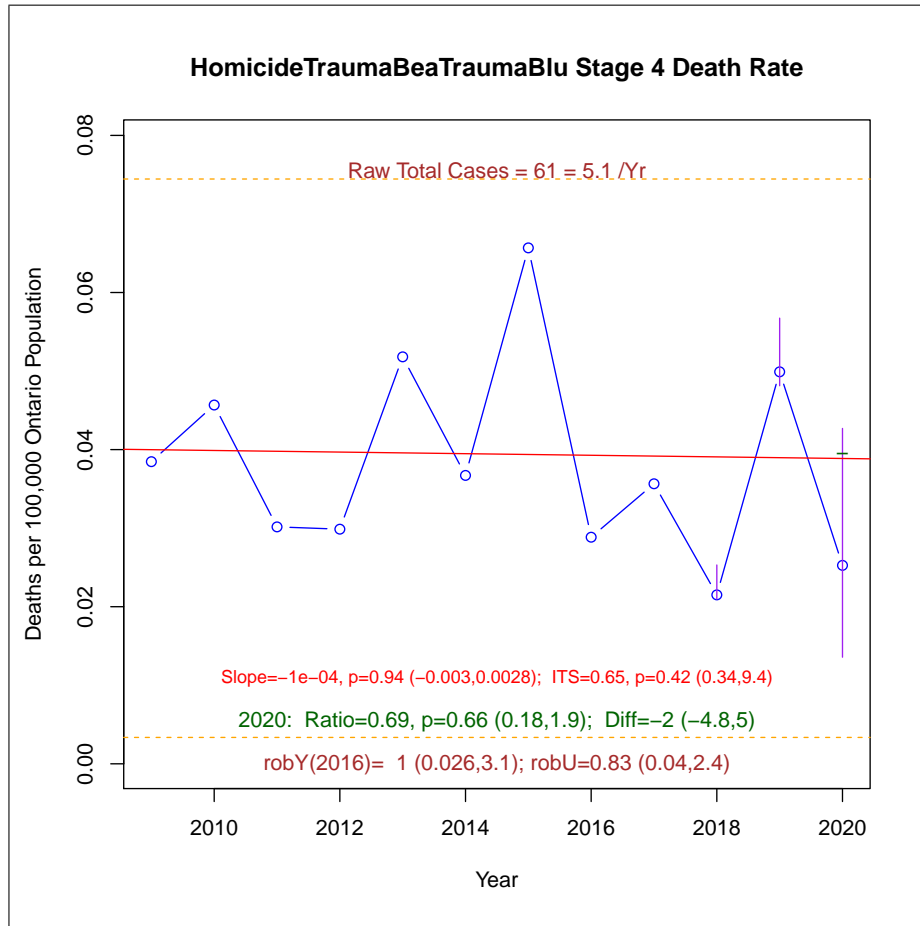
6.2. HomicideTraumaBeaTraumaBlu – Stage 2 (June 12 – July 16):



6.3. HomicideTraumaBeaTraumaBlu – Stage 3 (July 17 – November 7):



6.4. HomicideTraumaBeaTraumaBlu – Stage 4 (November 8 – December 31):

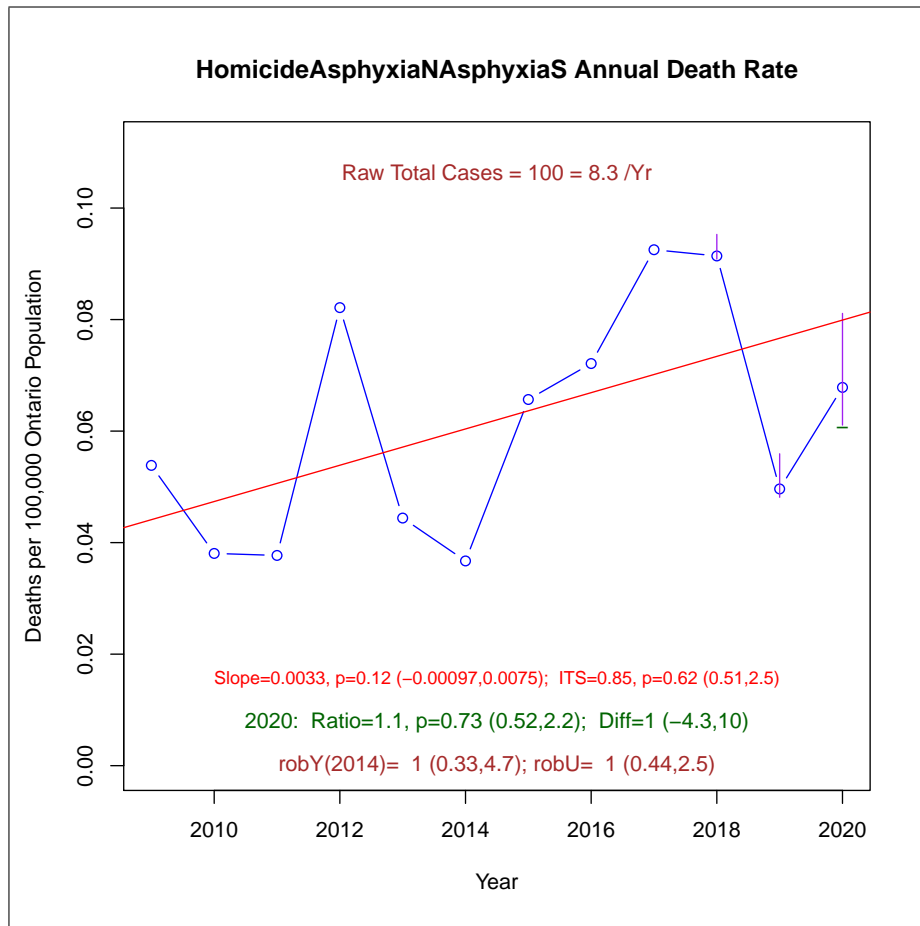


7. HomicideAsphyxiaNAsphyxiaS Category:

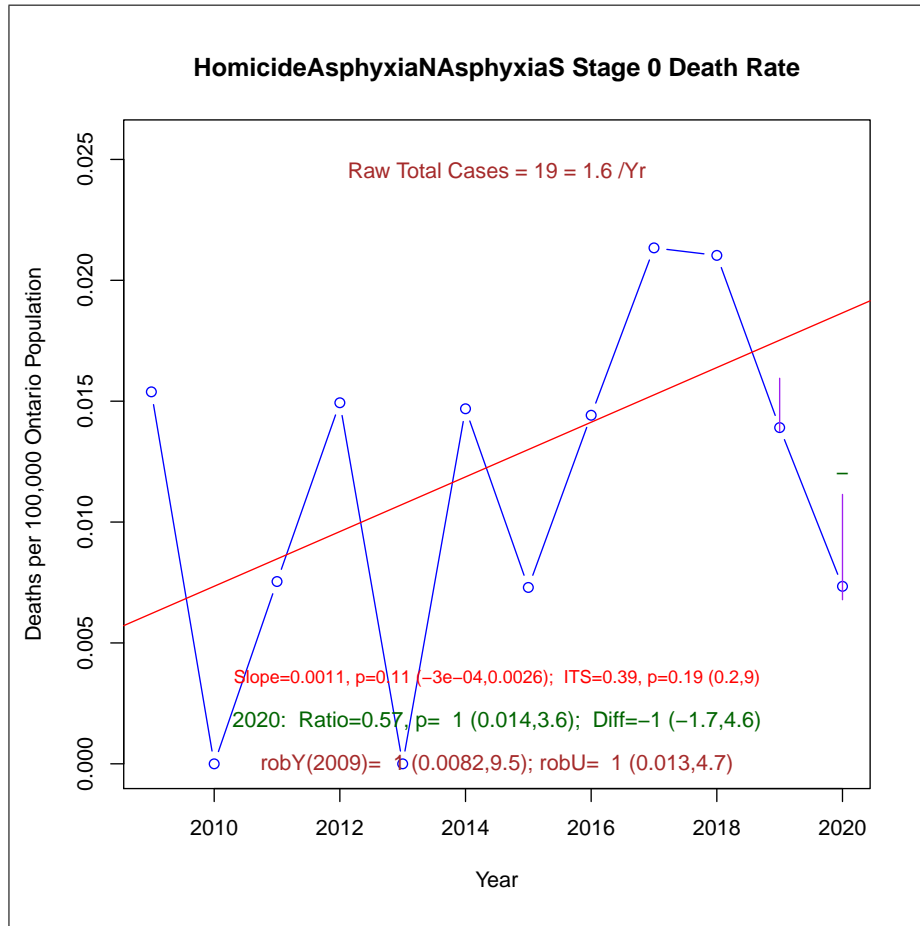
This category is defined by:
manner = “Homicide”; and factor = “Asphyxia - Neck Compression” or “Asphyxia - Strangulation (ligature, manual)”.

The corresponding correction multiplier is: $2 / 2790 = 0.00072$.

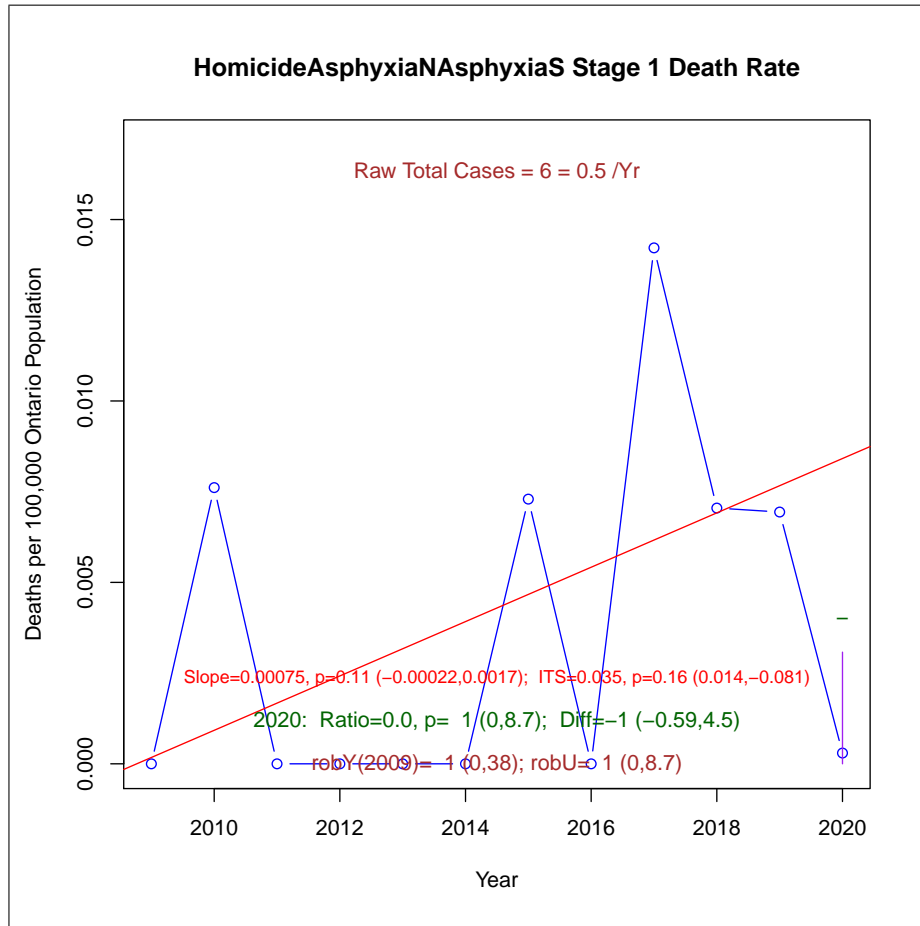
We begin with the Totals for entire years:



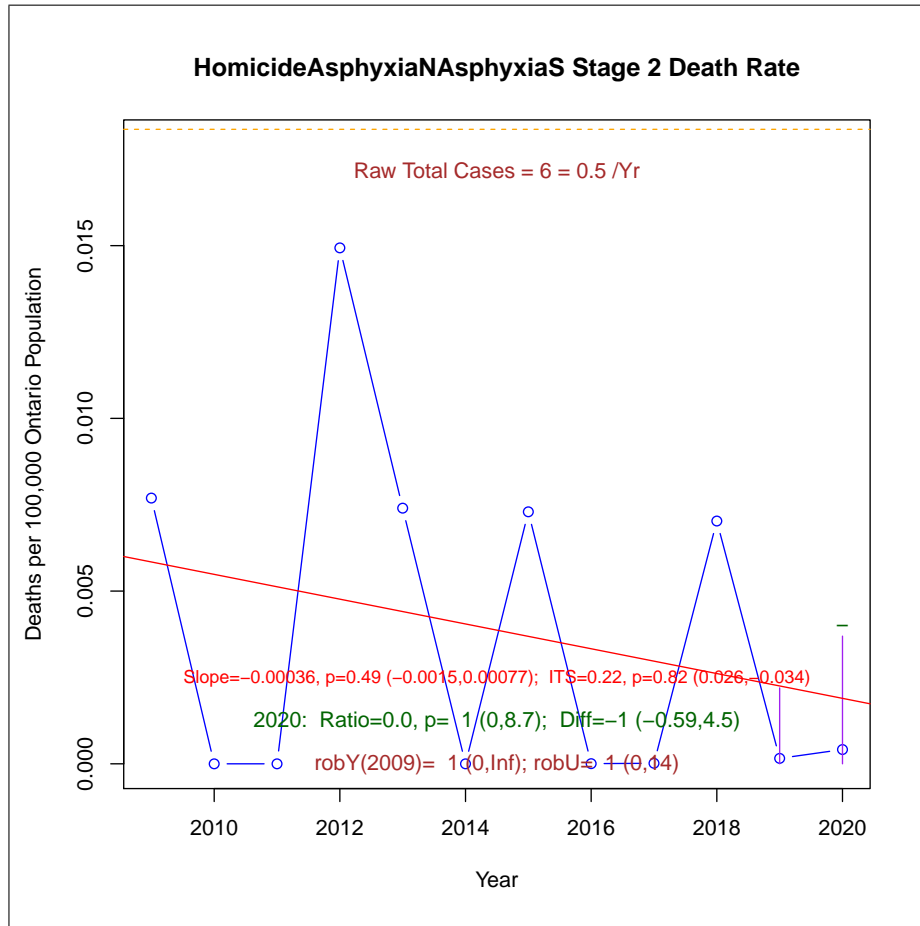
7.0. HomicideAsphyxiaNAsphyxiaS – Stage 0 (March 17 – May 18):



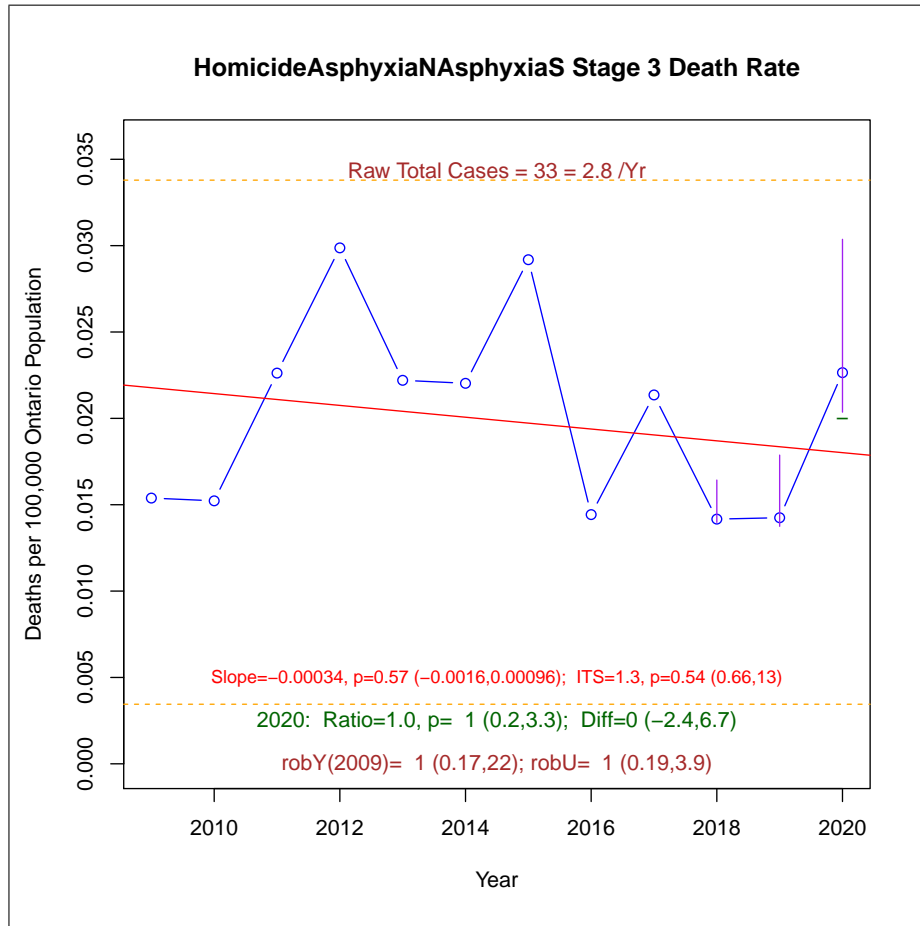
7.1. HomicideAsphyxiaNAsphyxiaS – Stage 1 (May 19 – June 11):



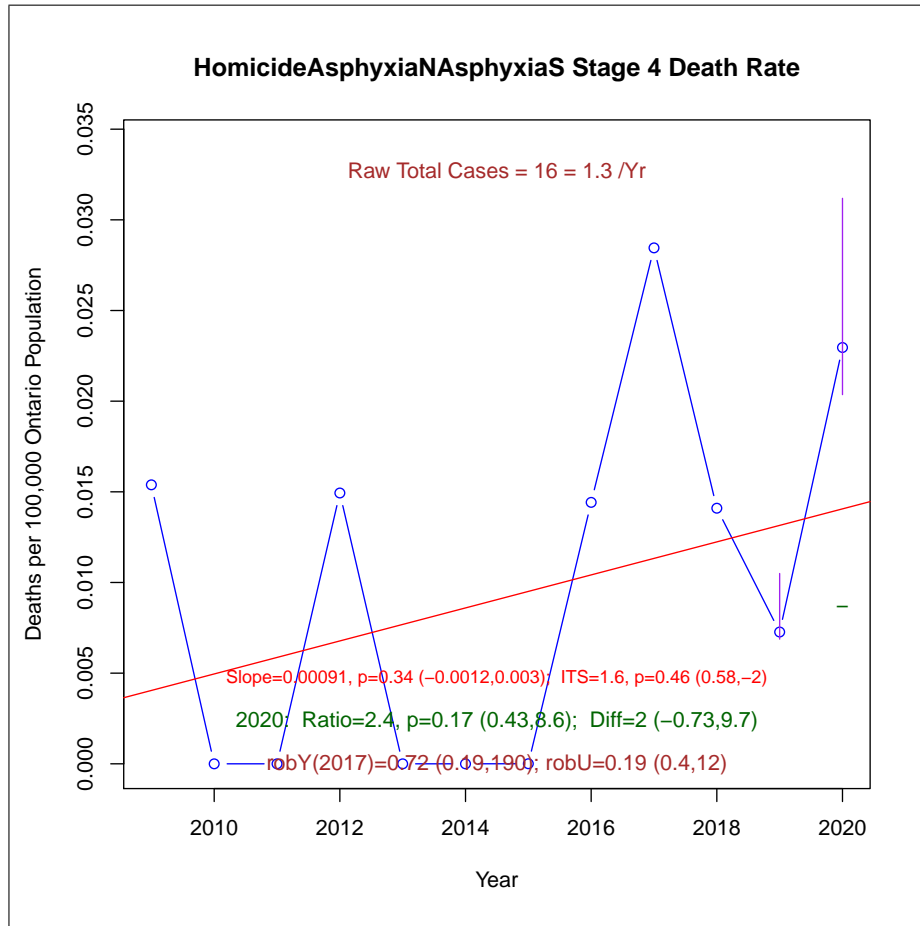
7.2. HomicideAsphyxiaNAsphyxiaS – Stage 2 (June 12 – July 16):



7.3. HomicideAsphyxiaNAsphyxiaS – Stage 3 (July 17 – November 7):



7.4. HomicideAsphyxiaNAsphyxiaS – Stage 4 (November 8 – December 31):

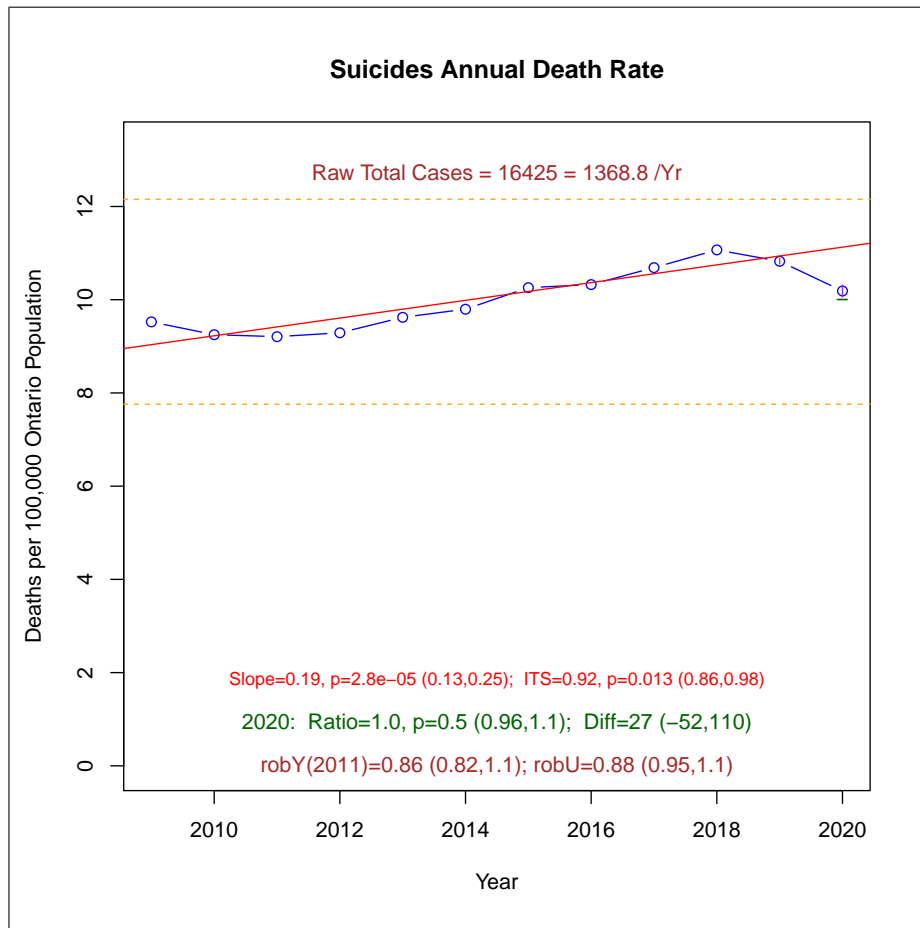


8. SuicideAny Category:

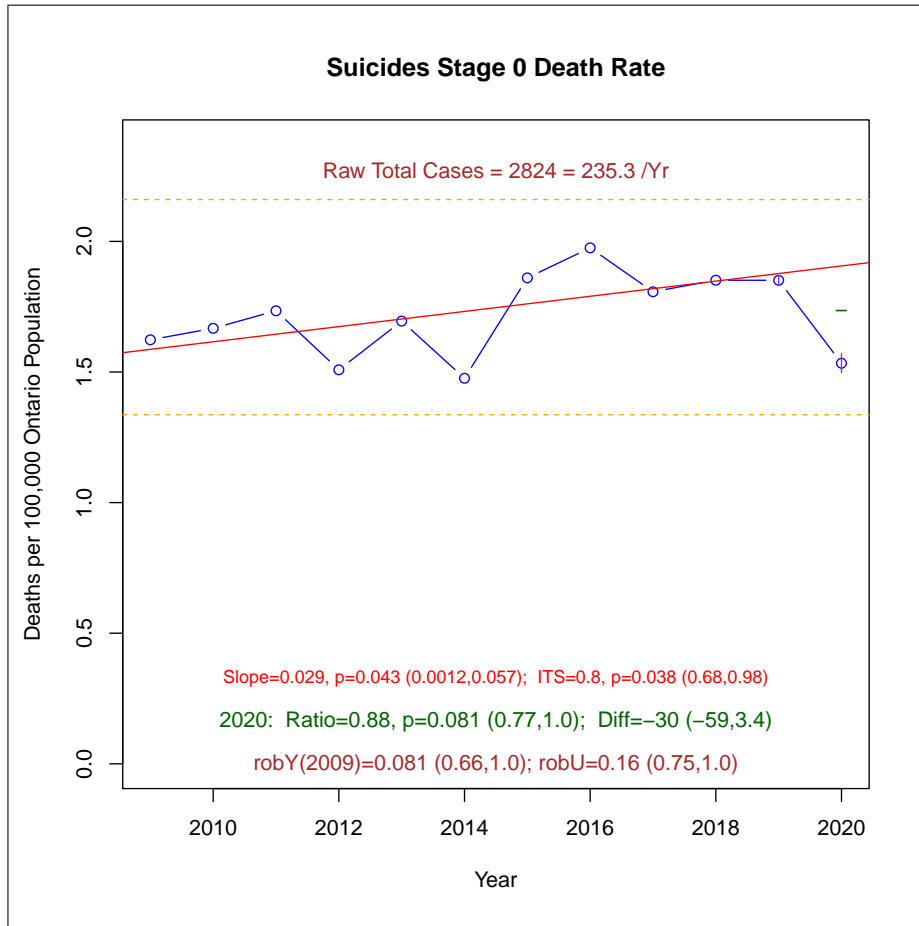
This category is defined by:
manner = "Suicide"; and factor = any.

The corresponding correction multiplier is: $195 / 2790 = 0.06989$.

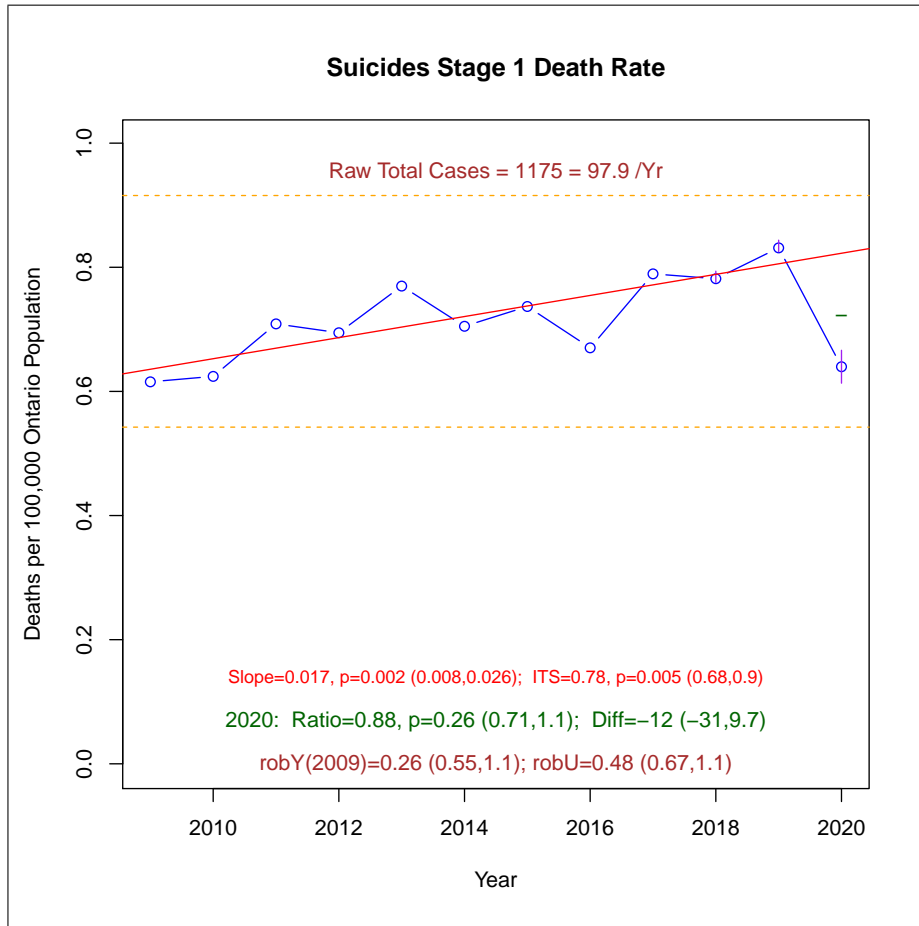
We begin with the Totals for entire years:



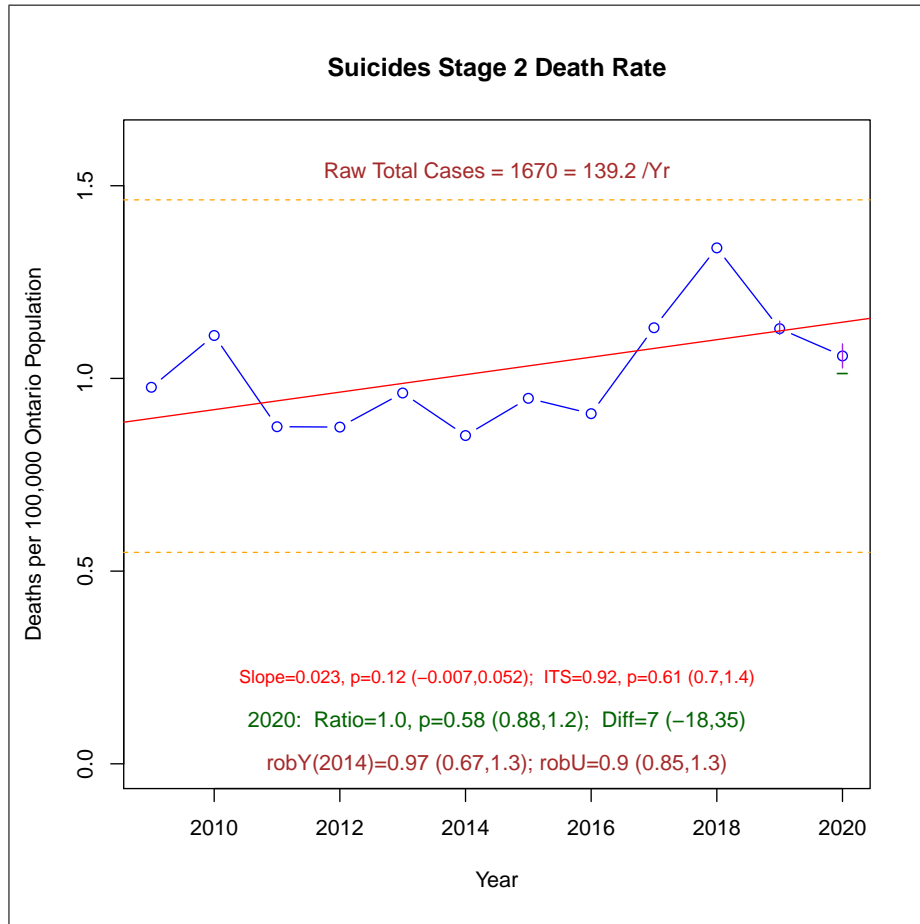
8.0. SuicideAny – Stage 0 (March 17 – May 18):



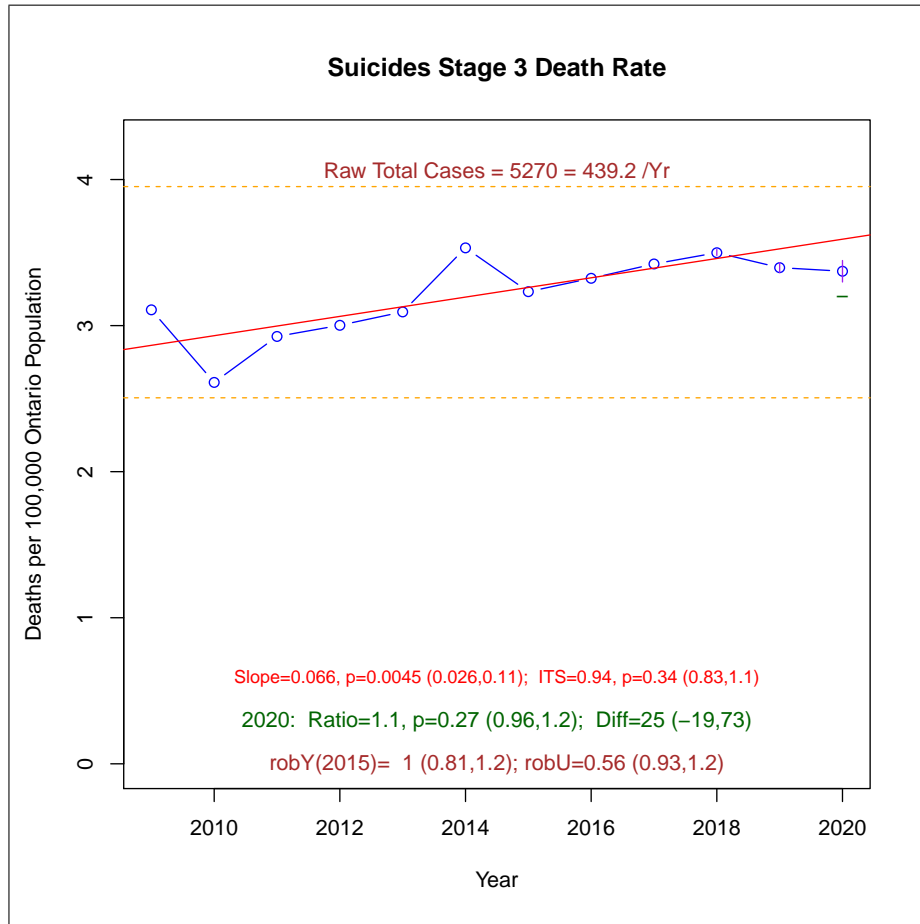
8.1. SuicideAny – Stage 1 (May 19 – June 11):



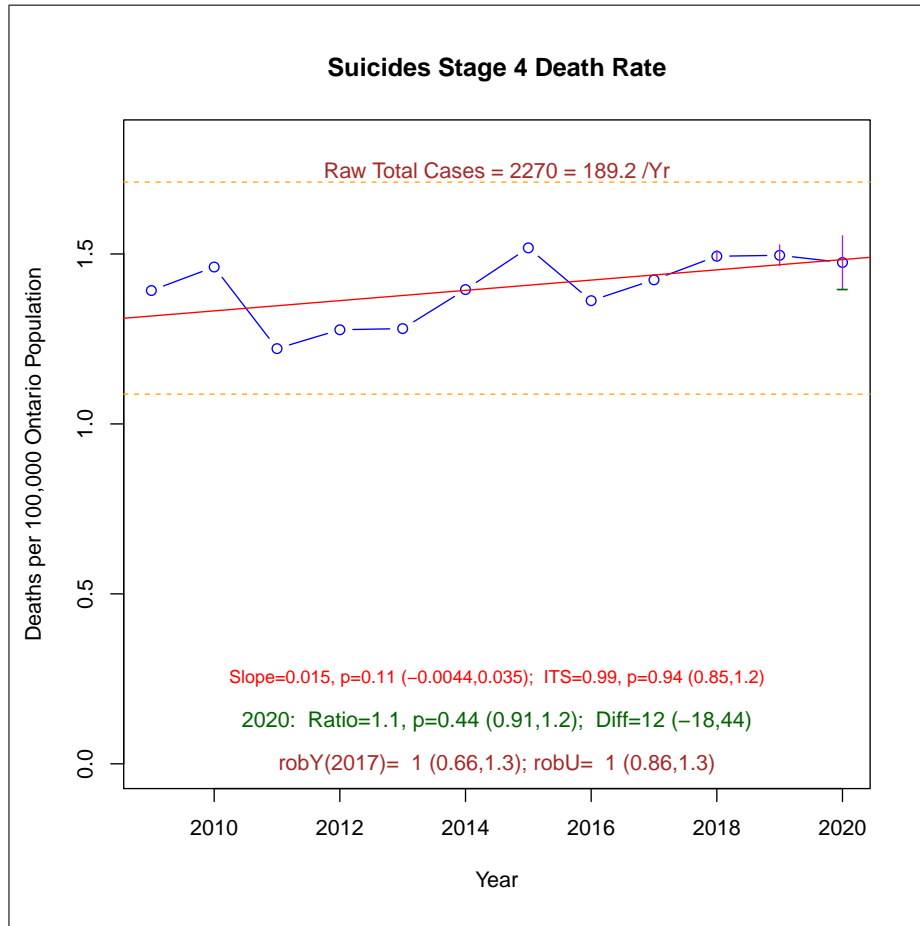
8.2. SuicideAny – Stage 2 (June 12 – July 16):



8.3. SuicideAny – Stage 3 (July 17 – November 7):



8.4. SuicideAny – Stage 4 (November 8 – December 31):



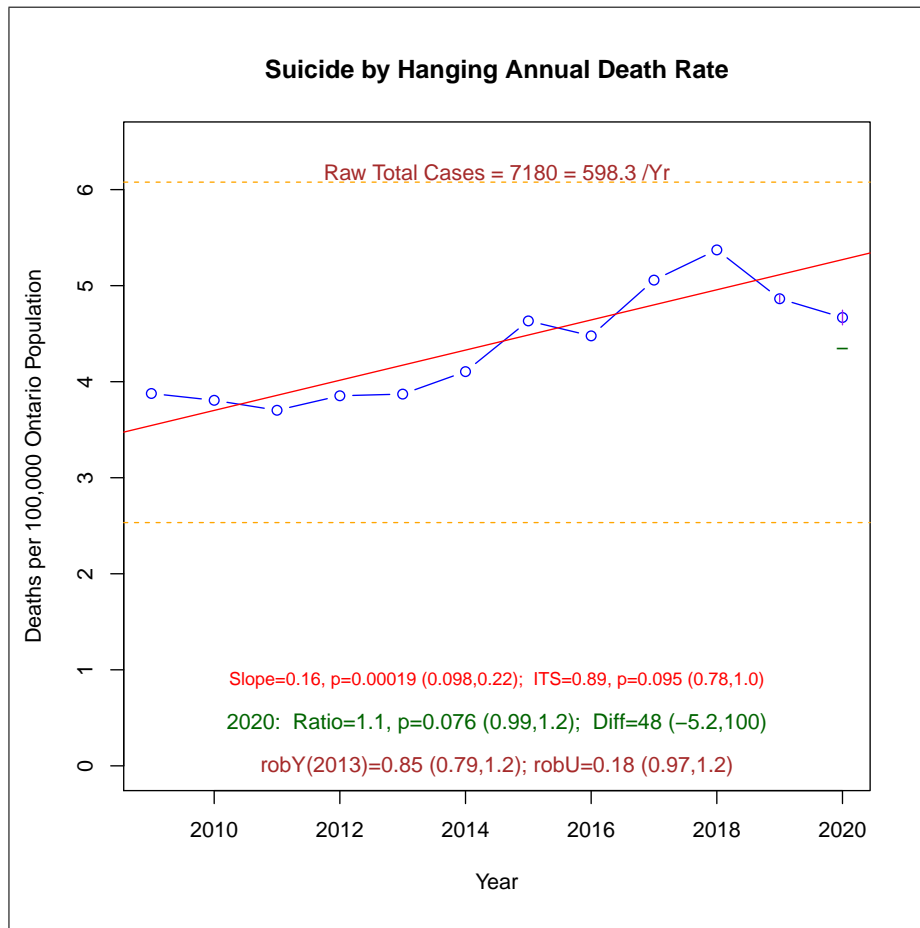
9. SuicideAsphyxiaHangi Category:

This category is defined by:

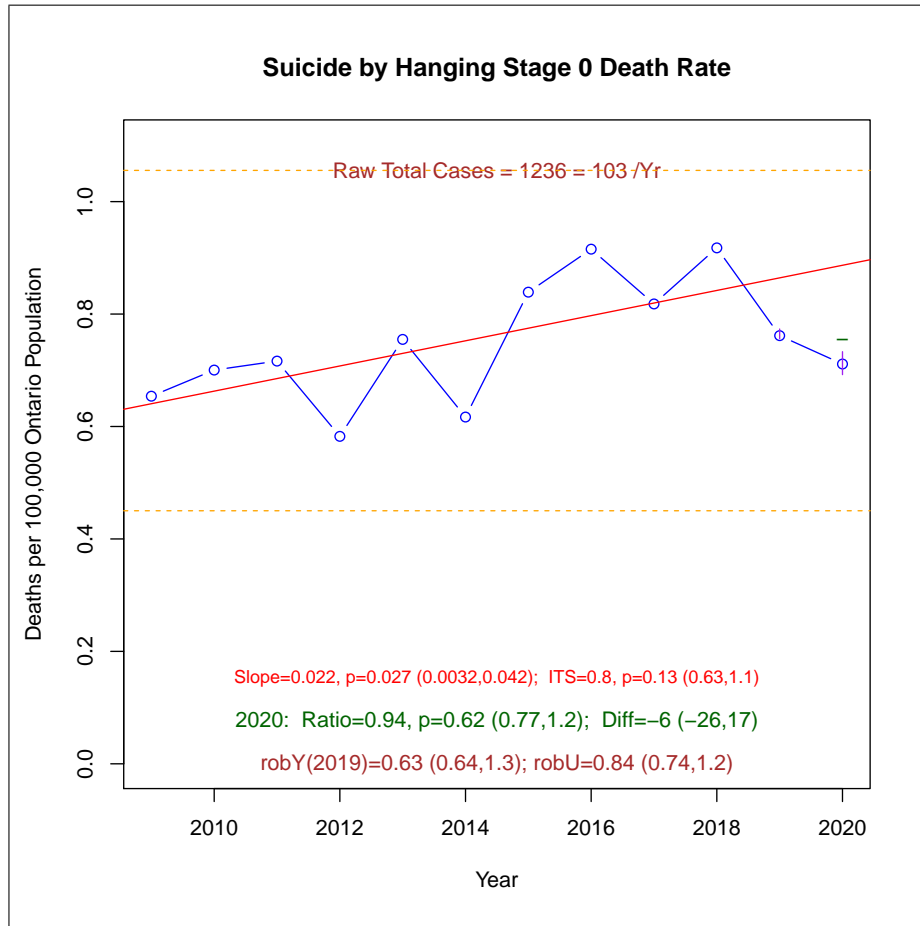
manner = "Suicide"; and factor = "Asphyxia - Hanging".

The corresponding correction multiplier is: $68 / 2790 = 0.02437$.

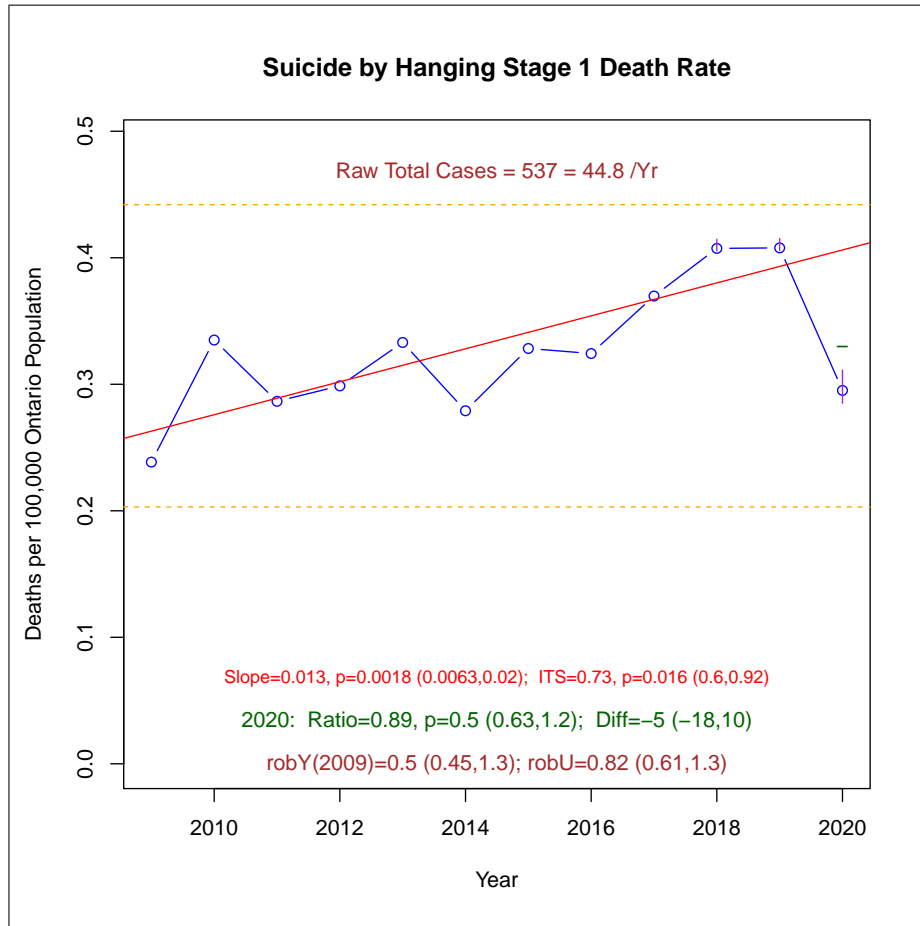
We begin with the Totals for entire years:



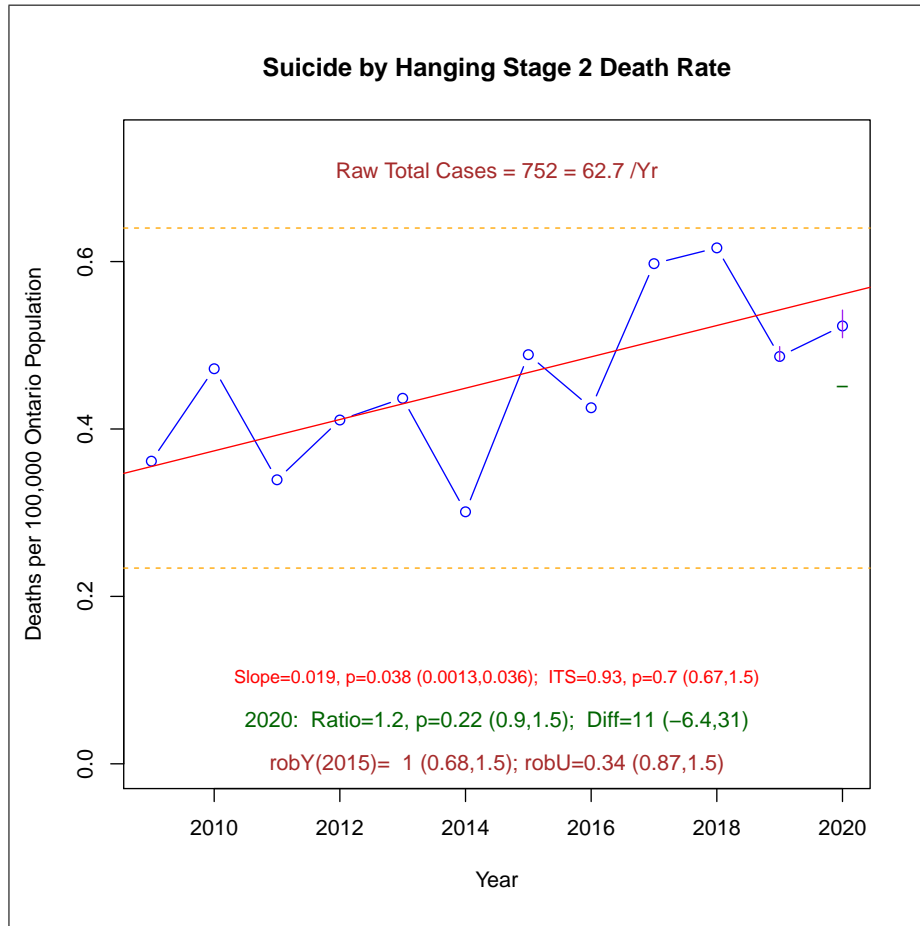
9.0. SuicideAsphyxiaHangi – Stage 0 (March 17 – May 18):



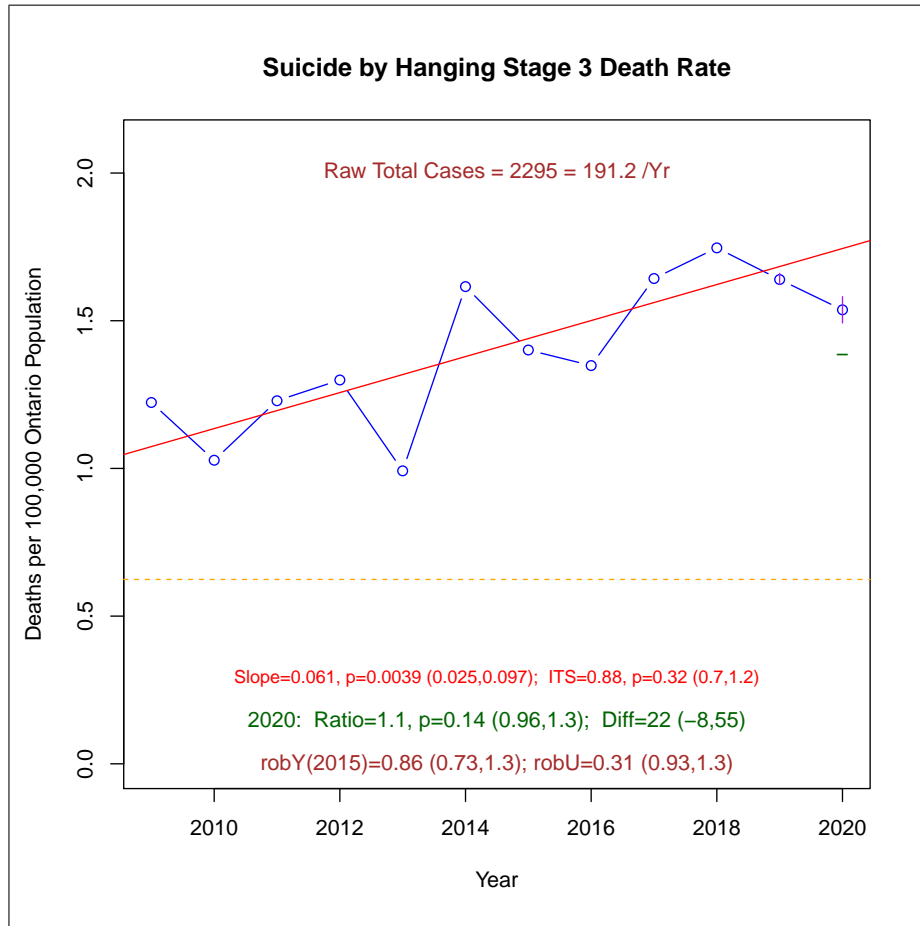
9.1. SuicideAsphyxiaHangi – Stage 1 (May 19 – June 11):



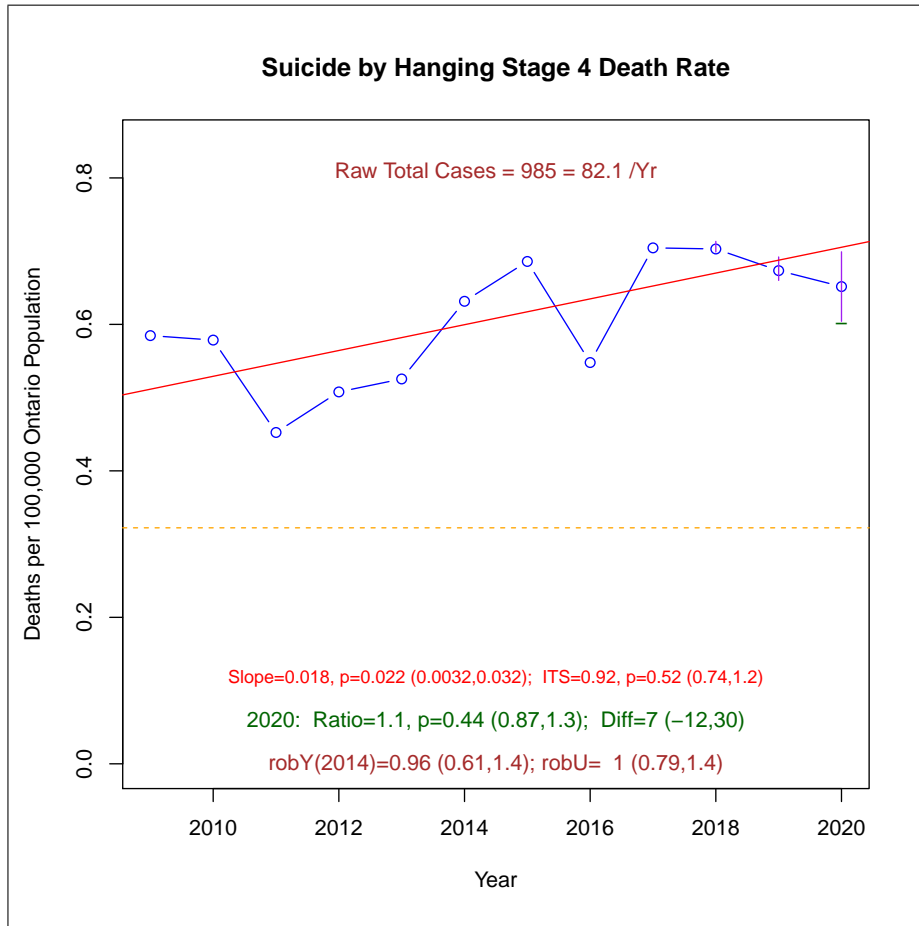
9.2. SuicideAsphyxiaHangi – Stage 2 (June 12 – July 16):



9.3. SuicideAsphyxiaHangi – Stage 3 (July 17 – November 7):



9.4. SuicideAsphyxiaHangi – Stage 4 (November 8 – December 31):



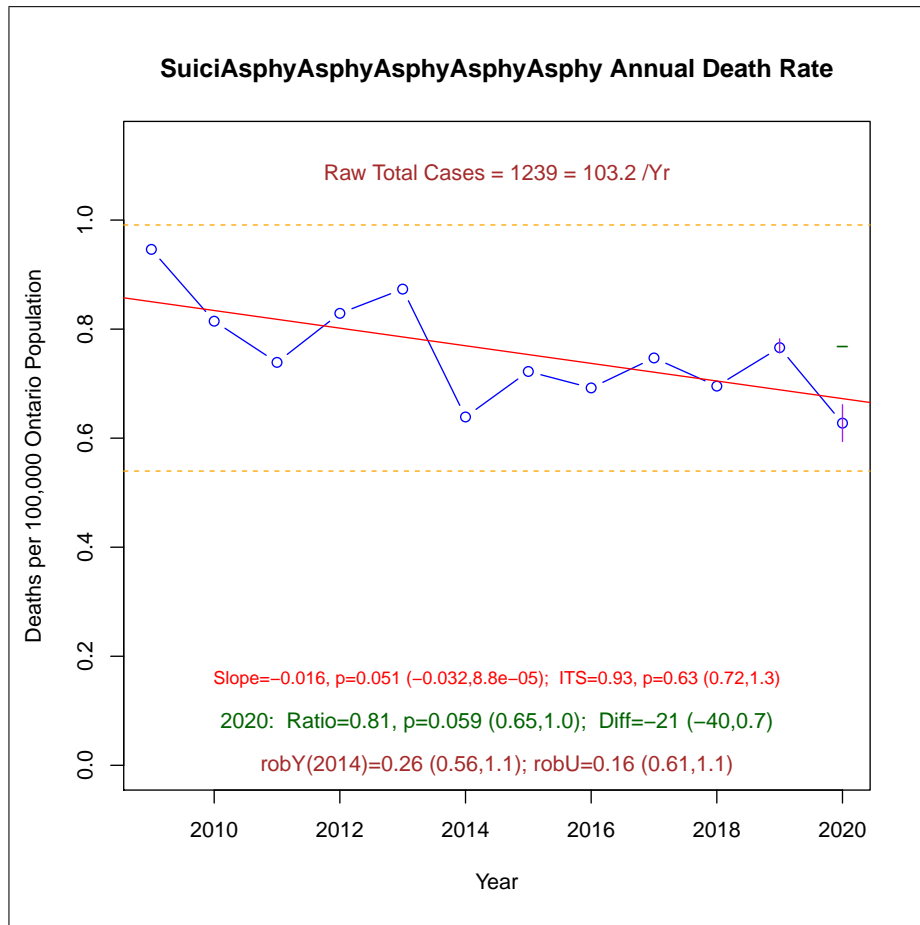
10. SuiciAsphyAsphyAsphyAsphyAsphy Category:

This category is defined by:

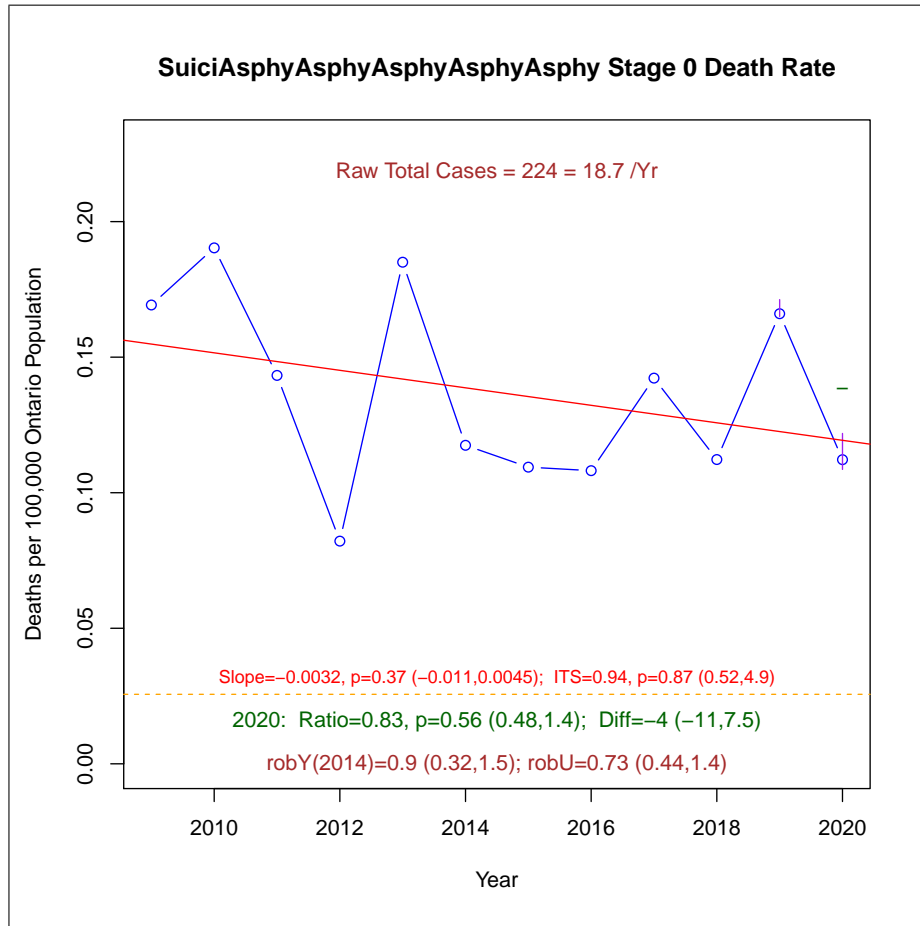
manner = “Suicide”; and factor = “Asphyxia - Airway Obstruction” or “Asphyxia - Environmental - Anoxic environment” or “Asphyxia - Environmental - CO, vehicle exhaust, furnace fumes” or “Asphyxia - Neck Compression” or “Asphyxia - Strangulation (ligature, manual)”.

The corresponding correction multiplier is: $13 / 2790 = 0.00466$.

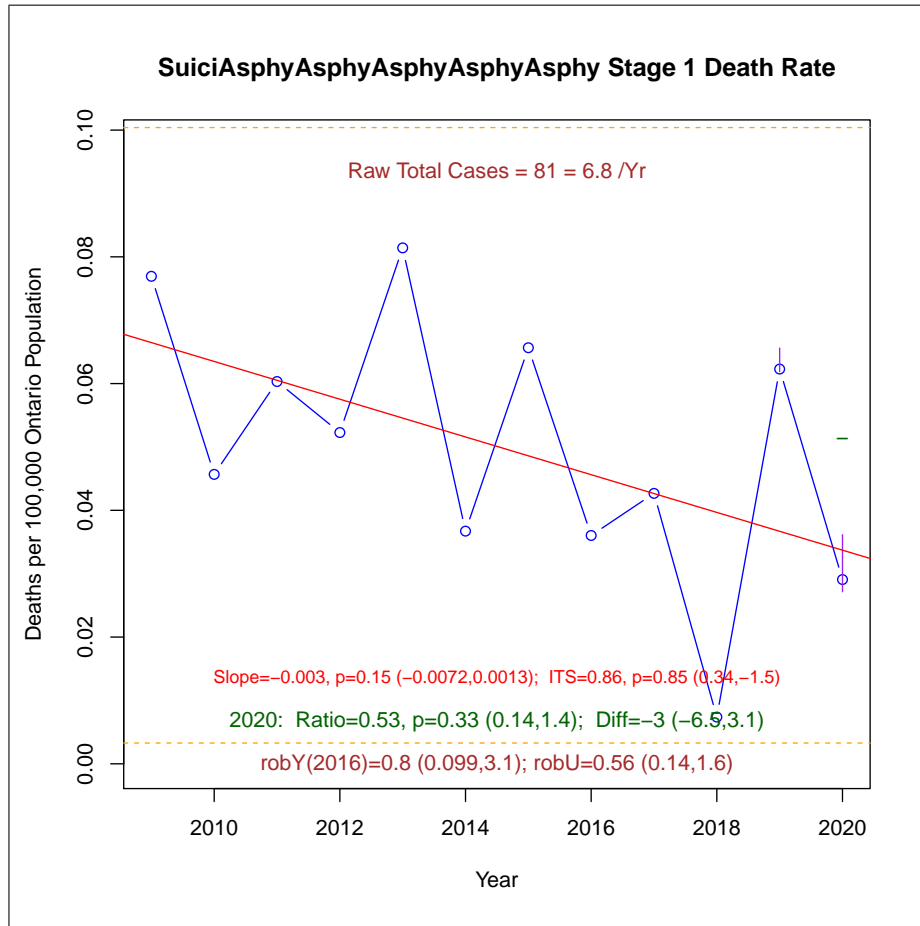
We begin with the Totals for entire years:



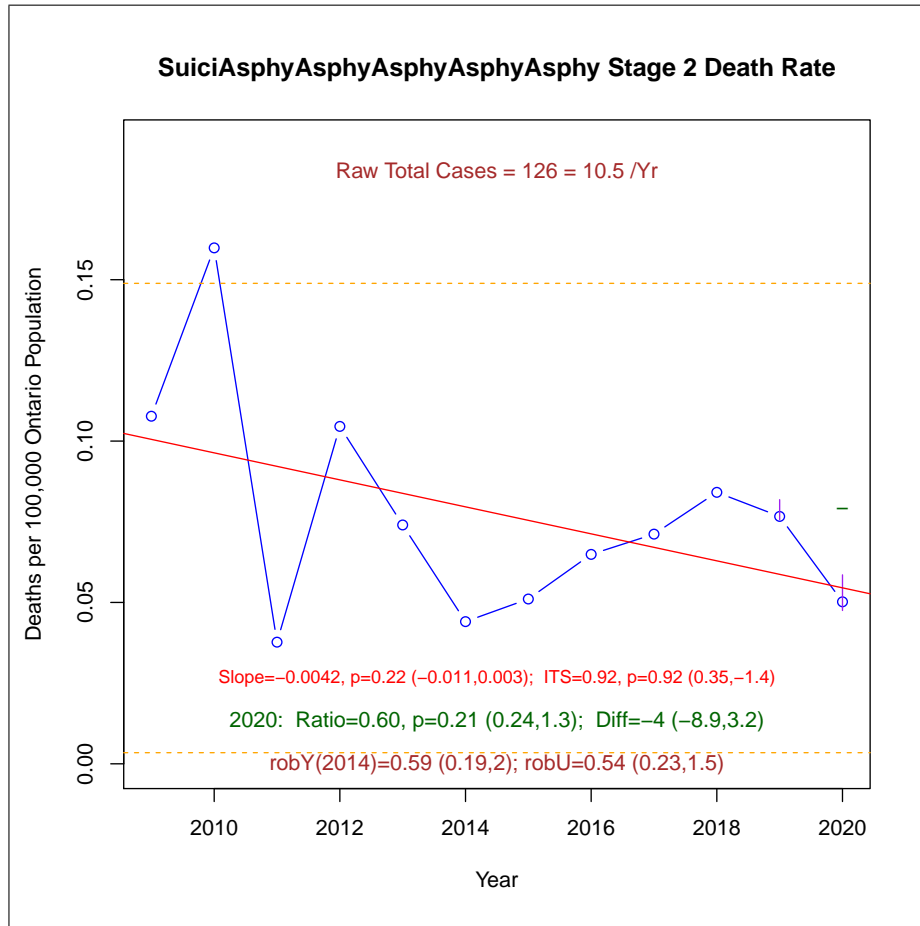
10.0. SuiciAsphyAsphyAsphyAsphyAsphy – Stage 0 (March 17 – May 18):



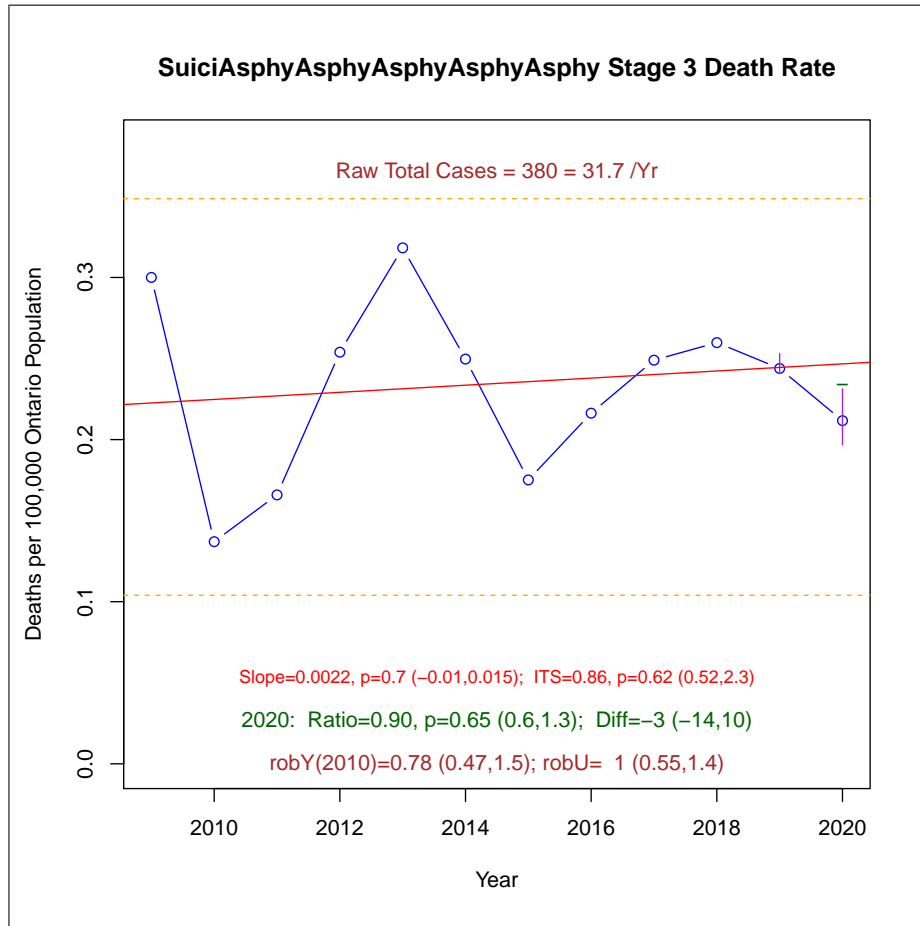
10.1. SuiciAsphyAsphyAsphyAsphyAsphy – Stage 1 (May 19 – June 11):



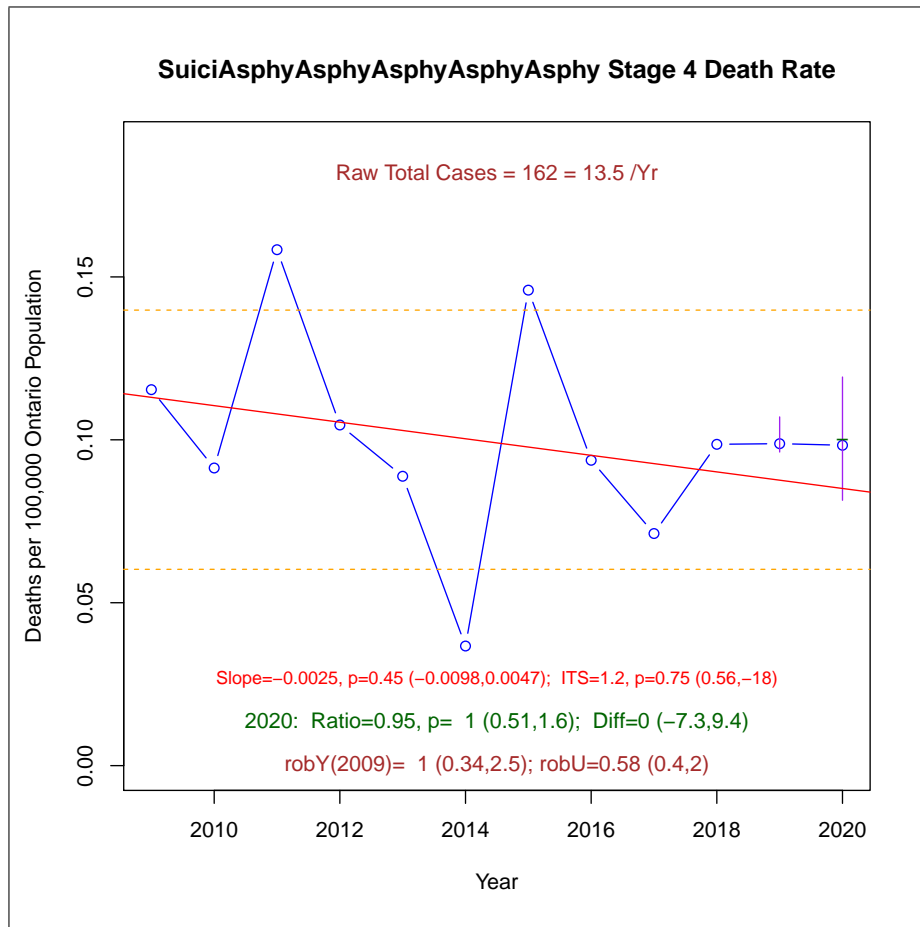
10.2. SuiciAsphyAsphyAsphyAsphyAsphy – Stage 2 (June 12 – July 16):



10.3. SuiciAsphyAsphyAsphyAsphyAsphy – Stage 3 (July 17 – November 7):



10.4. SuiciAsphyAsphyAsphyAsphyAsphy – Stage 4 (November 8 – December 31):



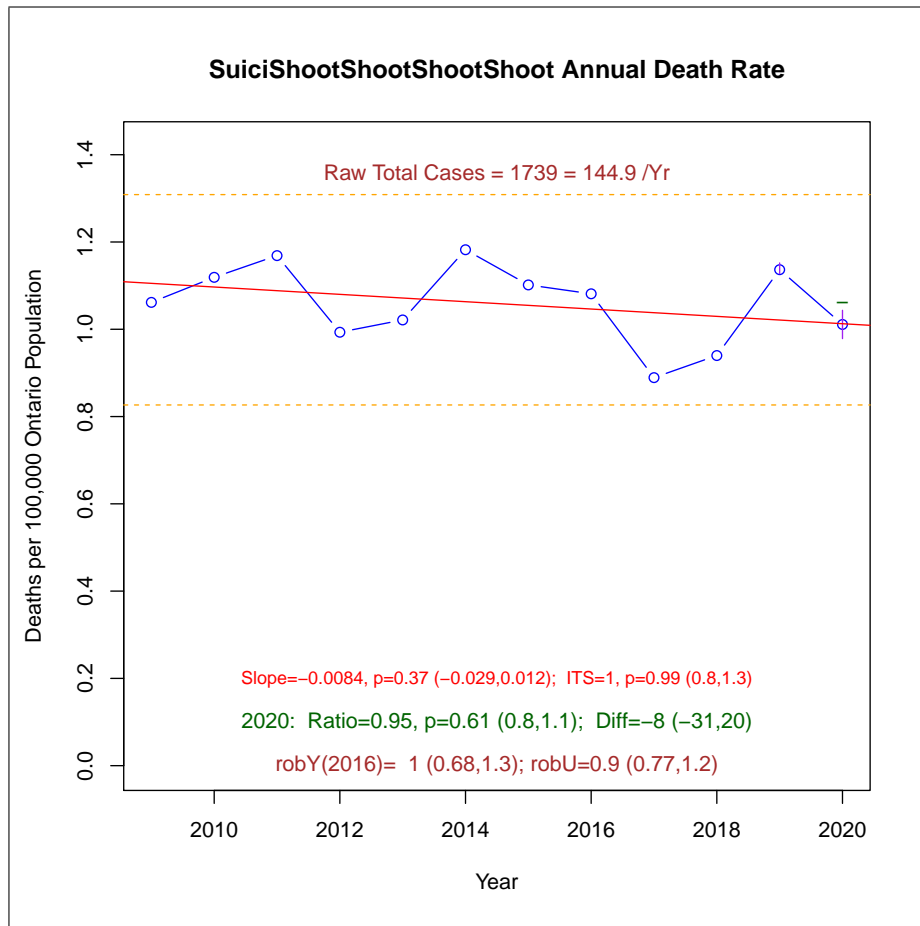
11. SuiciShootShootShootShoot Category:

This category is defined by:

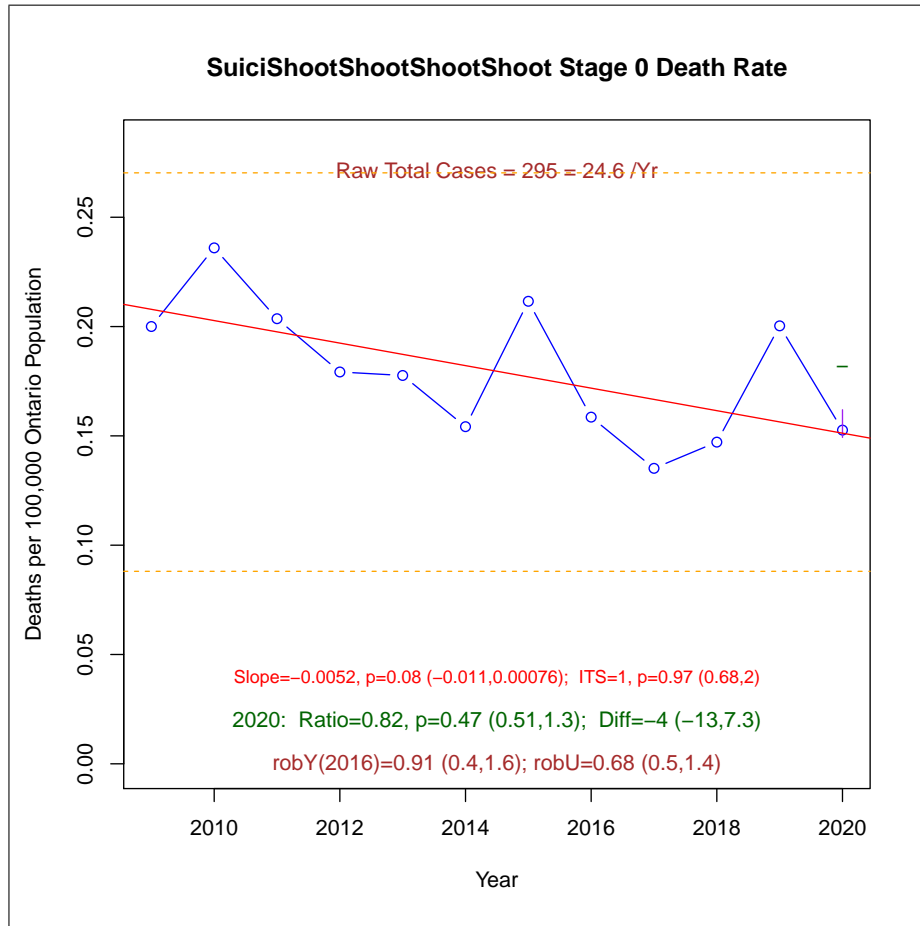
manner = “Suicide”; and factor = “Shooting - Handgun” or “Shooting - Rifle” or “Shooting - Shotgun” or “Shooting - Weapon not specified/other”.

The corresponding correction multiplier is: $12 / 2790 = 0.0043$.

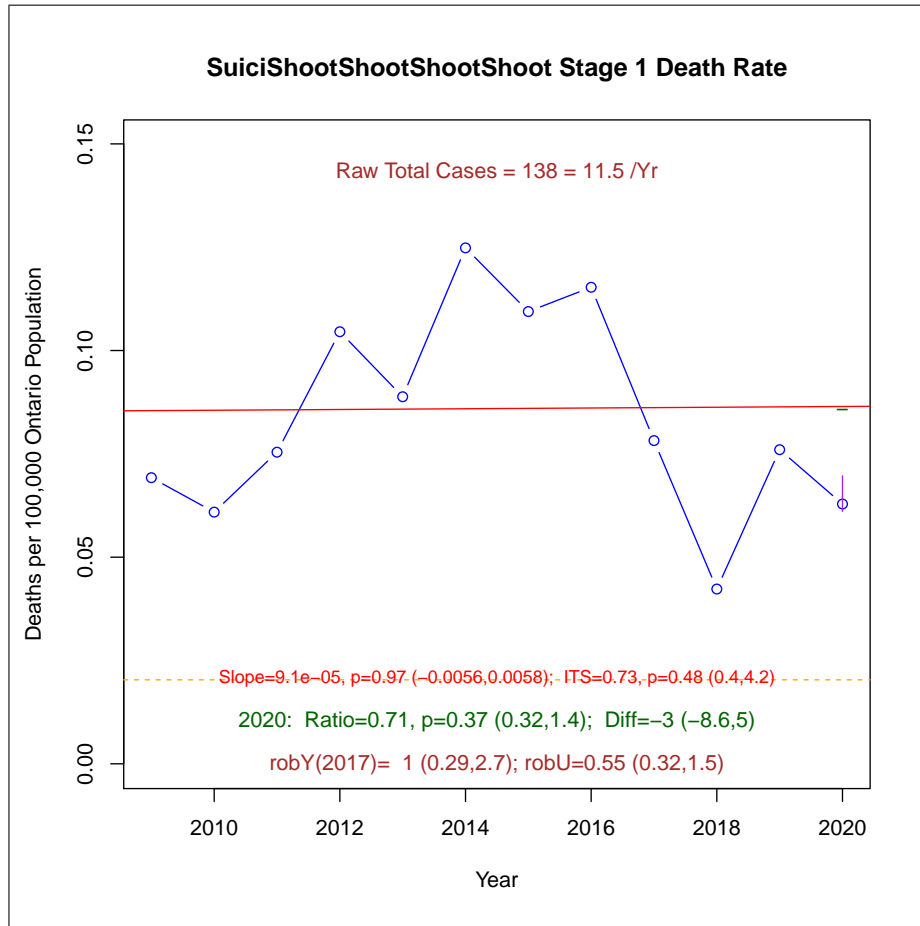
We begin with the Totals for entire years:



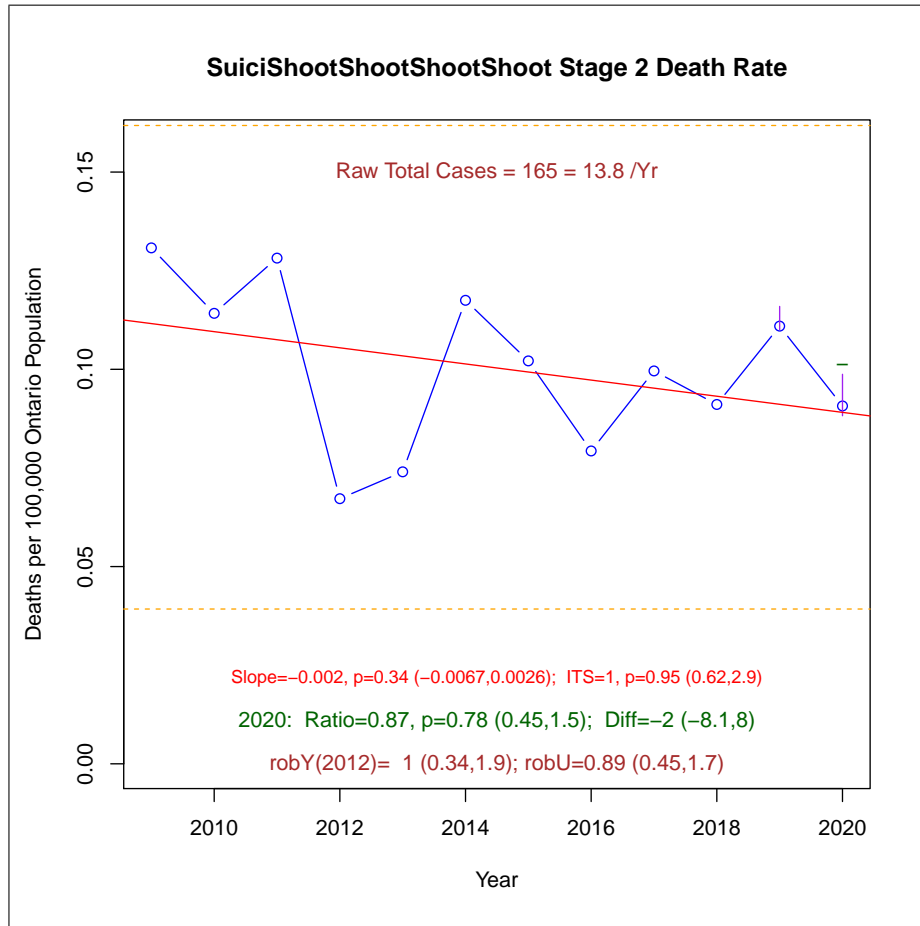
11.0. SuiciShootShootShootShoot – Stage 0 (March 17 – May 18):



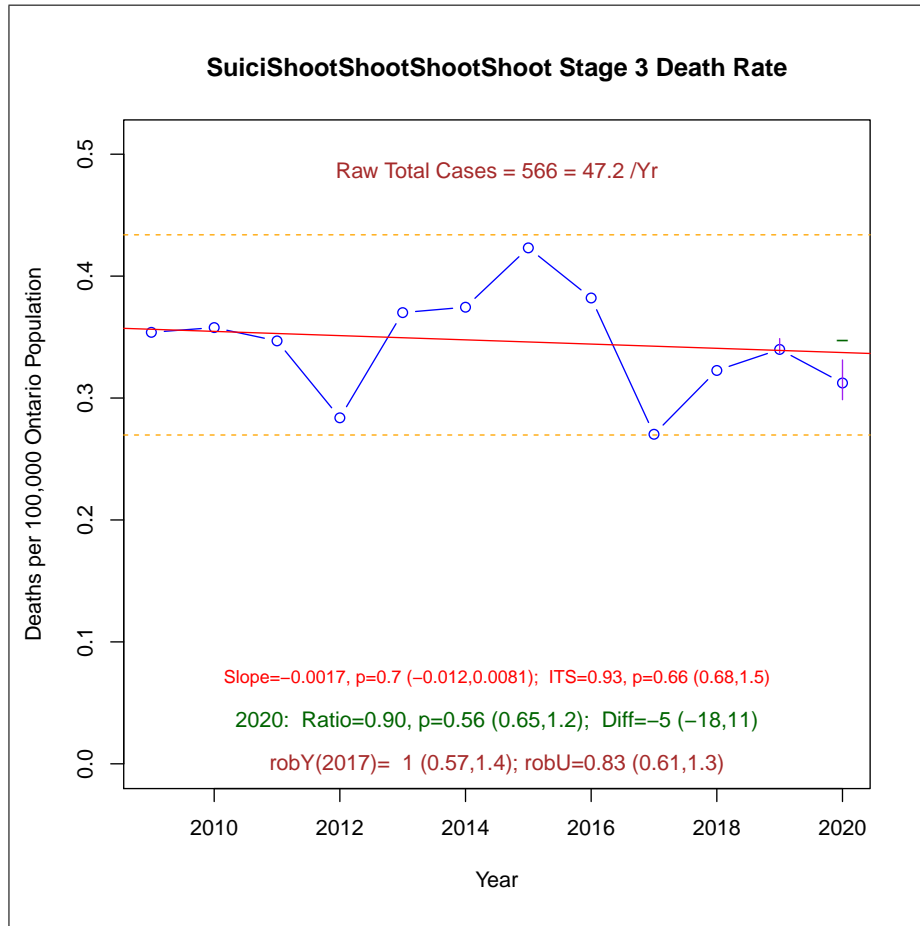
11.1. SuiciShootShootShootShoot – Stage 1 (May 19 – June 11):



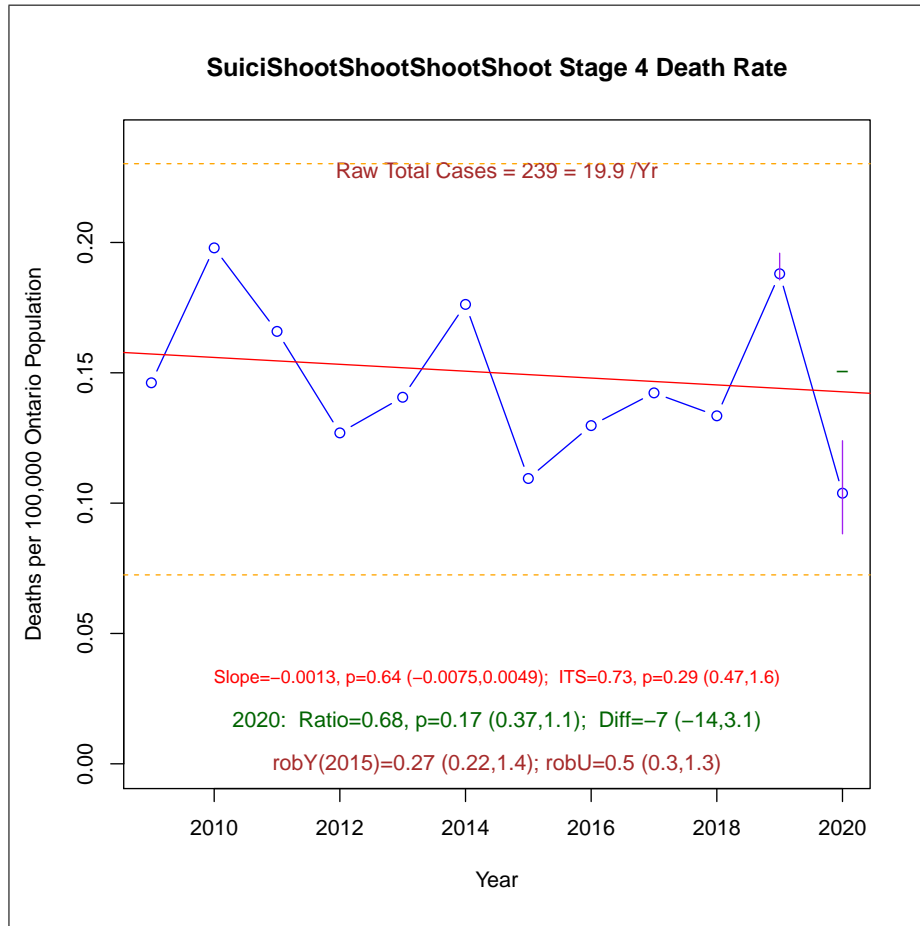
11.2. SuiciShootShootShootShoot – Stage 2 (June 12 – July 16):



11.3. SuiciShootShootShootShoot – Stage 3 (July 17 – November 7):



11.4. SuiciShootShootShootShoot – Stage 4 (November 8 – December 31):



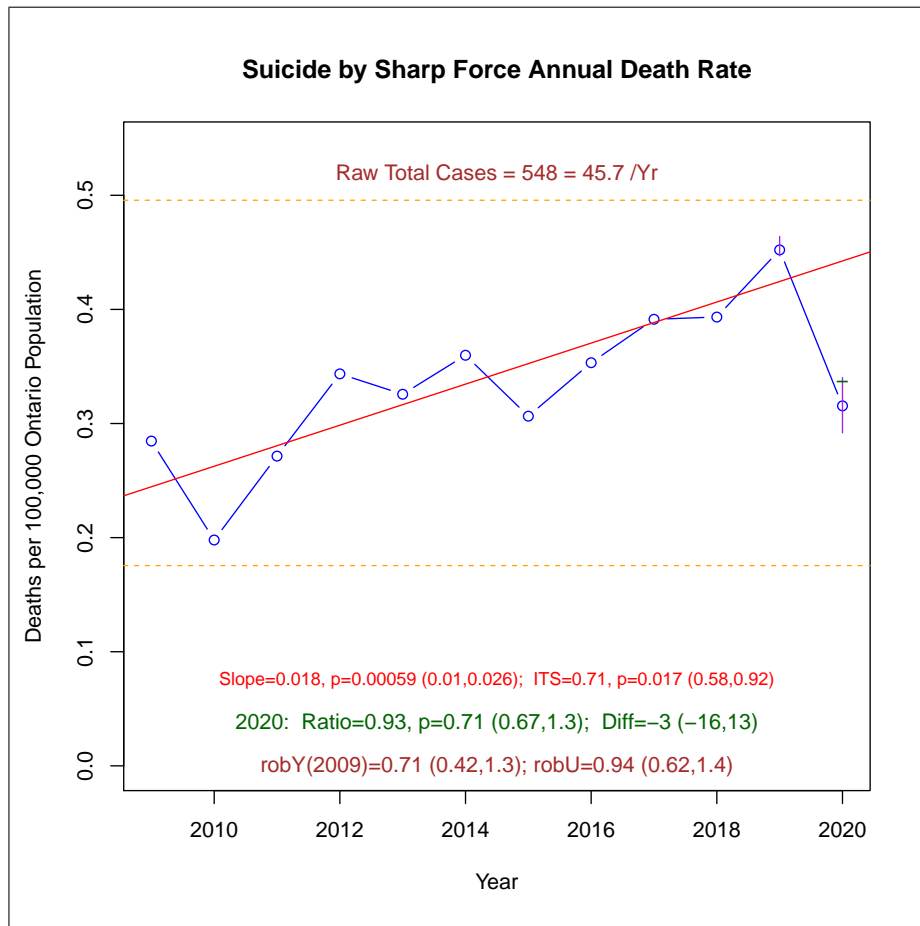
12. SuicideTraumaCutsSta Category:

This category is defined by:

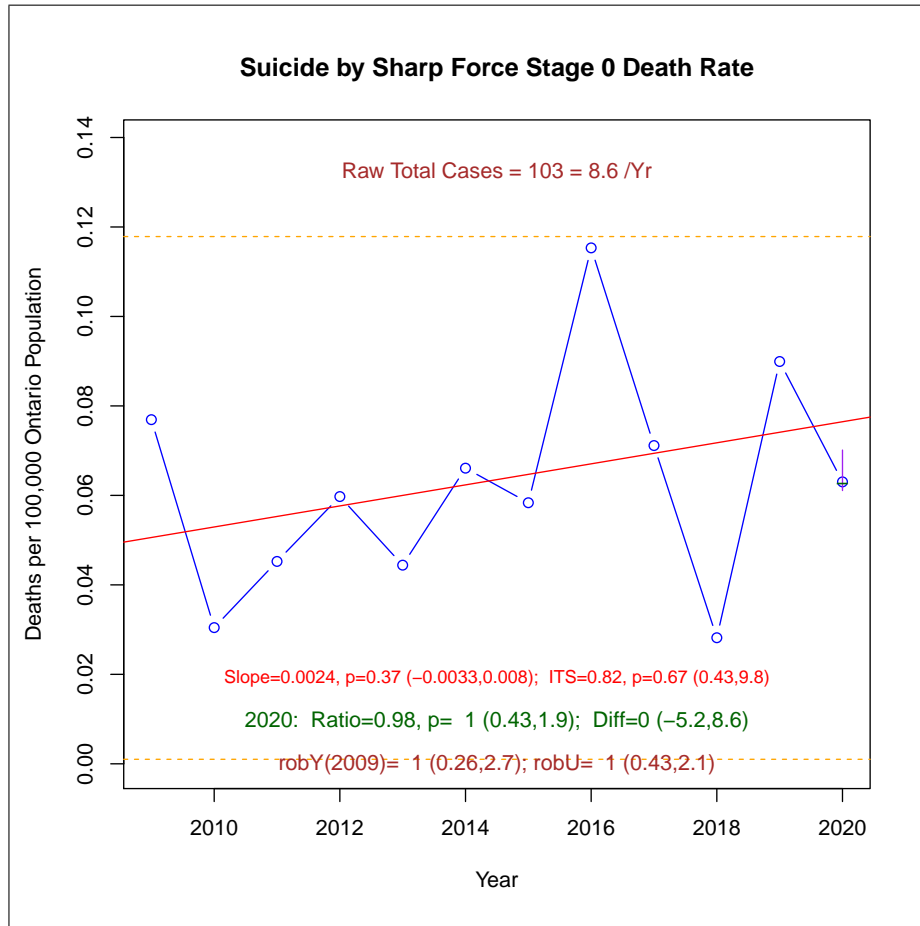
manner = "Suicide"; and factor = "Trauma - Cuts, Stabs".

The corresponding correction multiplier is: $7 / 2790 = 0.00251$.

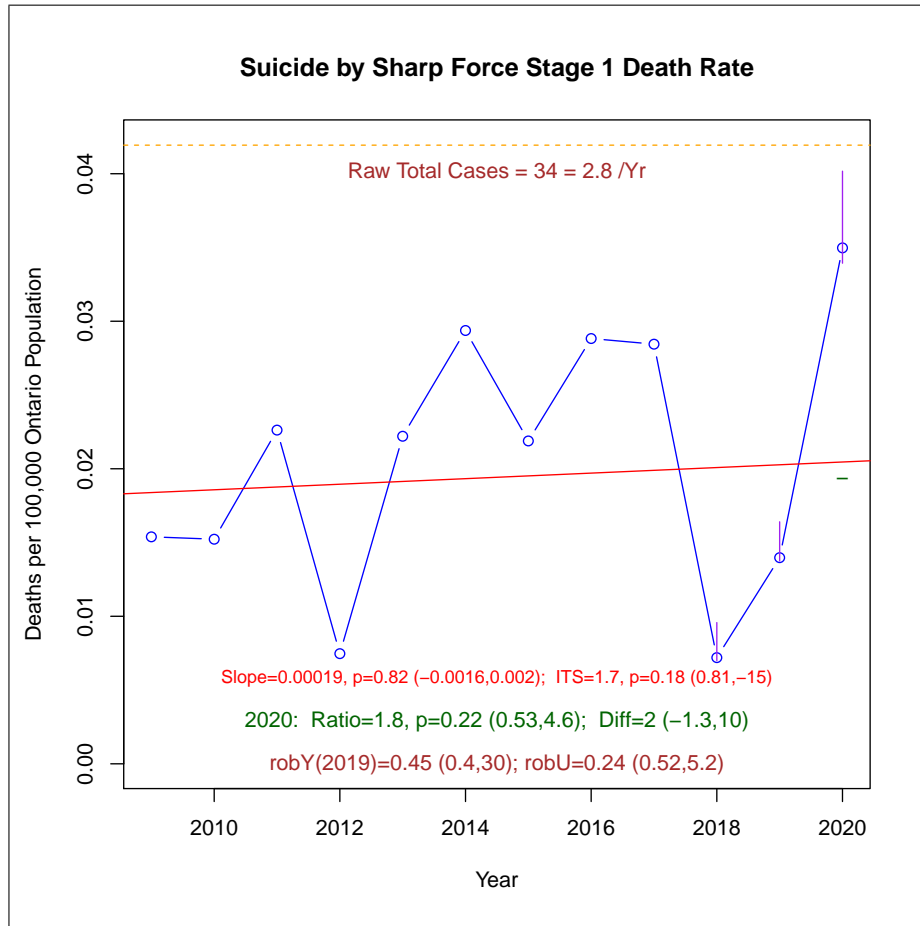
We begin with the Totals for entire years:



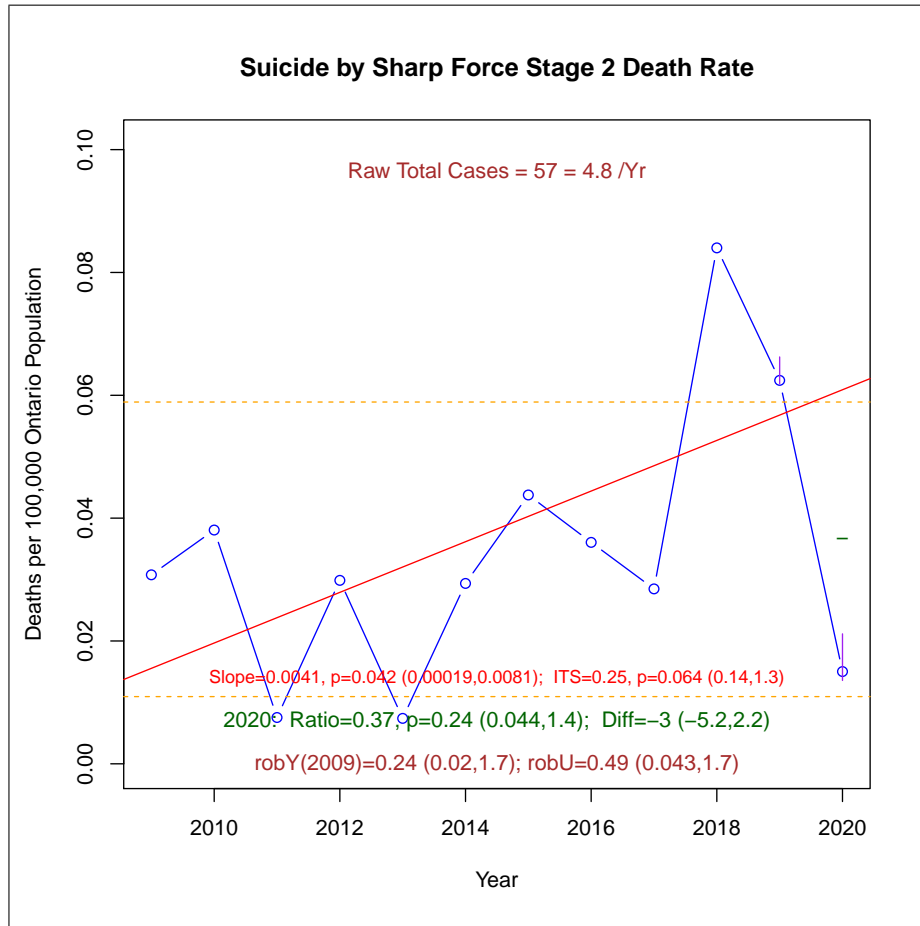
12.0. SuicideTraumaCutsSta – Stage 0 (March 17 – May 18):



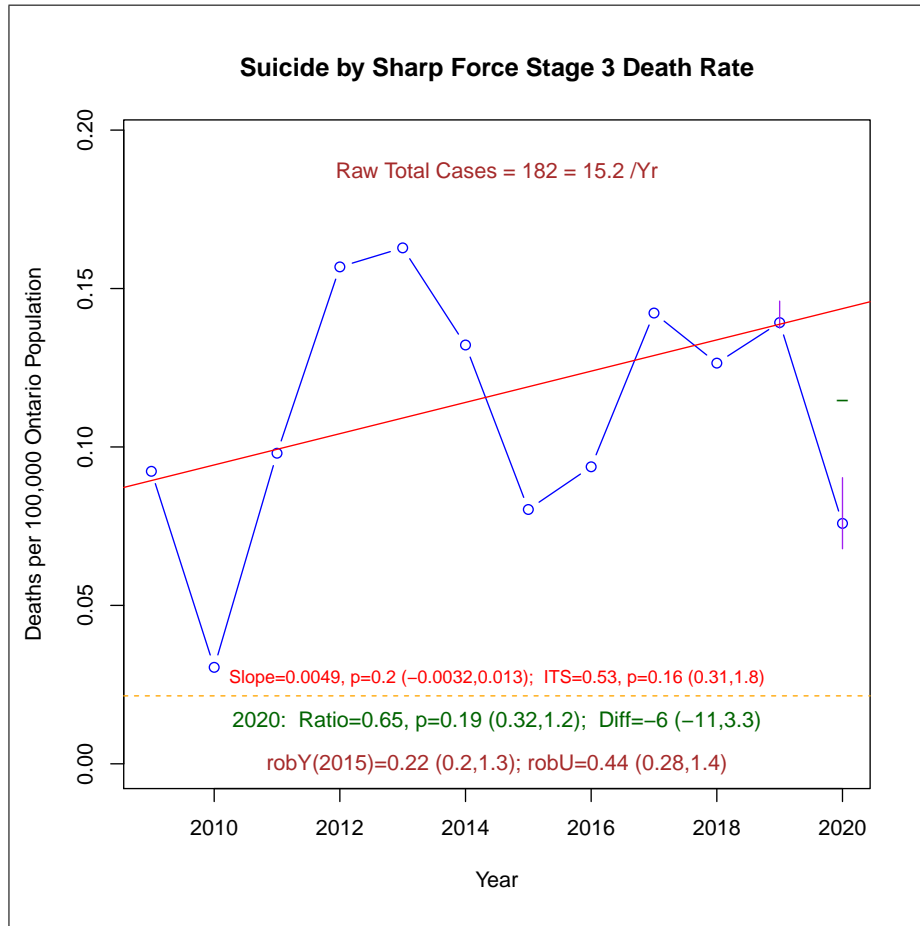
12.1. SuicideTraumaCutsSta – Stage 1 (May 19 – June 11):



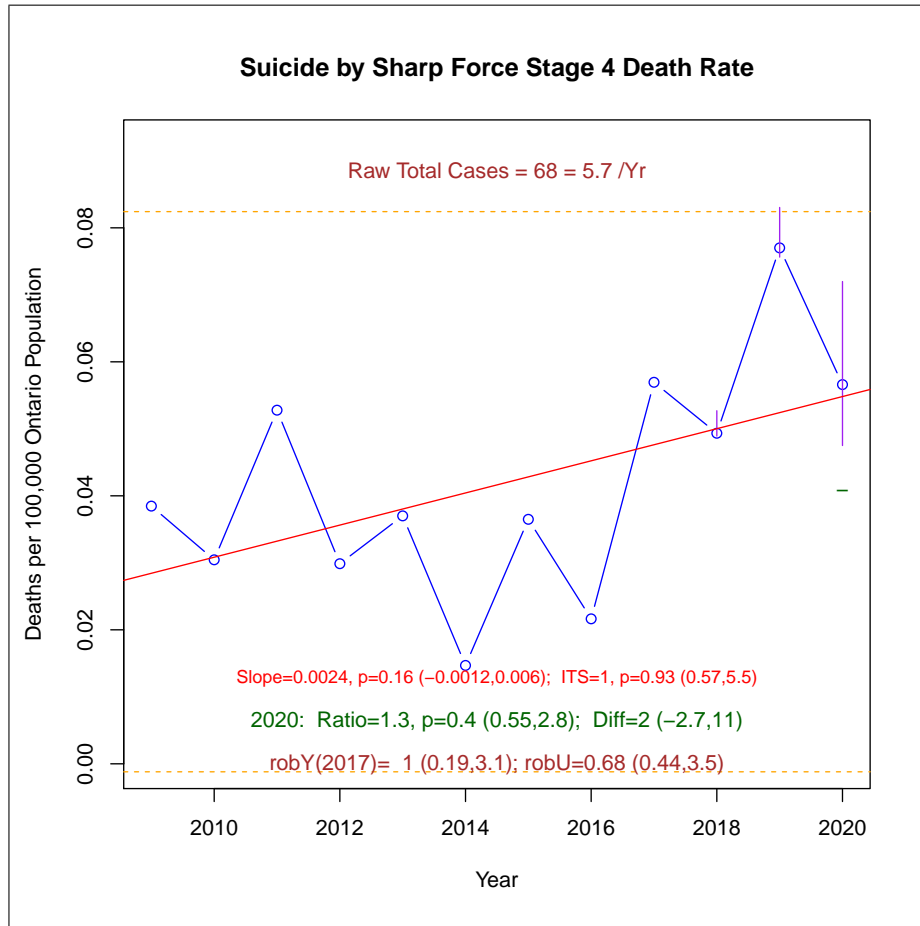
12.2. SuicideTraumaCutsSta – Stage 2 (June 12 – July 16):



12.3. SuicideTraumaCutsSta – Stage 3 (July 17 – November 7):



12.4. SuicideTraumaCutsSta – Stage 4 (November 8 – December 31):



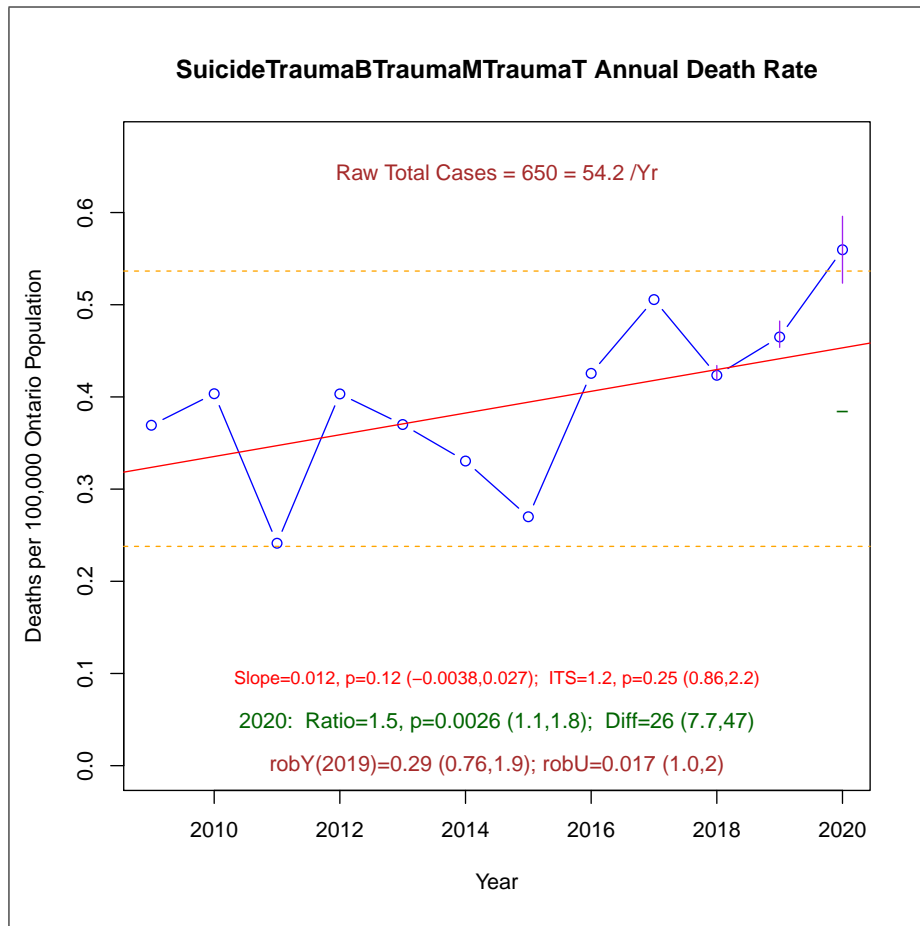
13. SuicideTraumaBTraumaMTraumaT Category:

This category is defined by:

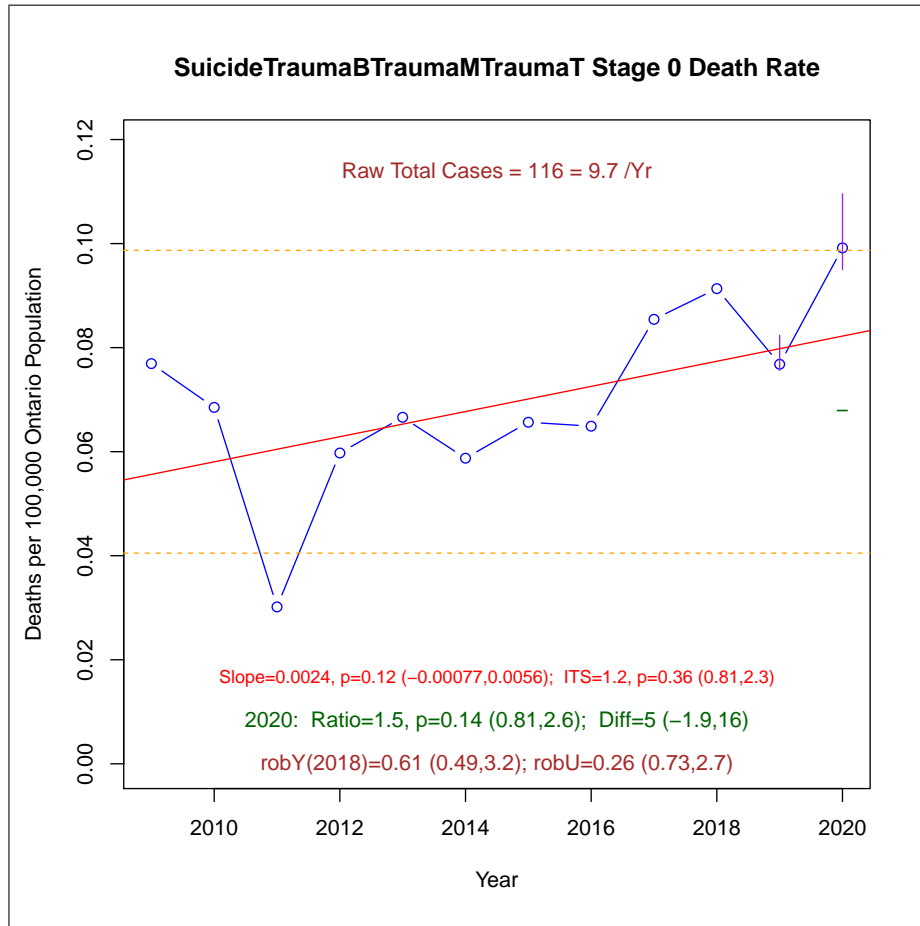
manner = “Suicide”; and factor = “Trauma - Blunt Force” or “Trauma - Motor Vehicle, Vehicle/Pedestrian collision” or “Trauma - Train/Vehicle, Train/Pedestrian collision”.

The corresponding correction multiplier is: $15 / 2790 = 0.00538$.

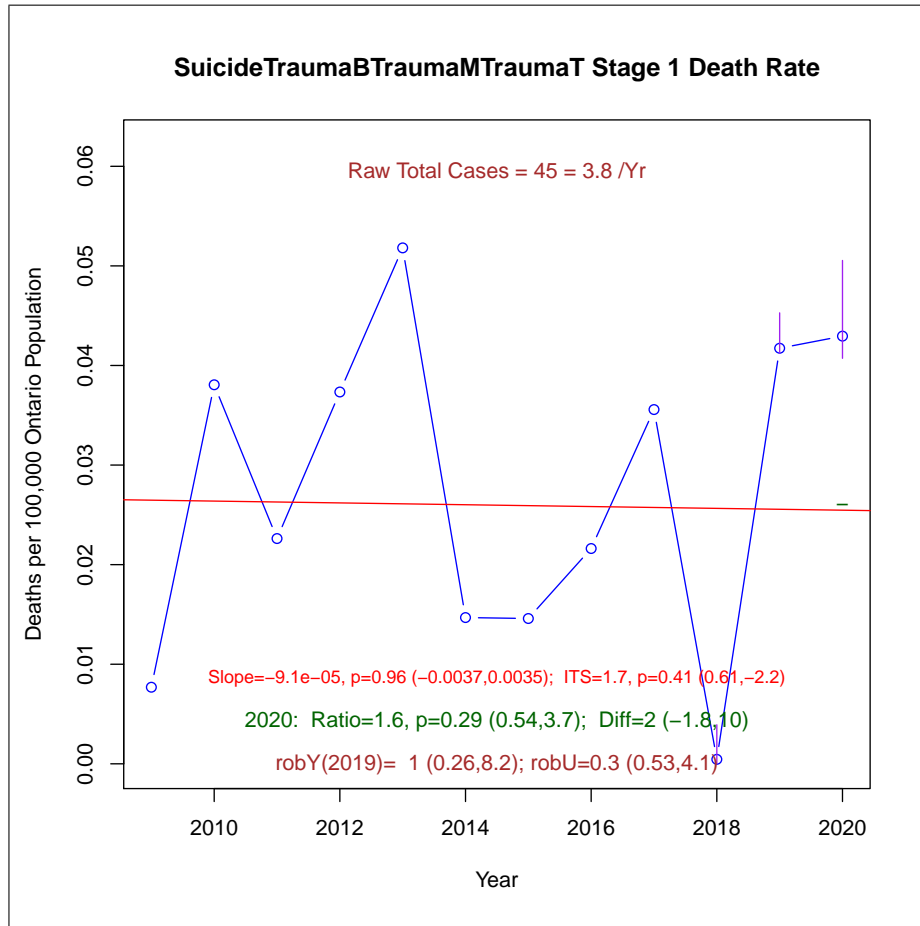
We begin with the Totals for entire years:



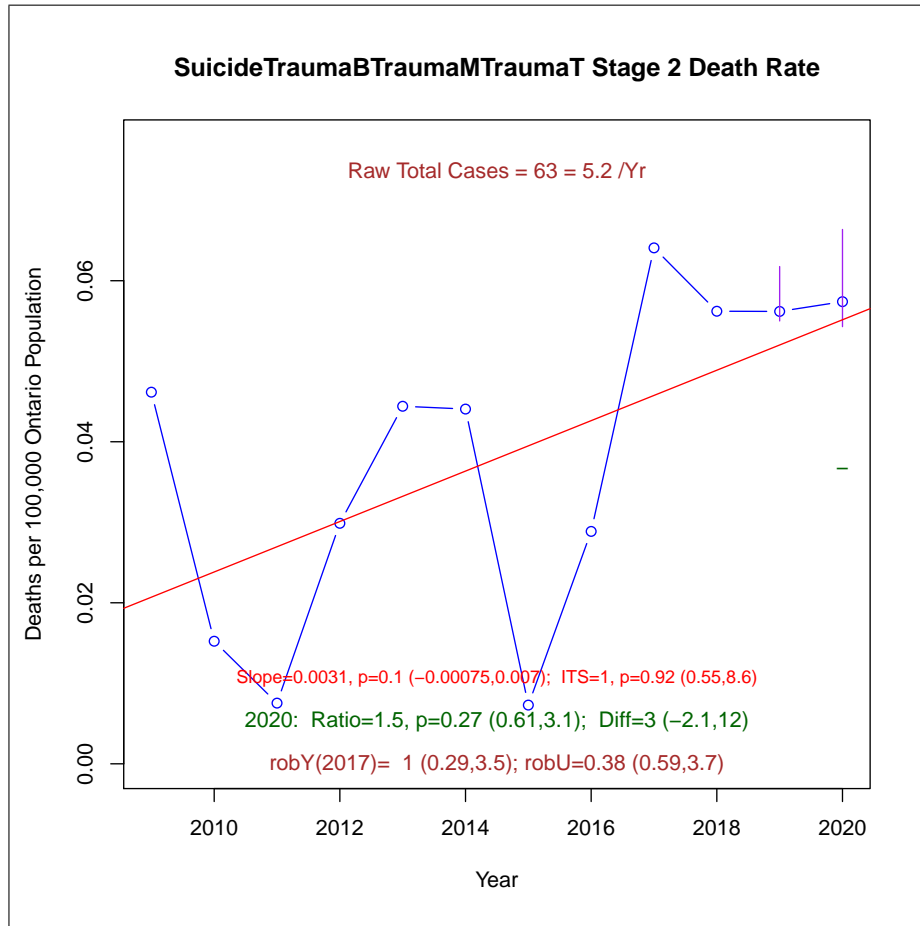
13.0. SuicideTraumaBTraumaMTraumaT – Stage 0 (March 17 – May 18):



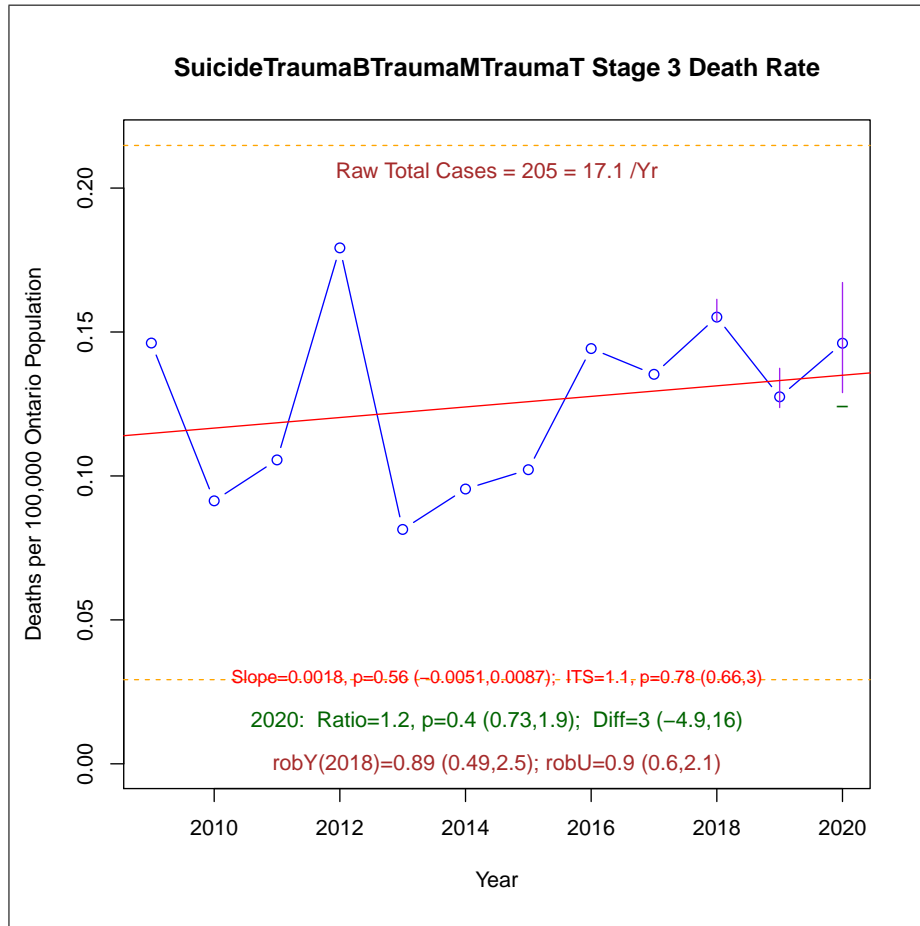
13.1. SuicideTraumaBTraumaMTraumaT – Stage 1 (May 19 – June 11):



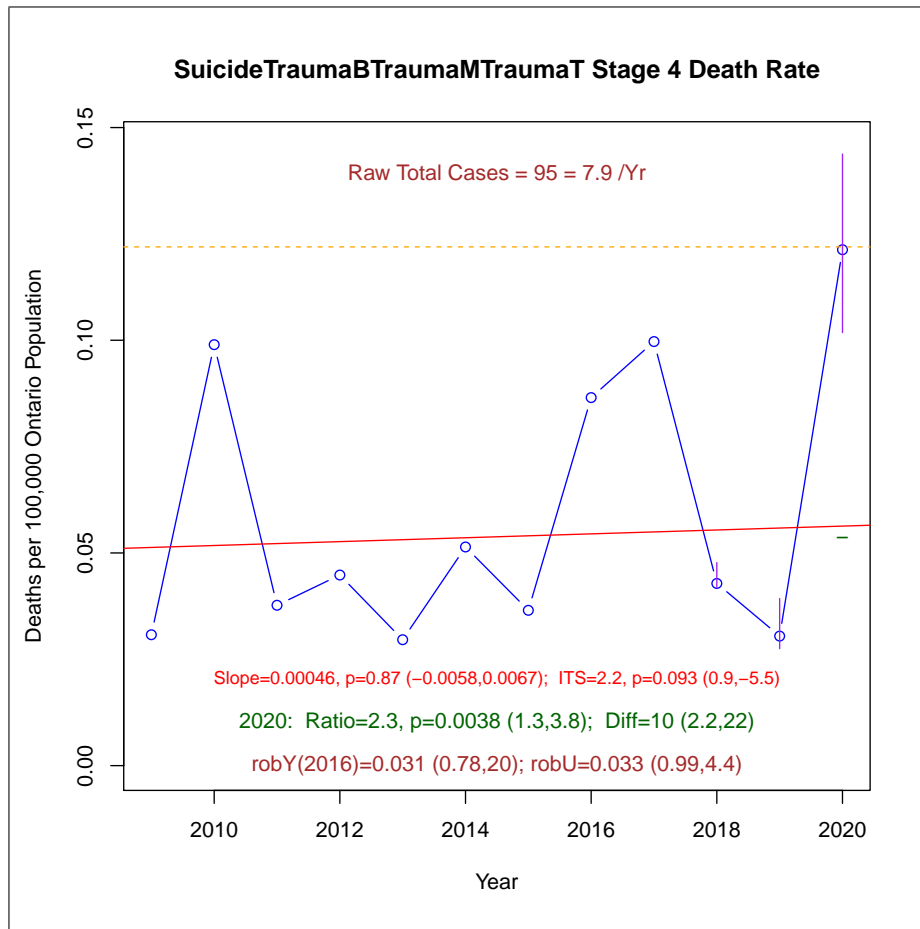
13.2. SuicideTraumaBTraumaMTraumaT – Stage 2 (June 12 – July 16):



13.3. SuicideTraumaBTraumaMTraumaT – Stage 3 (July 17 – November 7):



13.4. SuicideTraumaBTraumaMTraumaT – Stage 4 (November 8 – December 31):



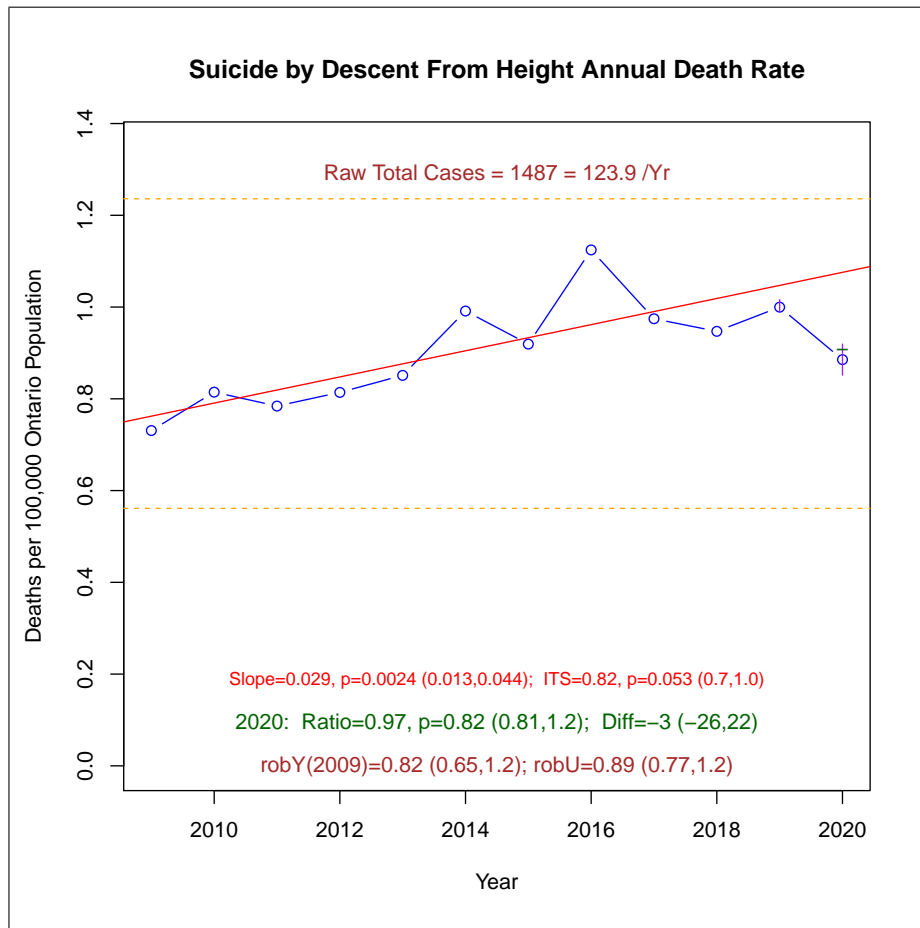
14. SuicideFallJumpDiffe Category:

This category is defined by:

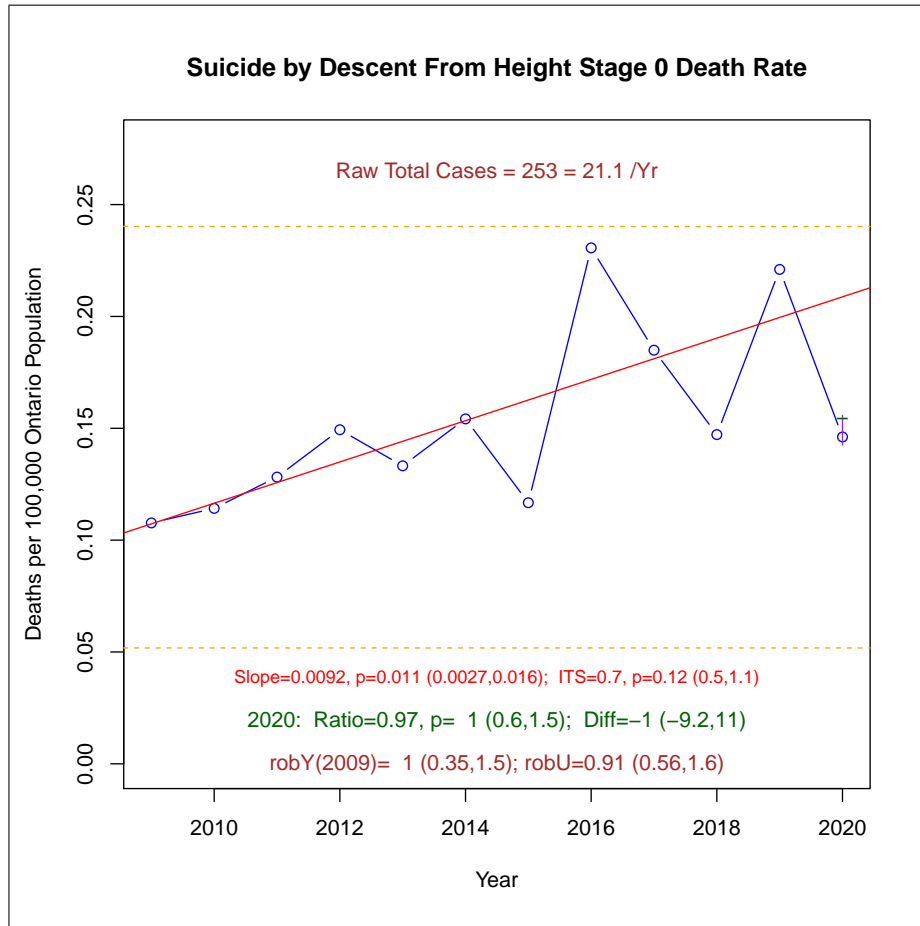
manner = "Suicide"; and factor = "Fall / Jump - Different Level/Height".

The corresponding correction multiplier is: $13 / 2790 = 0.00466$.

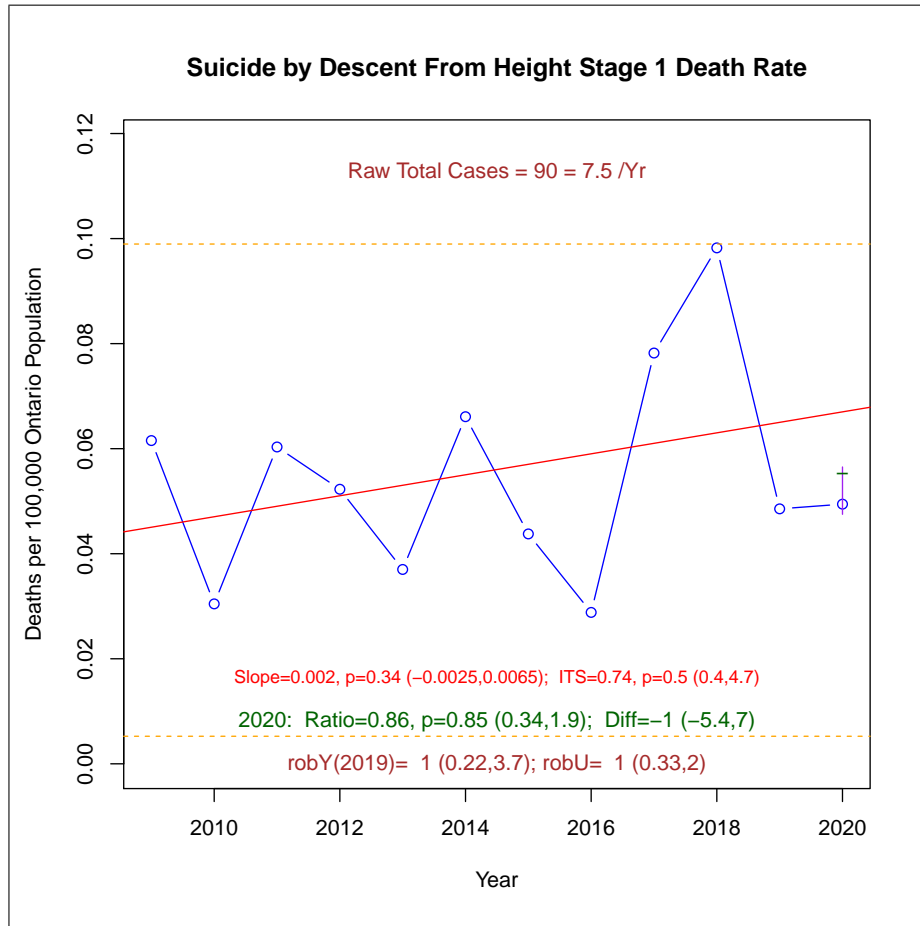
We begin with the Totals for entire years:



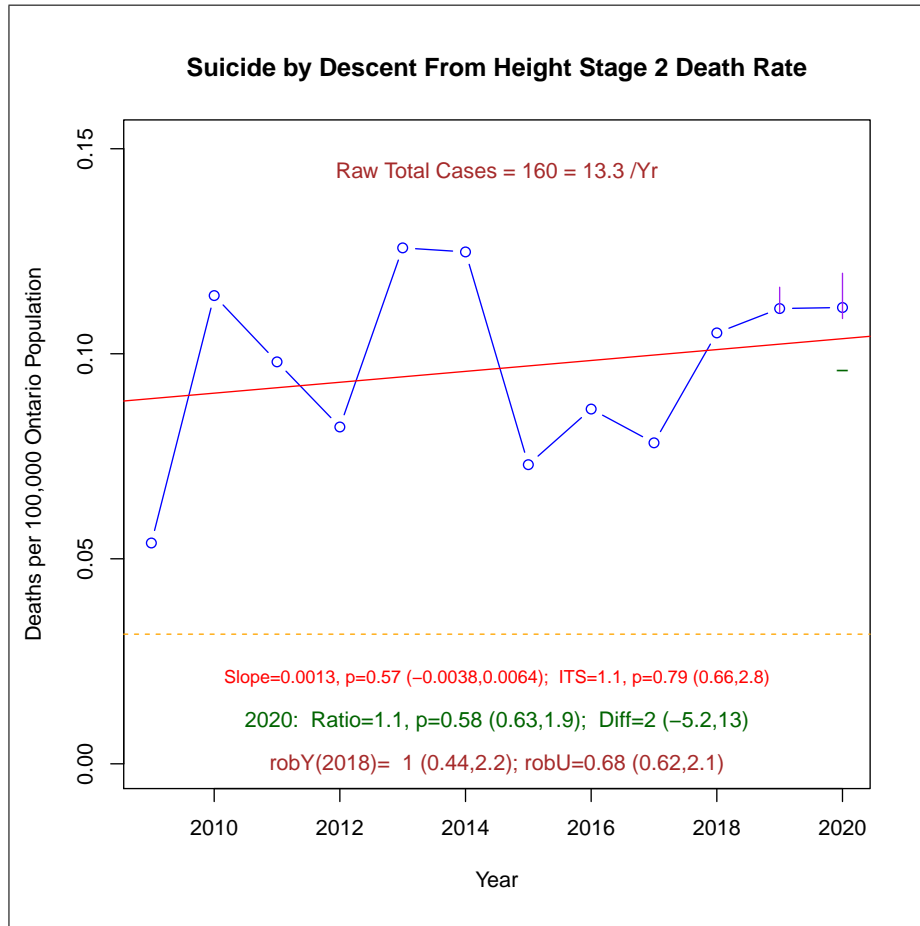
14.0. SuicideFallJumpDiffe – Stage 0 (March 17 – May 18):



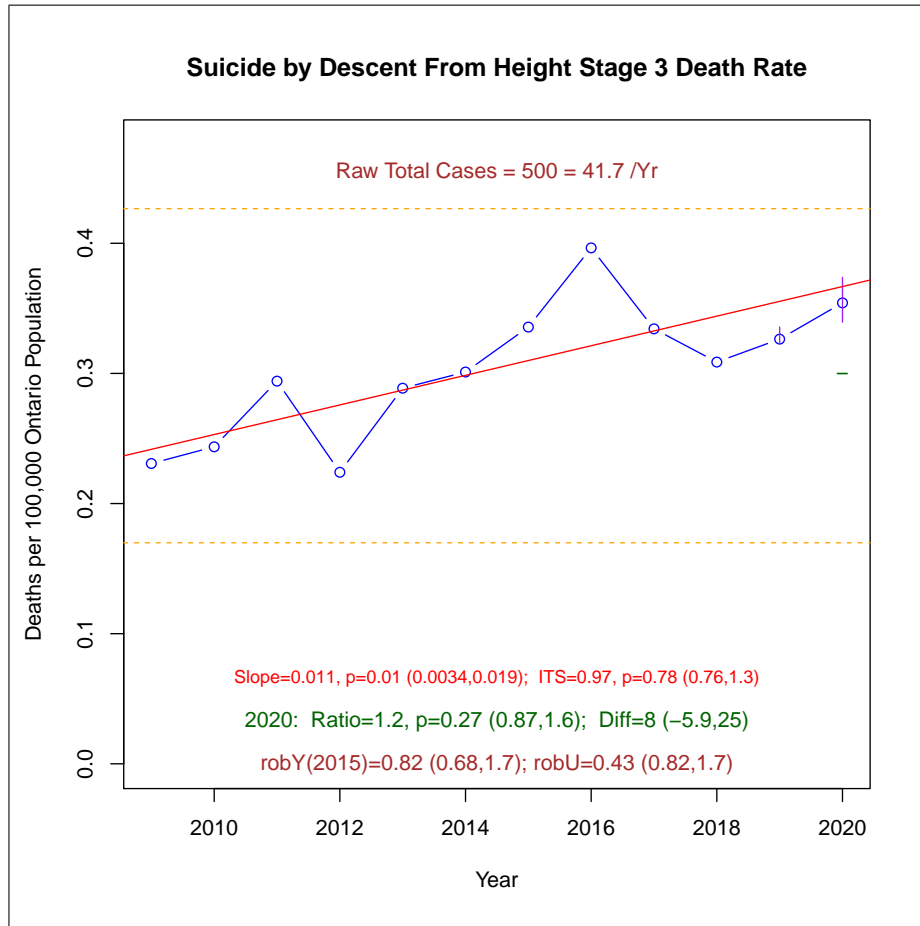
14.1. SuicideFallJumpDiffe – Stage 1 (May 19 – June 11):



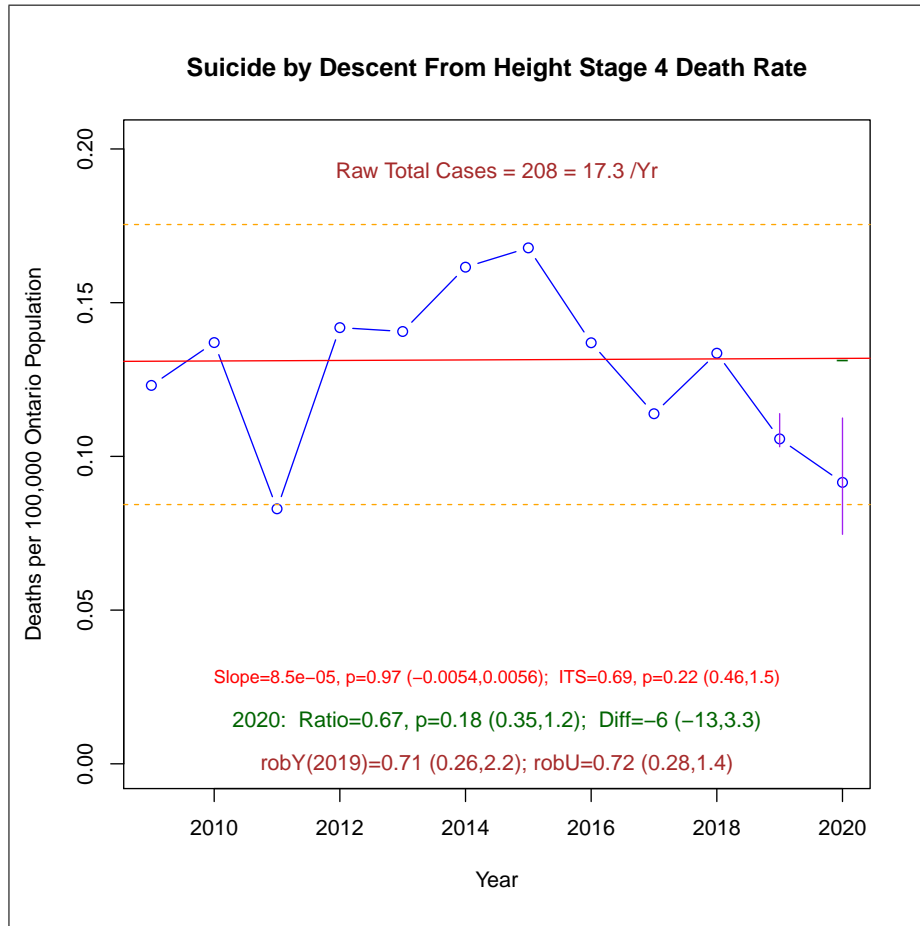
14.2. SuicideFallJumpDiffe – Stage 2 (June 12 – July 16):



14.3. SuicideFallJumpDiffe – Stage 3 (July 17 – November 7):



14.4. SuicideFallJumpDiffe – Stage 4 (November 8 – December 31):

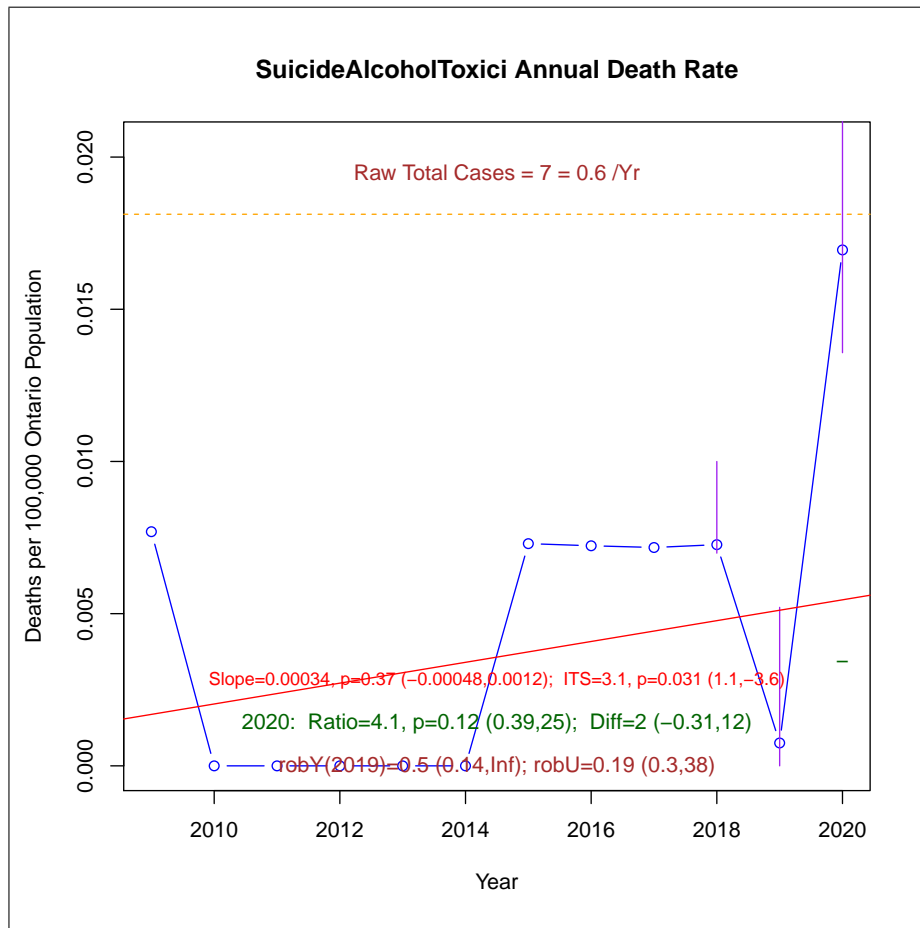


15. SuicideAlcoholToxic Category:

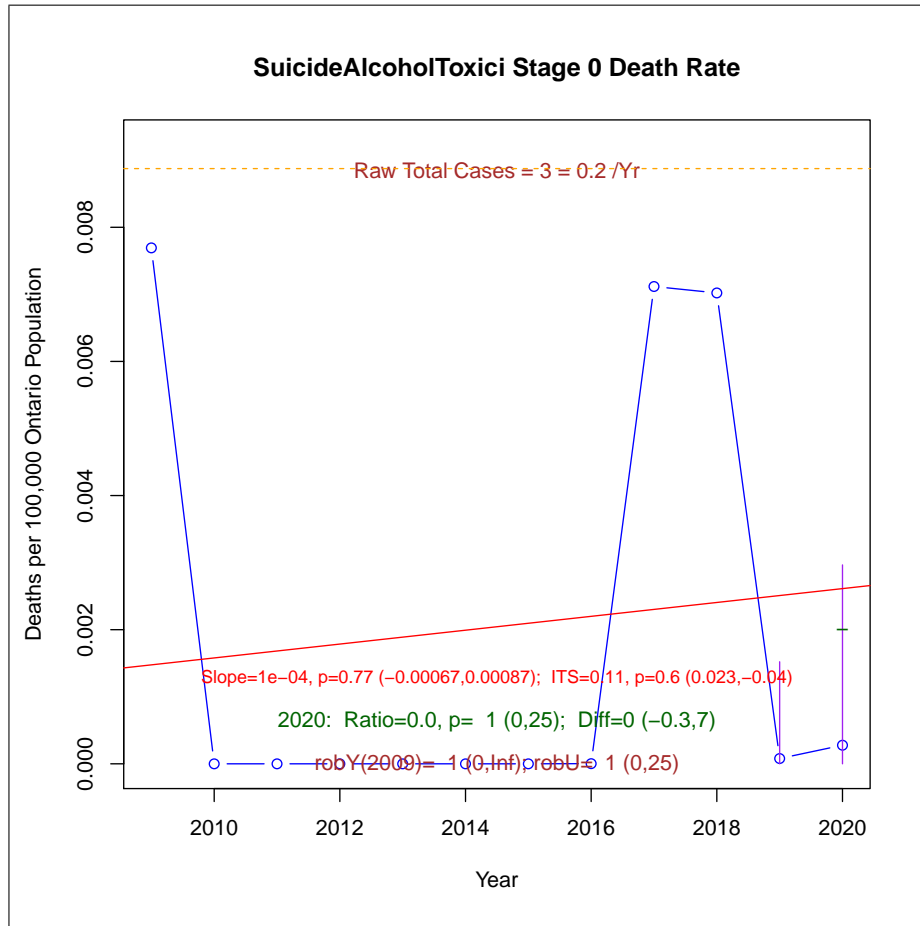
This category is defined by:
manner = “Suicide”; and factor = “Alcohol Toxicity (Acute)”.

The corresponding correction multiplier is: $1 / 2790 = 0.00036$.

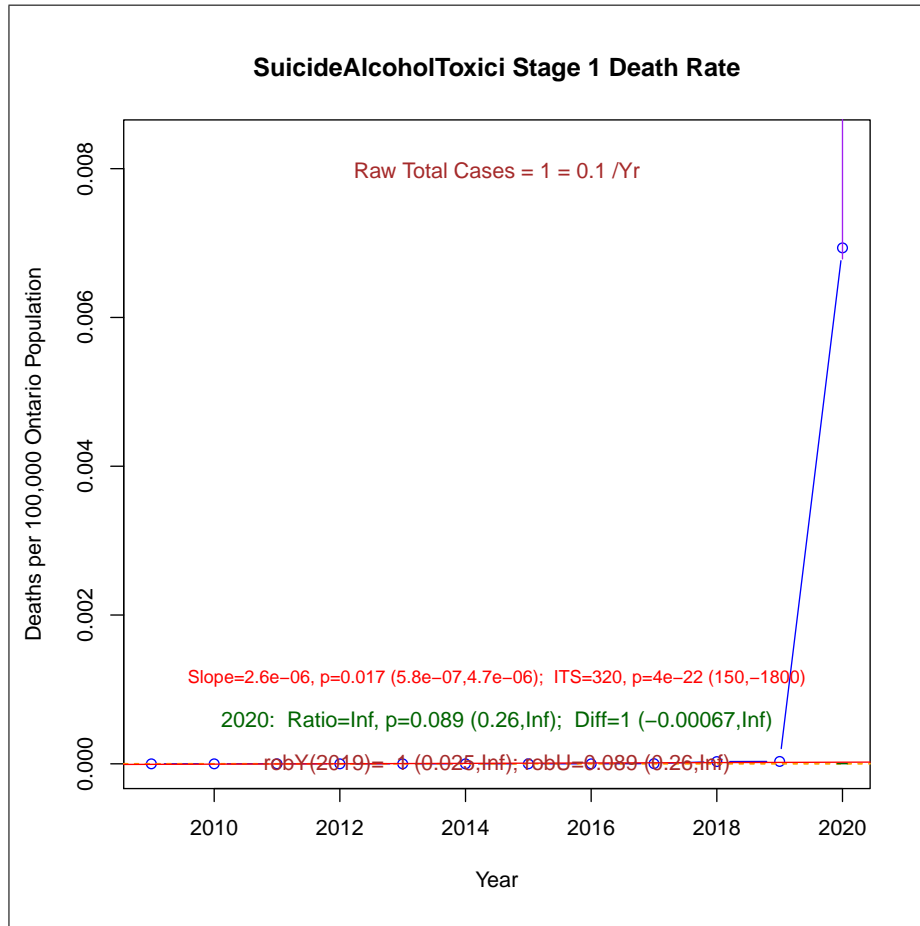
We begin with the Totals for entire years:



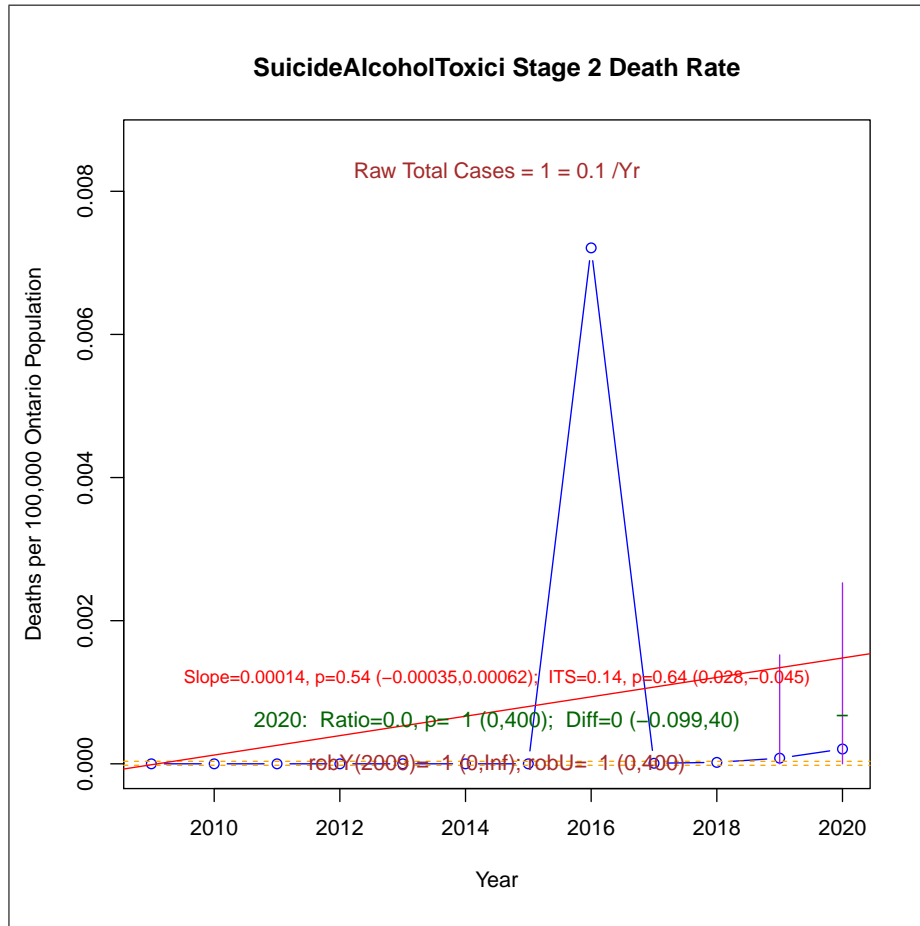
15.0. SuicideAlcoholToxici – Stage 0 (March 17 – May 18):



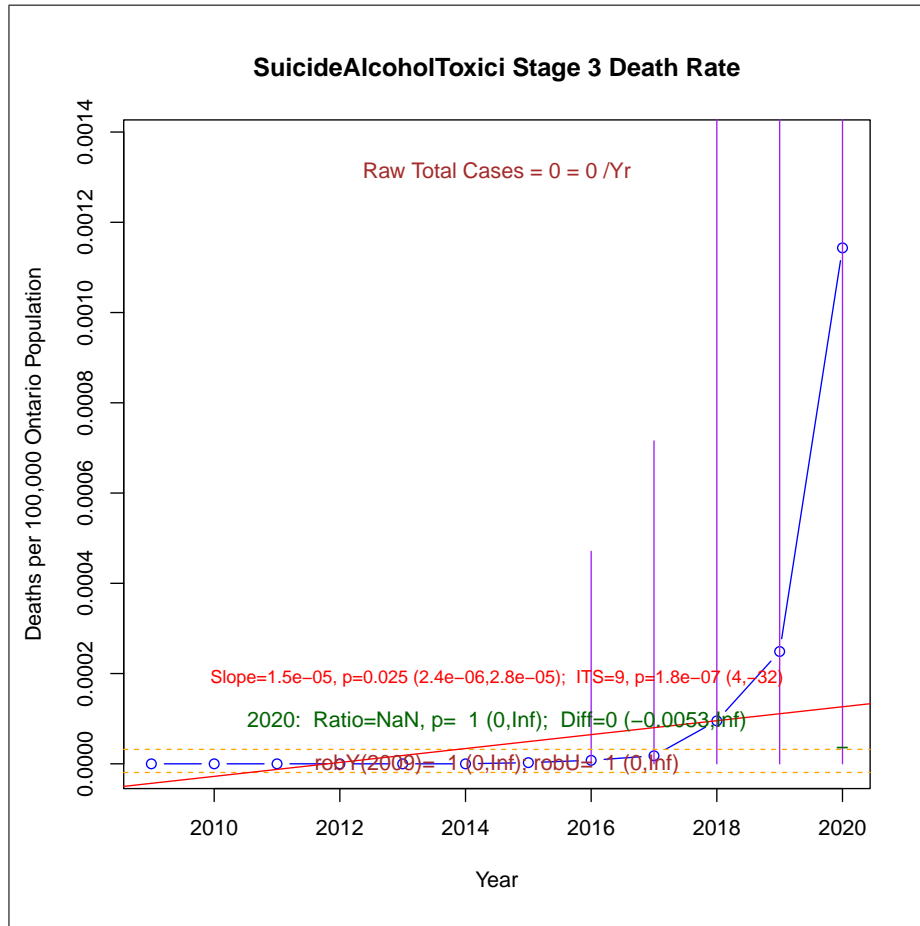
15.1. SuicideAlcoholToxici – Stage 1 (May 19 – June 11):



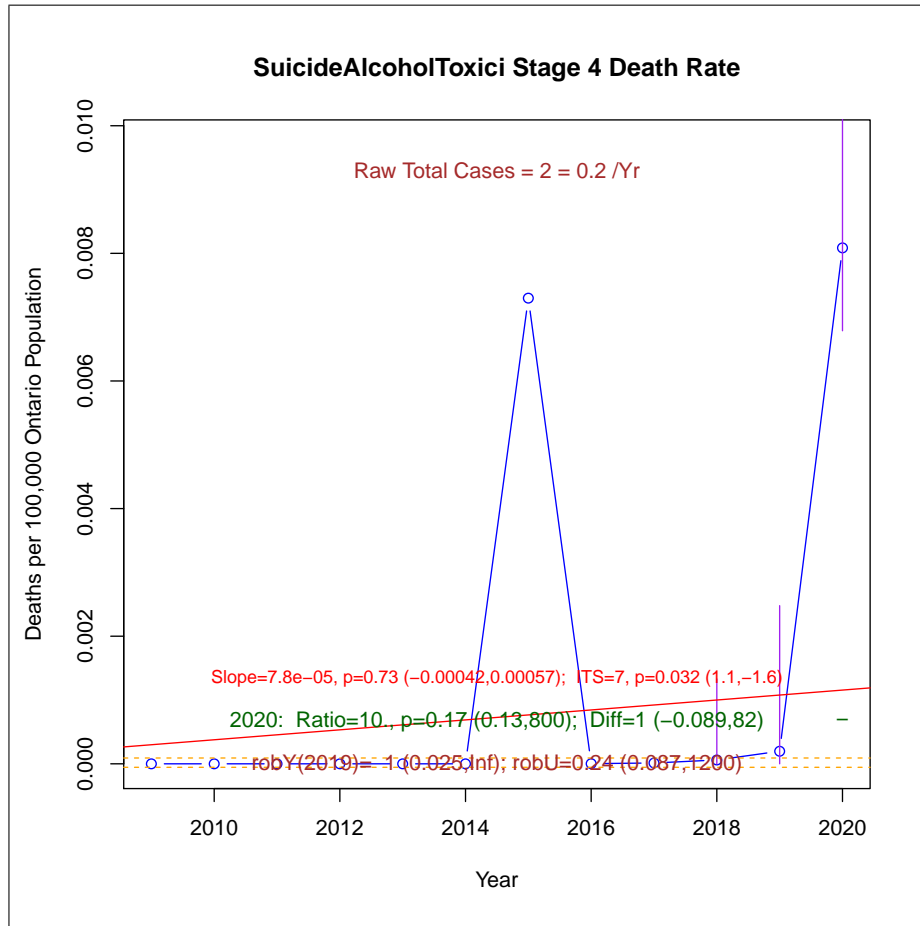
15.2. SuicideAlcoholToxici – Stage 2 (June 12 – July 16):



15.3. SuicideAlcoholToxici – Stage 3 (July 17 – November 7):



15.4. SuicideAlcoholToxici – Stage 4 (November 8 – December 31):



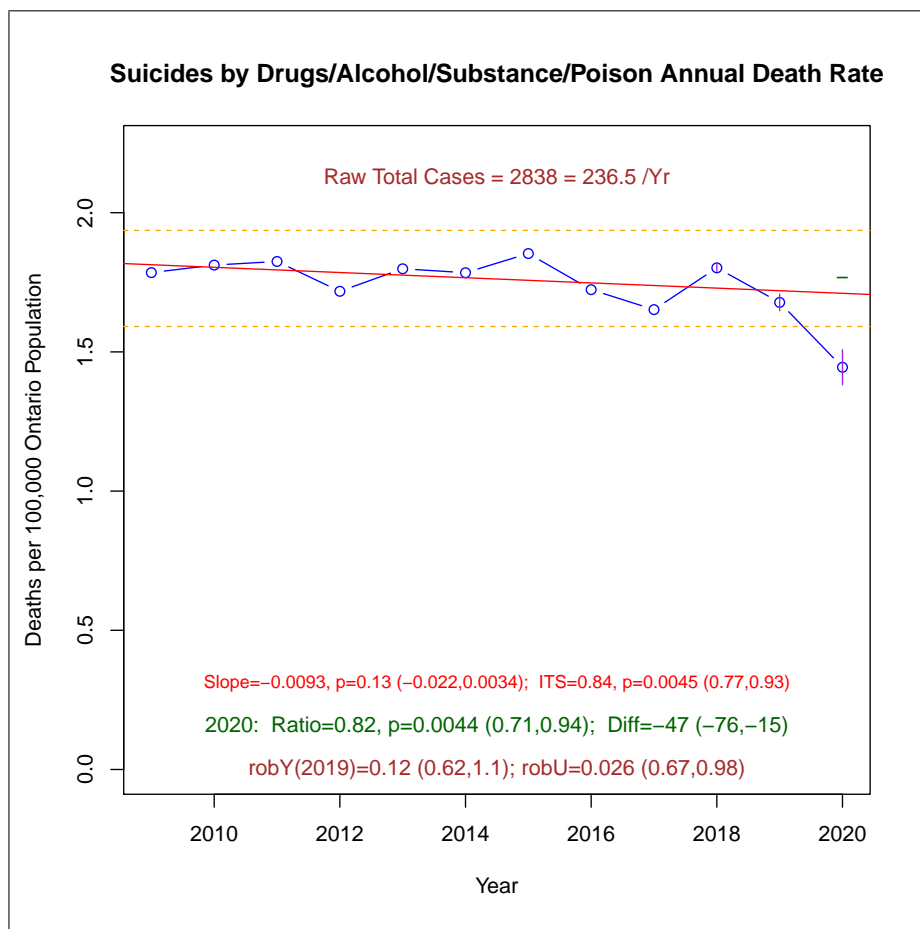
16. SuiciDrugADrugTSubstPoisoAlcoh Category:

This category is defined by:

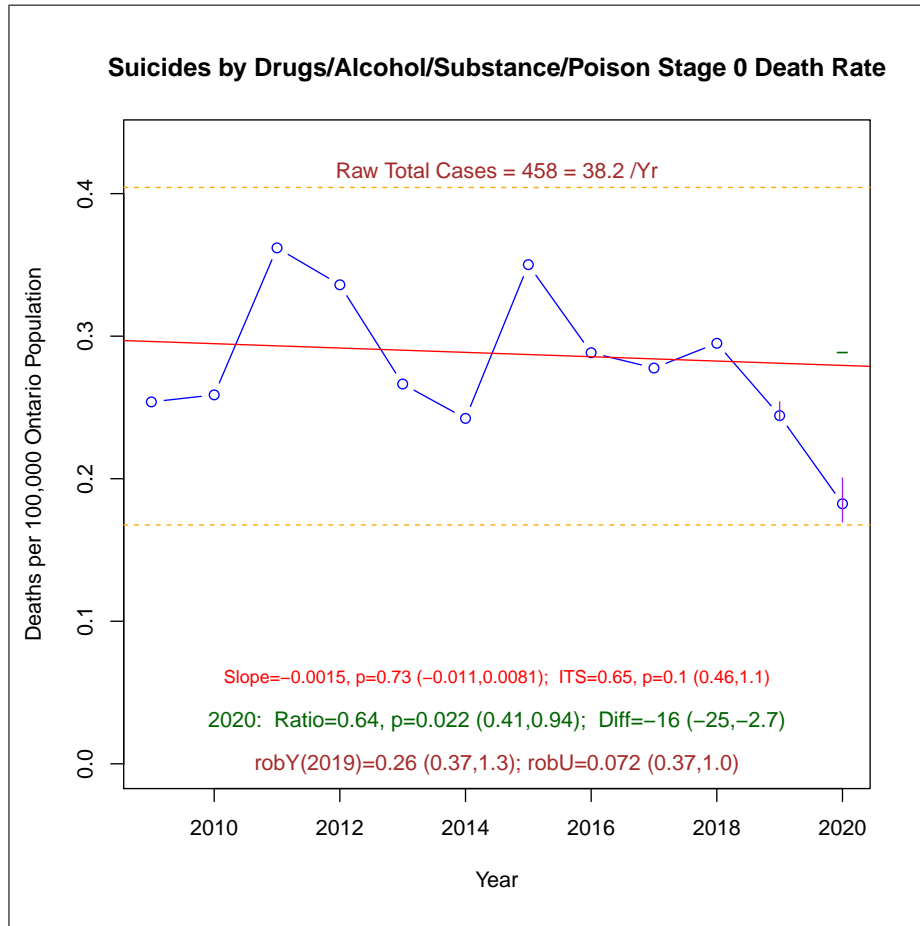
manner = “Suicide”; and factor = “Drug & Alcohol Toxicity (Acute)” or “Drug Toxicity (Acute)” or “Substance Abuse (glue/gasoline/solvents) / Aerosol sprays” or “Poisons / Toxins” or “Alcohol Toxicity (other alcohols)”.

The corresponding correction multiplier is: $46 / 2790 = 0.01649$.

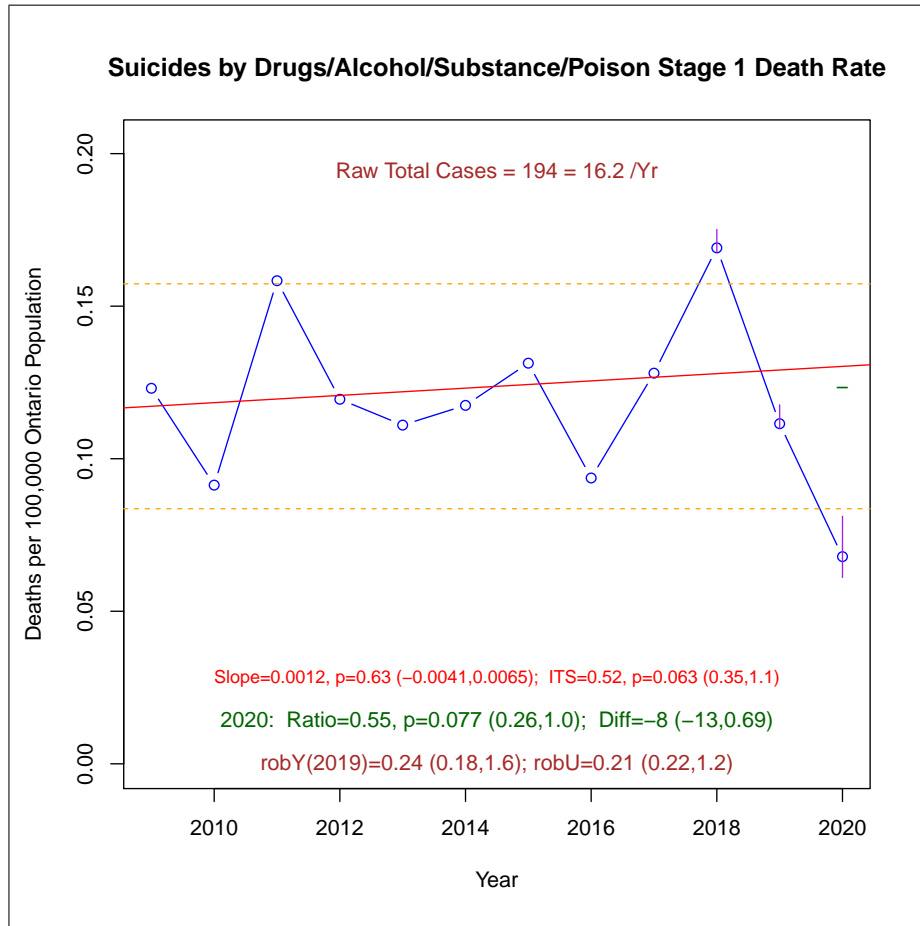
We begin with the Totals for entire years:



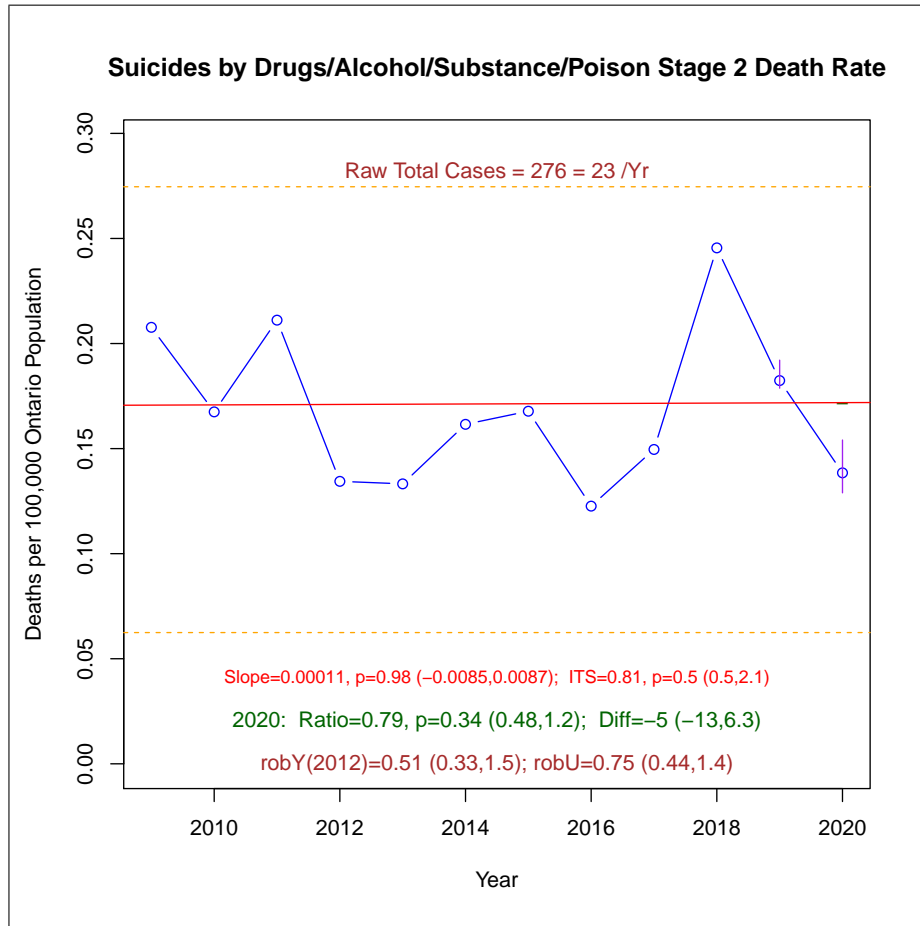
16.0. SuiciDrugADrugTSubstPoisoAlcoh – Stage 0 (March 17 – May 18):



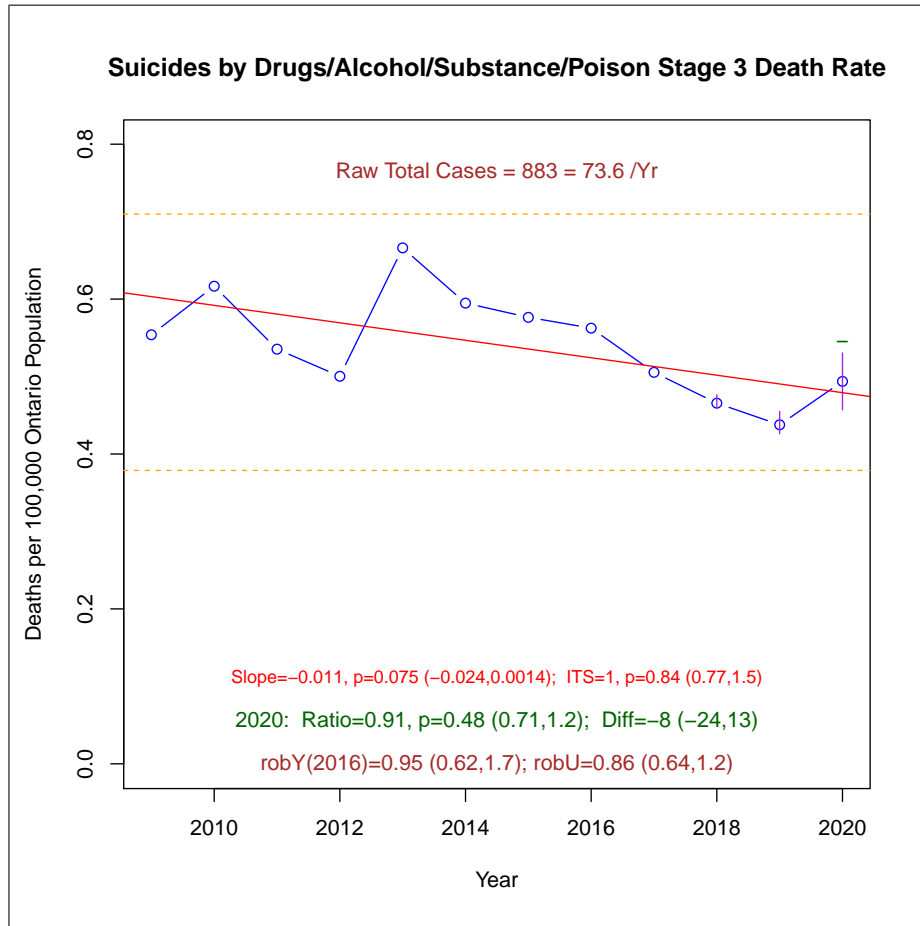
16.1. SuiciDrugADrugTSubstPoisoAlcoh – Stage 1 (May 19 – June 11):



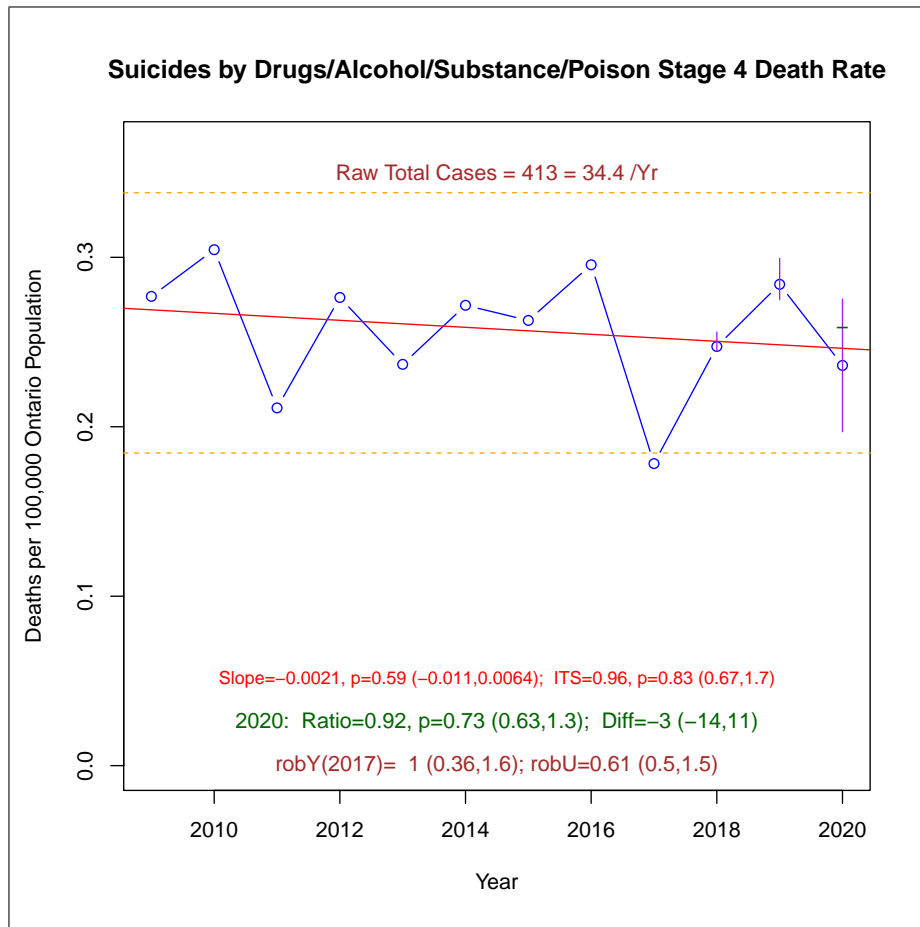
16.2. SuiciDrugADrugTSubstPoisoAlcoh – Stage 2 (June 12 – July 16):



16.3. SuiciDrugADrugTSubstPoisoAlcoh – Stage 3 (July 17 – November 7):



16.4. SuiciDrugADrugTSubstPoisoAlcoh – Stage 4 (November 8 – December 31):

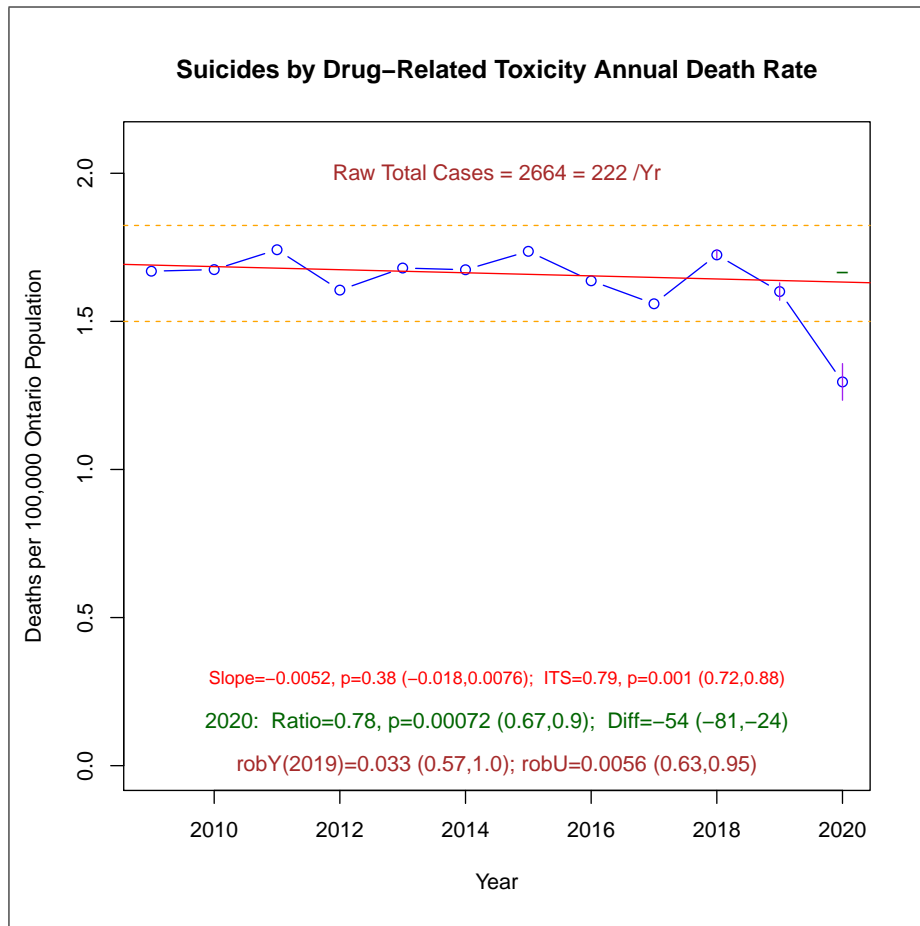


17. SuicideDrugToxicDrugAlcoh Category:

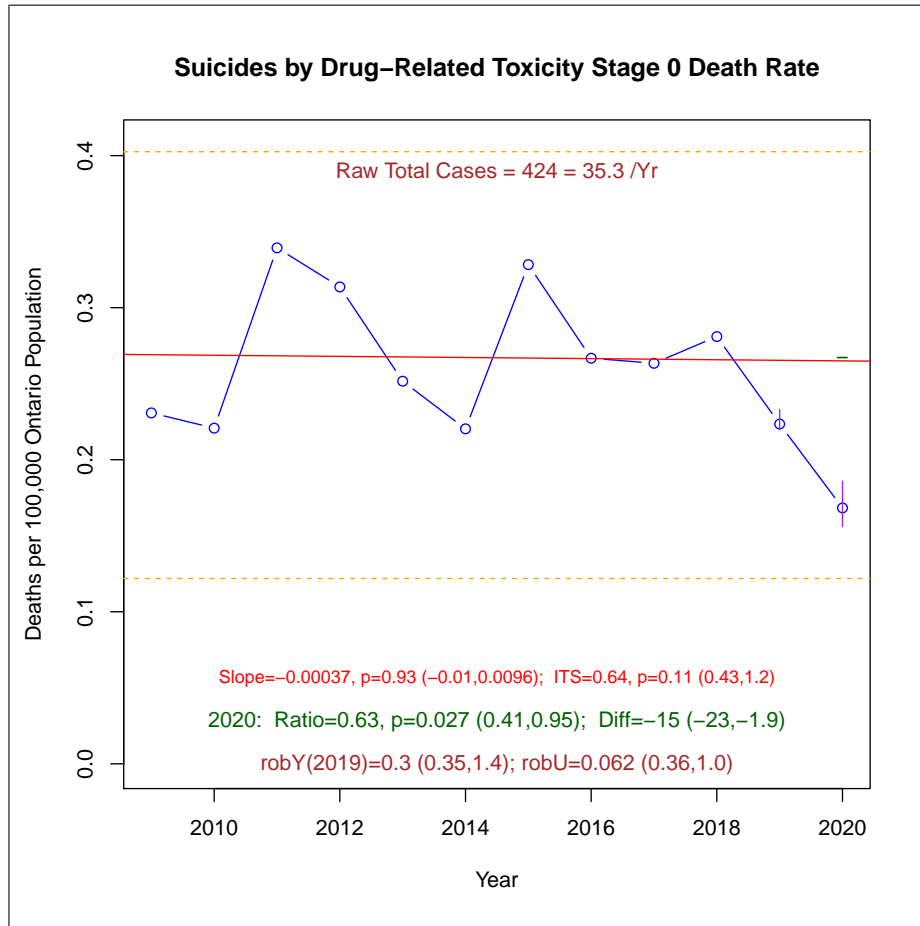
This category is defined by:
manner = “Suicide”; and factor = “Drug Toxicity (Acute)” or “Drug & Alcohol Toxicity (Acute)”.

The corresponding correction multiplier is: $44 / 2790 = 0.01577$.

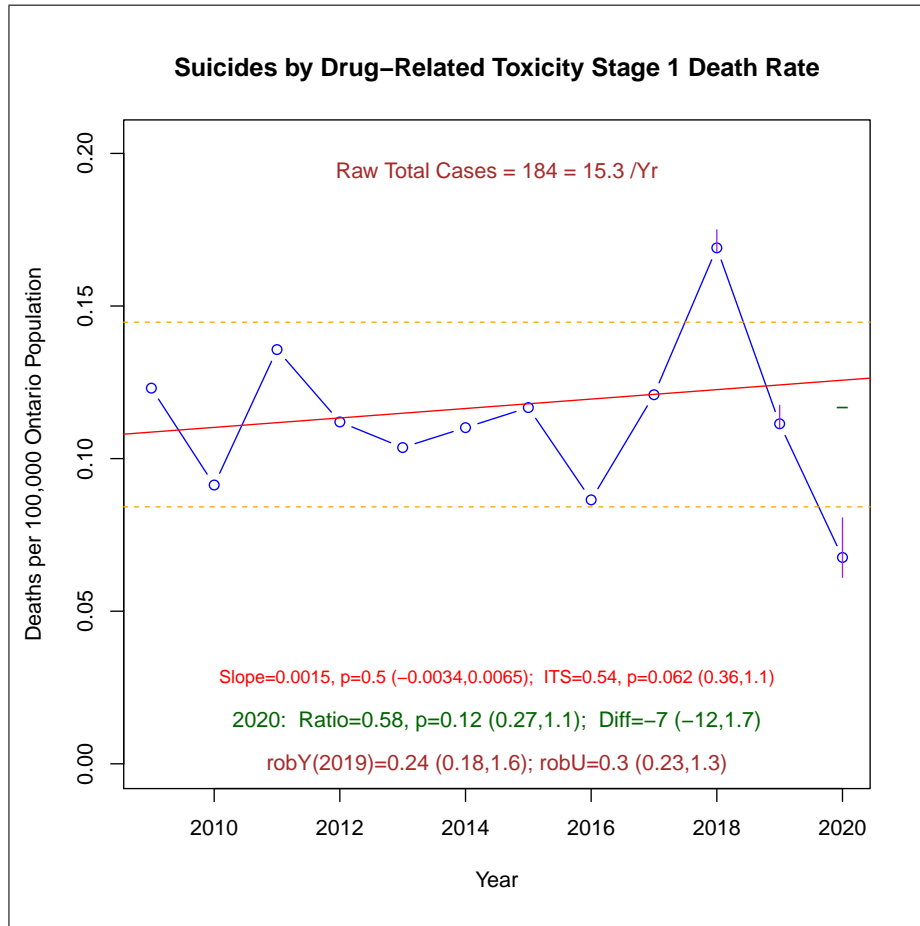
We begin with the Totals for entire years:



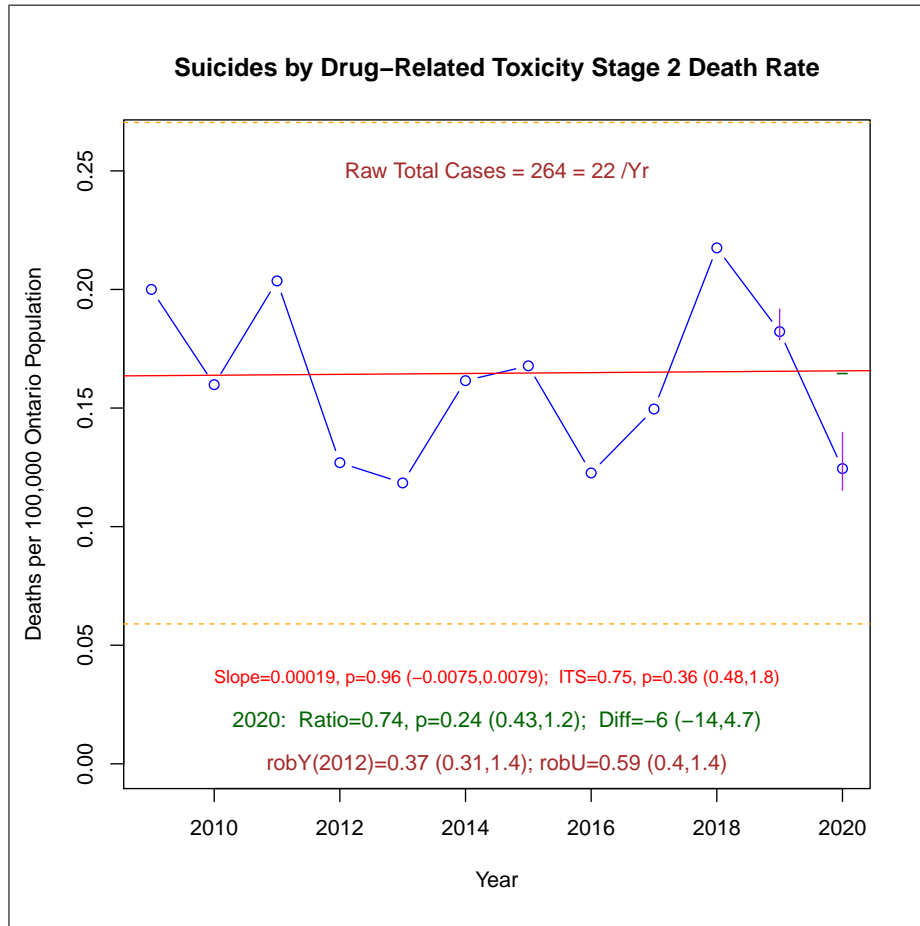
17.0. SuicideDrugToxicDrugAlcohol – Stage 0 (March 17 – May 18):



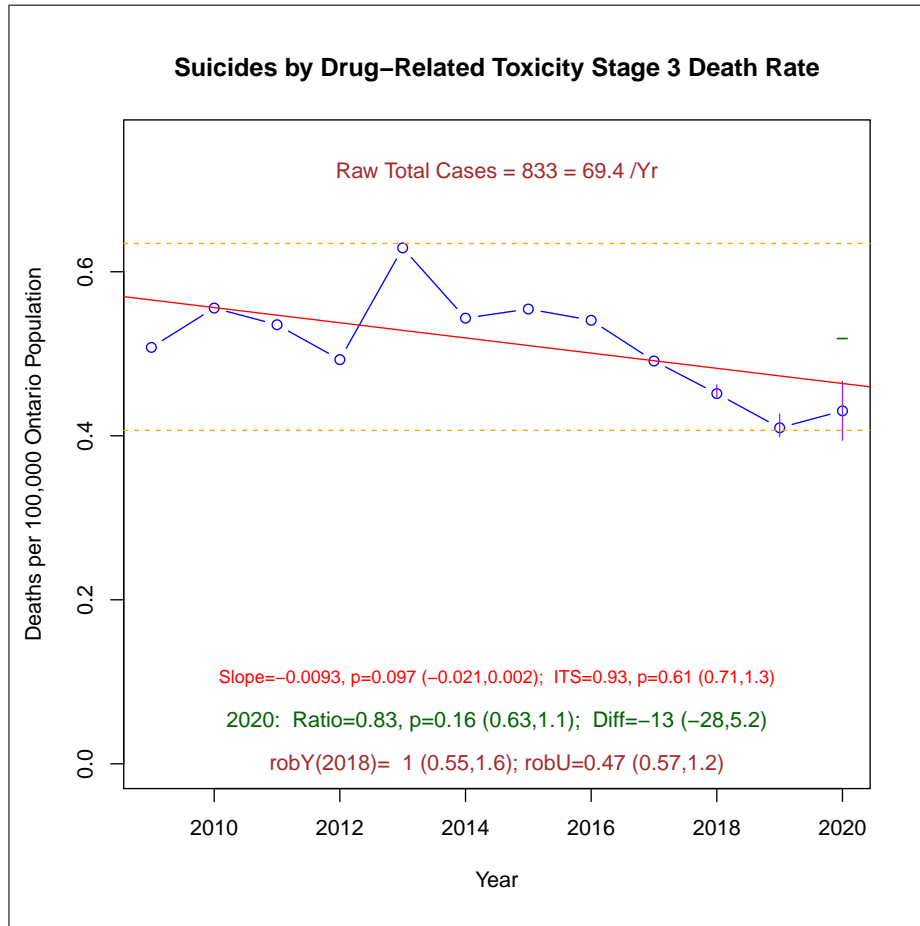
17.1. SuicideDrugToxicDrugAlcohol – Stage 1 (May 19 – June 11):



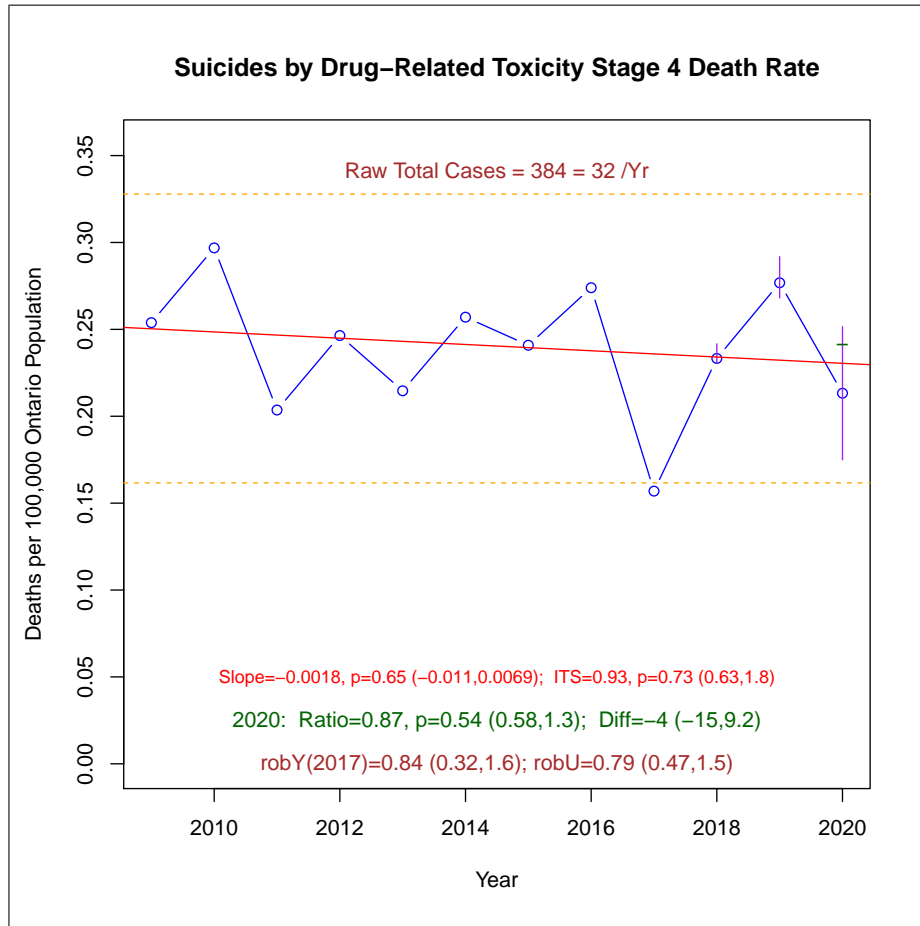
17.2. SuicideDrugToxicDrugAlcohol – Stage 2 (June 12 – July 16):



17.3. SuicideDrugToxicDrugAlcohol – Stage 3 (July 17 – November 7):



17.4. SuicideDrugToxicDrugAlcohol – Stage 4 (November 8 – December 31):

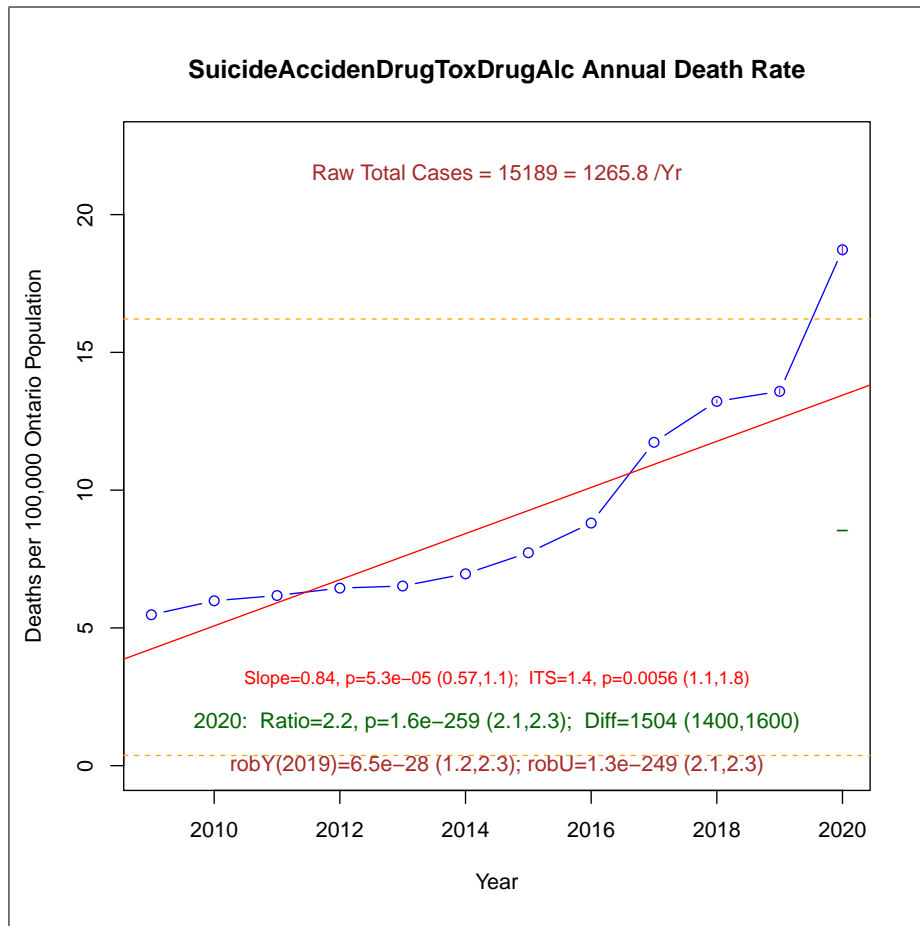


18. SuicideAccidenDrugToxDrugAlc Category:

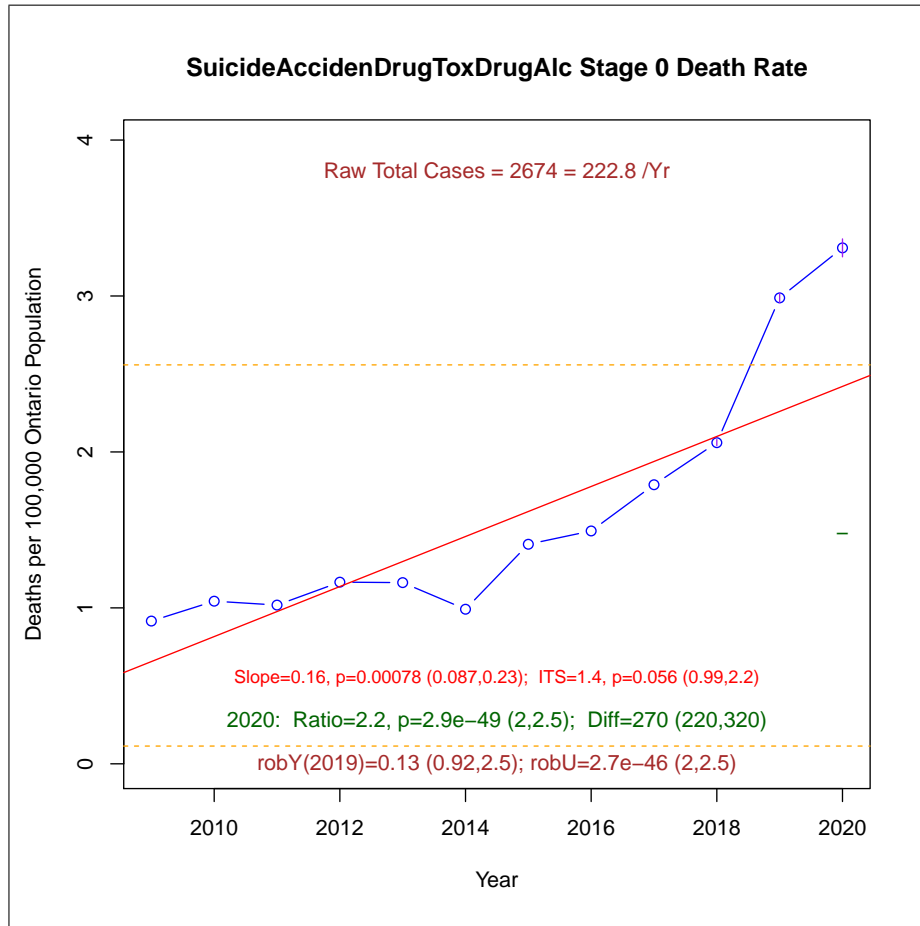
This category is defined by:
manner = “Suicide” or “Accident”; and factor = “Drug Toxicity (Acute)” or “Drug & Alcohol Toxicity (Acute)”.

The corresponding correction multiplier is: $575 / 2790 = 0.20609$.

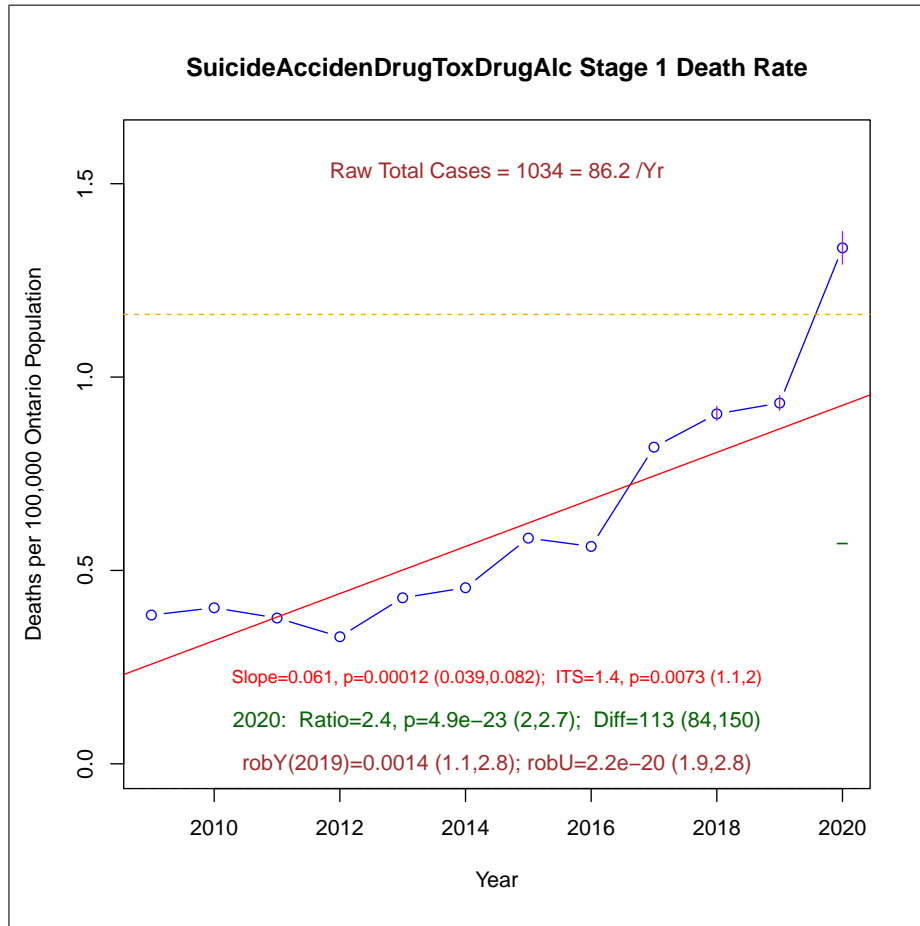
We begin with the Totals for entire years:



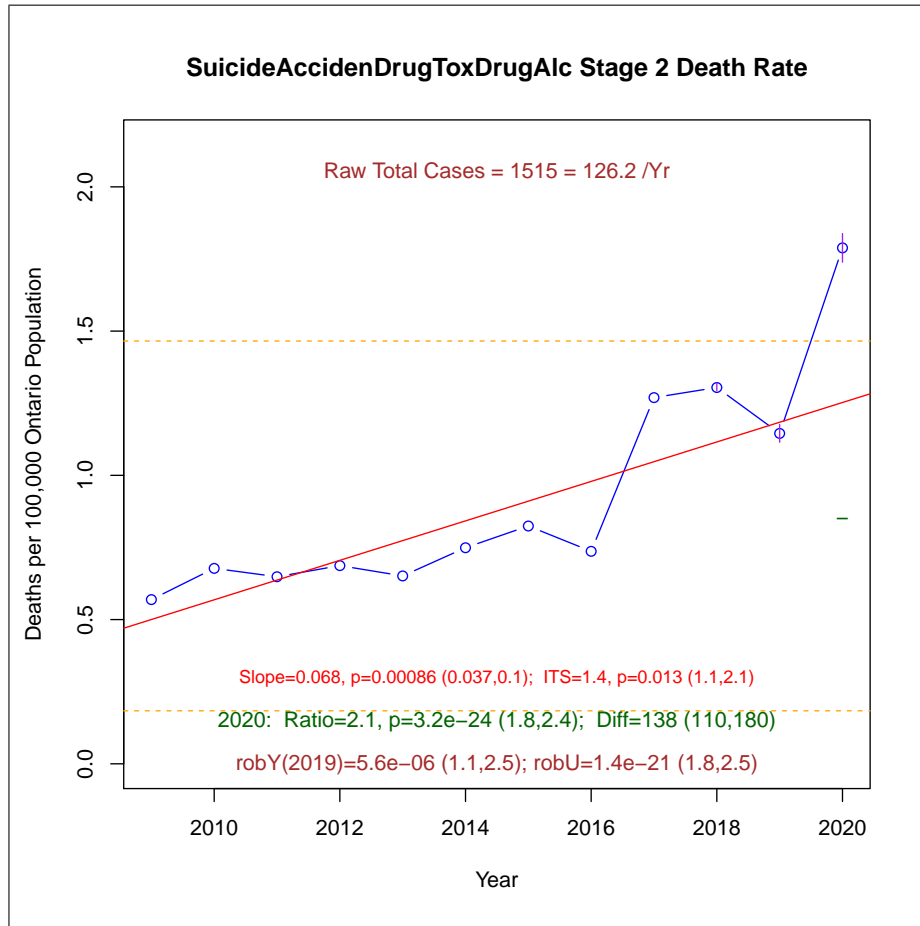
18.0. SuicideAccidenDrugToxDrugAlc – Stage 0 (March 17 – May 18):



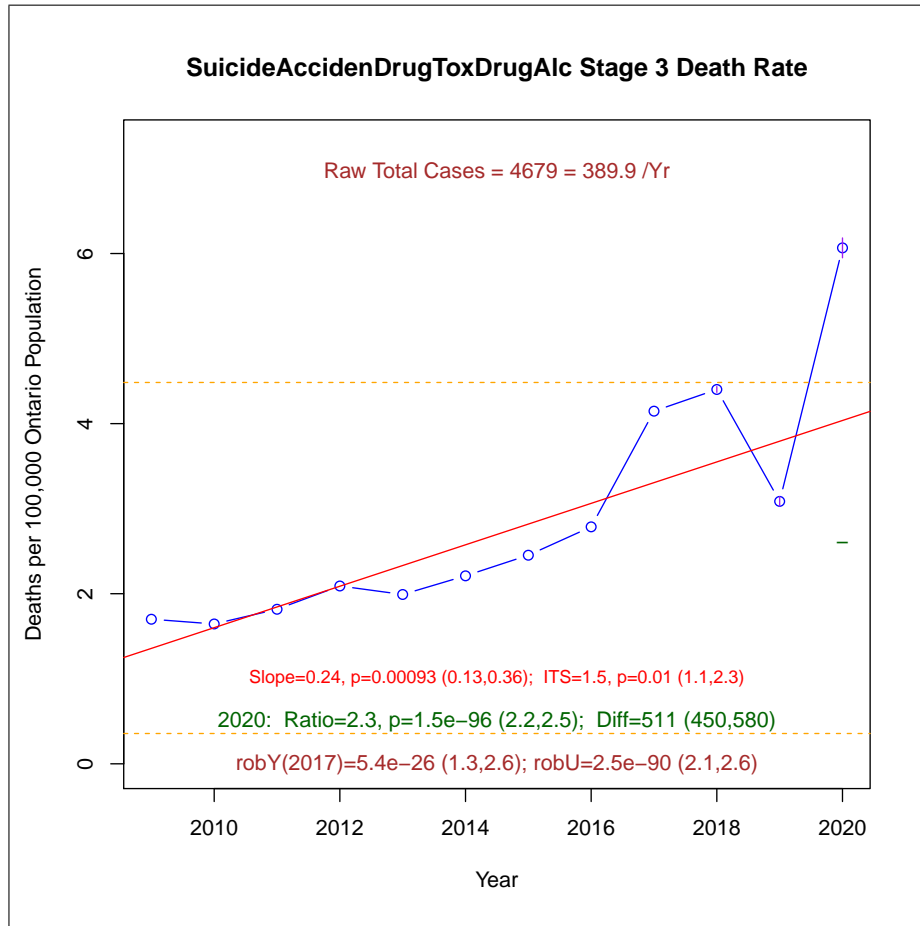
18.1. SuicideAccidenDrugToxDrugAlc – Stage 1 (May 19 – June 11):



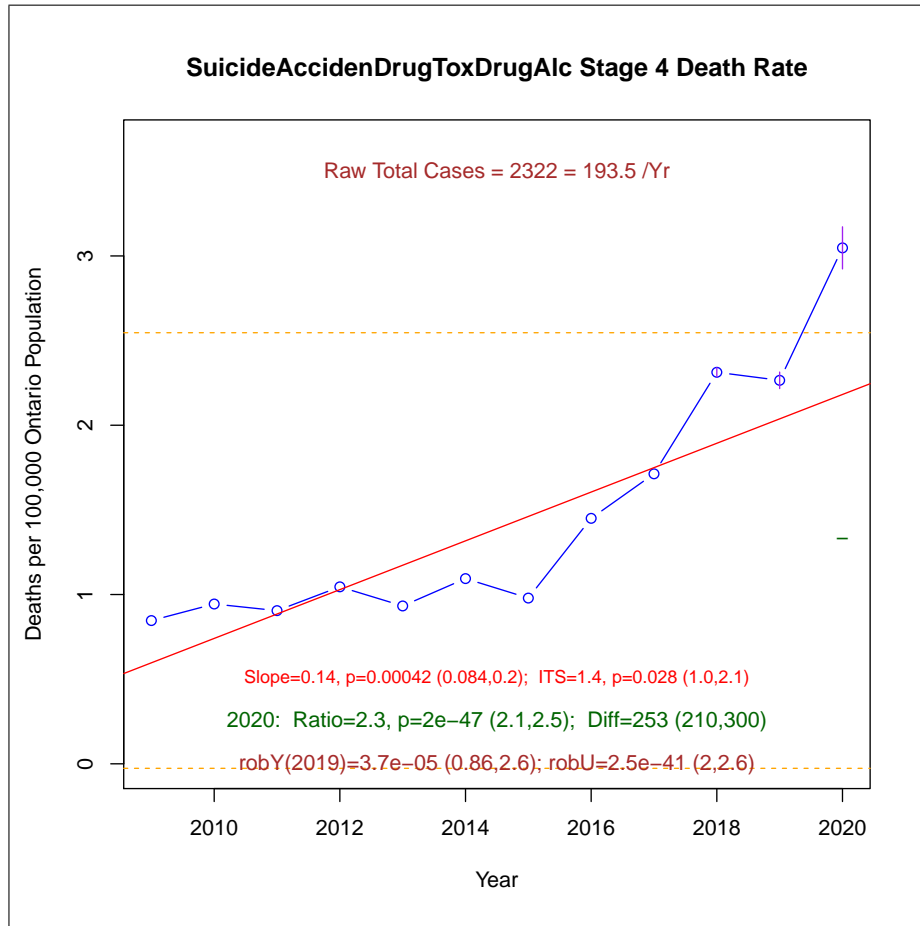
18.2. SuicideAccidenDrugToxDrugAlc – Stage 2 (June 12 – July 16):



18.3. SuicideAccidenDrugToxDrugAlc – Stage 3 (July 17 – November 7):



18.4. SuicideAccidenDrugToxDrugAlc – Stage 4 (November 8 – December 31):



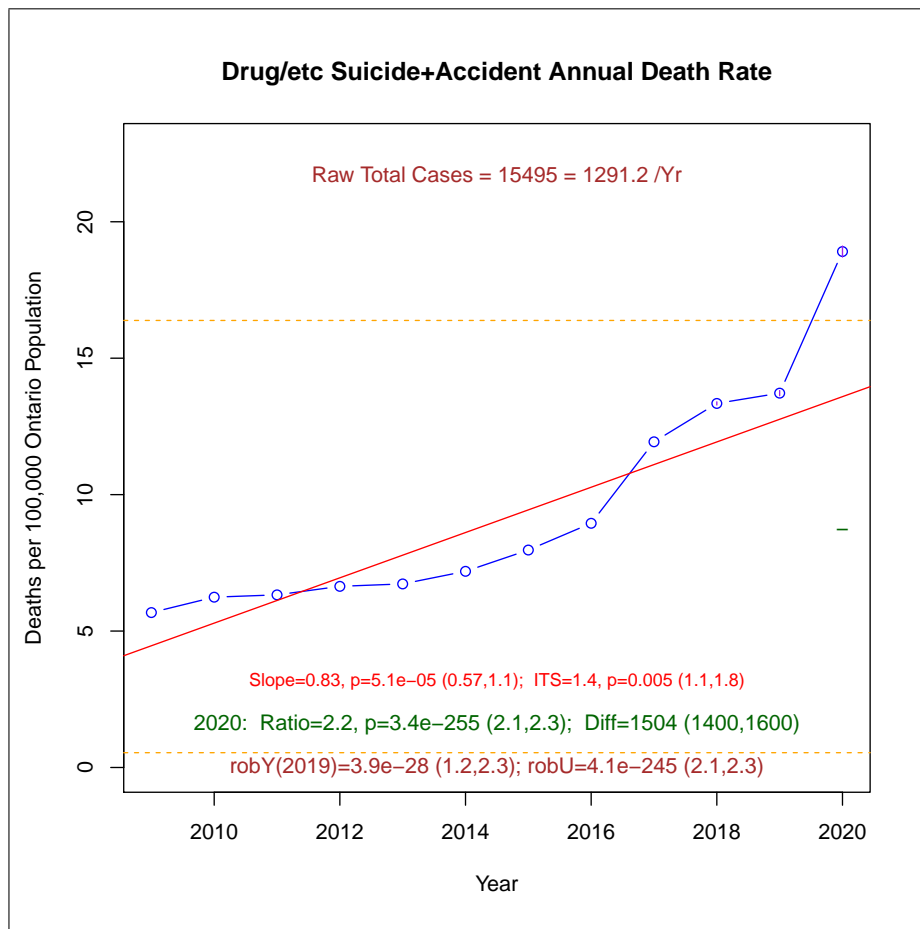
19. SuicAcciDrugDrugSubsPoisAlco Category:

This category is defined by:

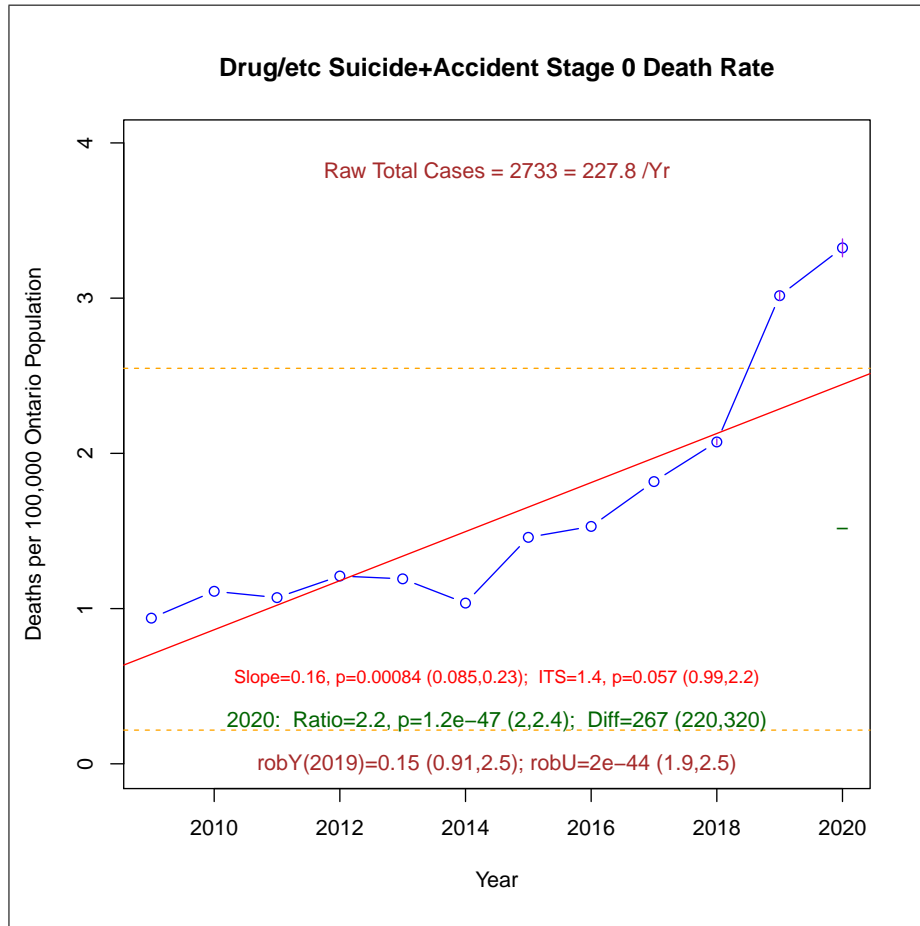
manner = “Suicide” or “Accident”; and factor = “Drug Toxicity (Acute)” or “Drug & Alcohol Toxicity (Acute)” or “Substance Abuse (glue/gasoline/solvents) / Aerosol sprays” or “Poisons / Toxins” or “Alcohol Toxicity (other alcohols)”.

The corresponding correction multiplier is: $581 / 2790 = 0.20824$.

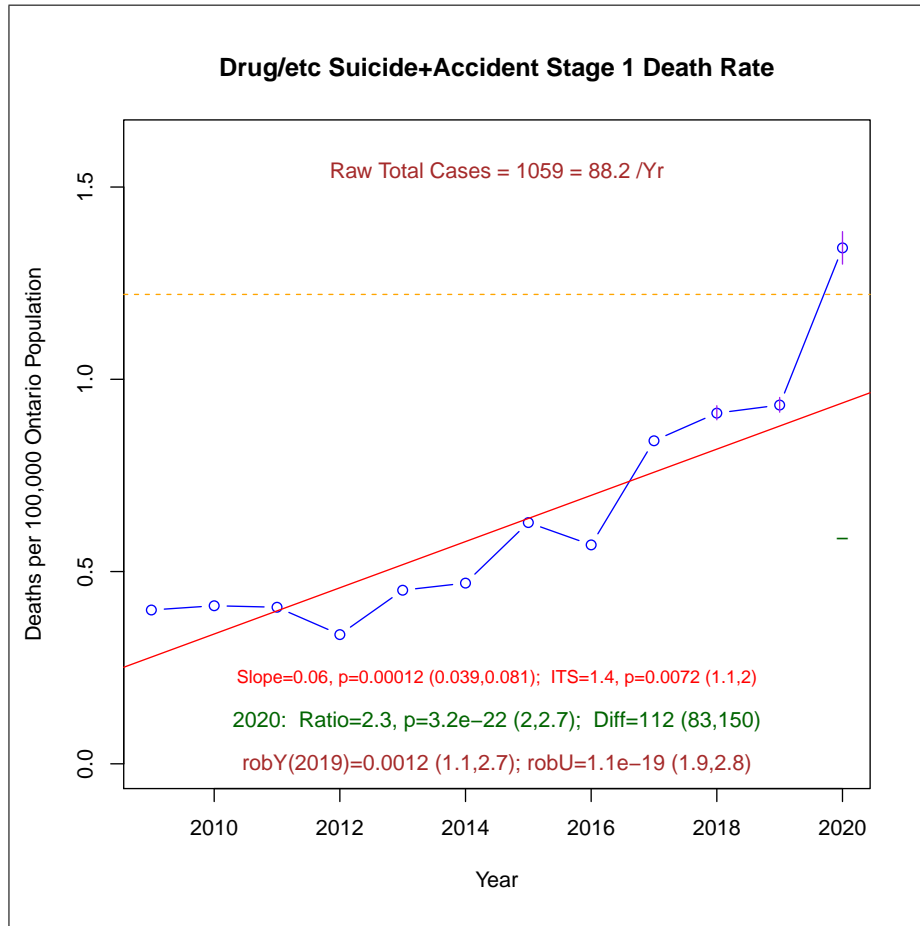
We begin with the Totals for entire years:



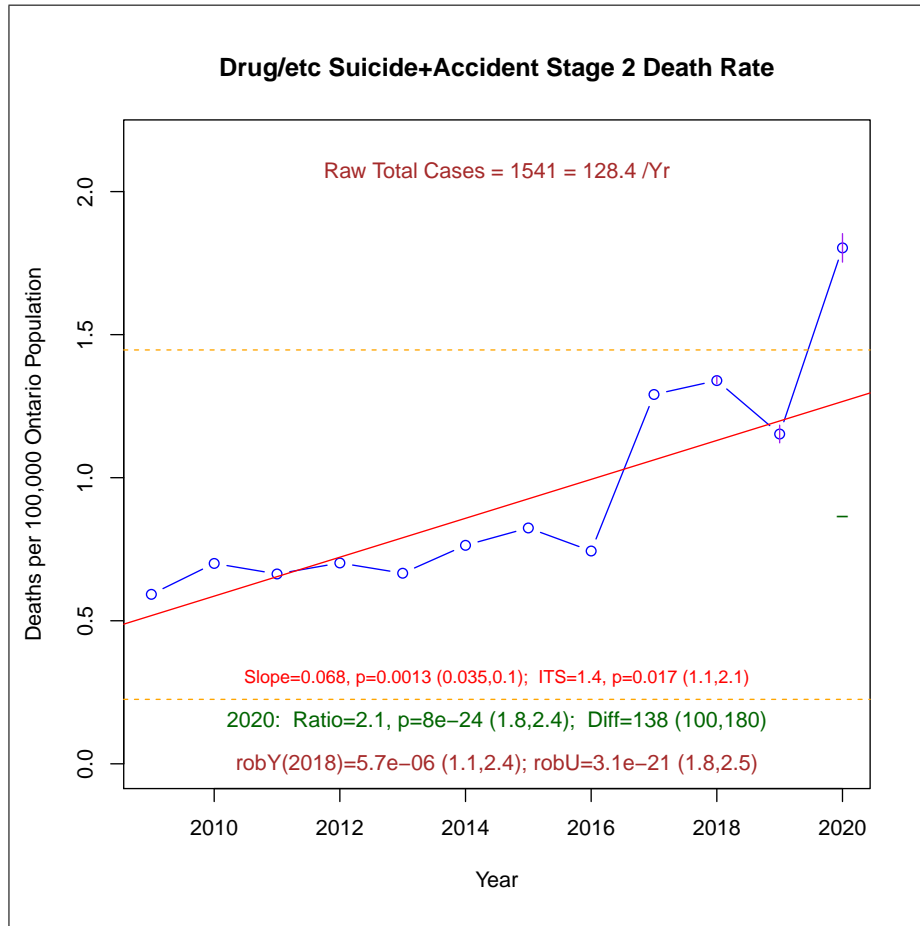
19.0. SuicAcciDrugDrugSubsPoisAlco – Stage 0 (March 17 – May 18):



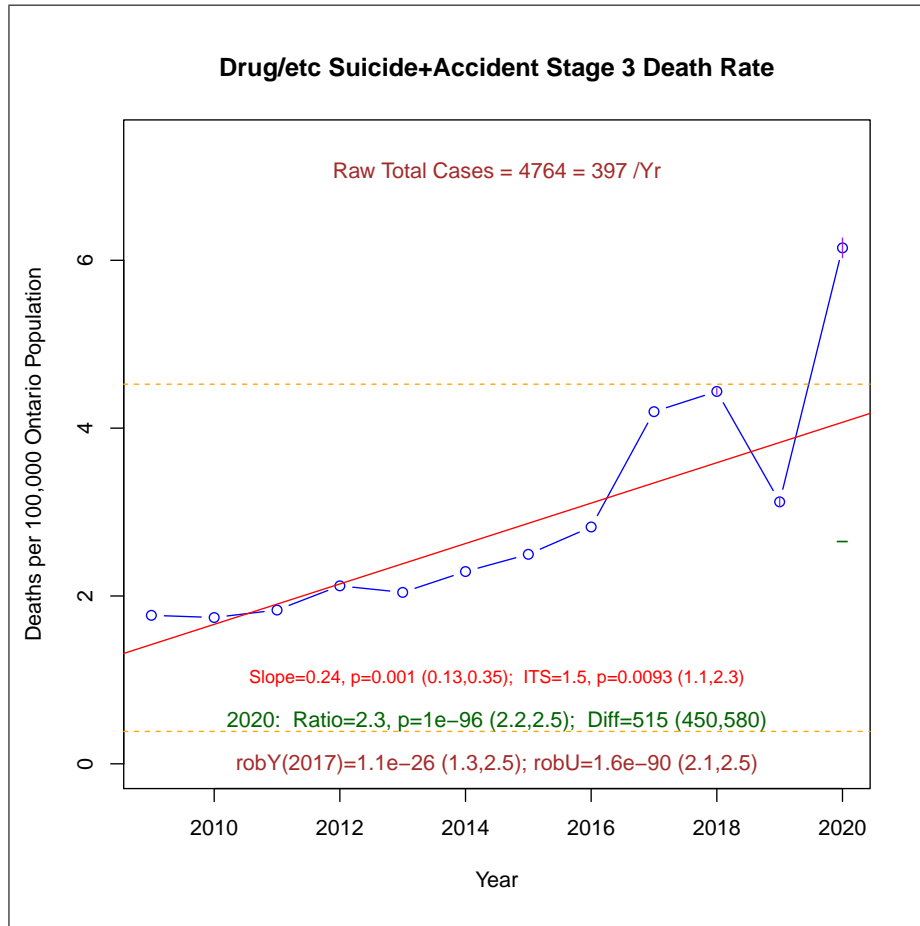
19.1. SuicAcciDrugDrugSubsPoisAlco – Stage 1 (May 19 – June 11):



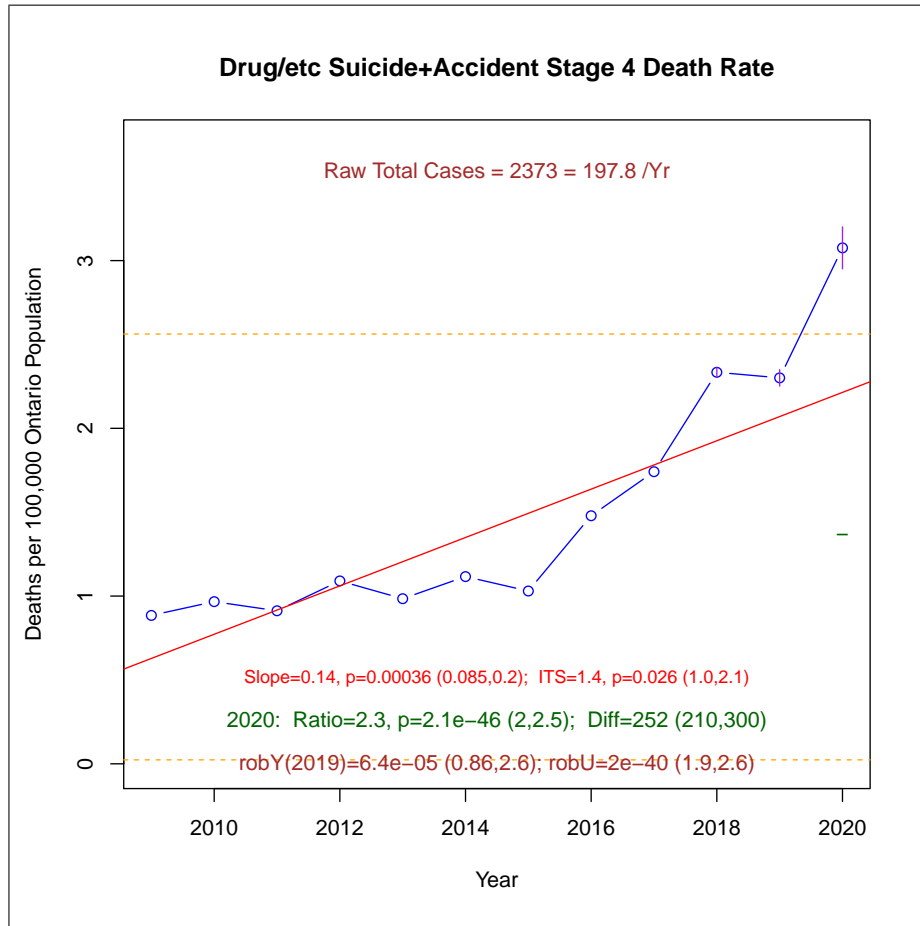
19.2. SuicAcciDrugDrugSubsPoisAlco – Stage 2 (June 12 – July 16):



19.3. SuicAcciDrugDrugSubsPoisAlco – Stage 3 (July 17 – November 7):



19.4. SuicAcciDrugDrugSubsPoisAlco – Stage 4 (November 8 – December 31):

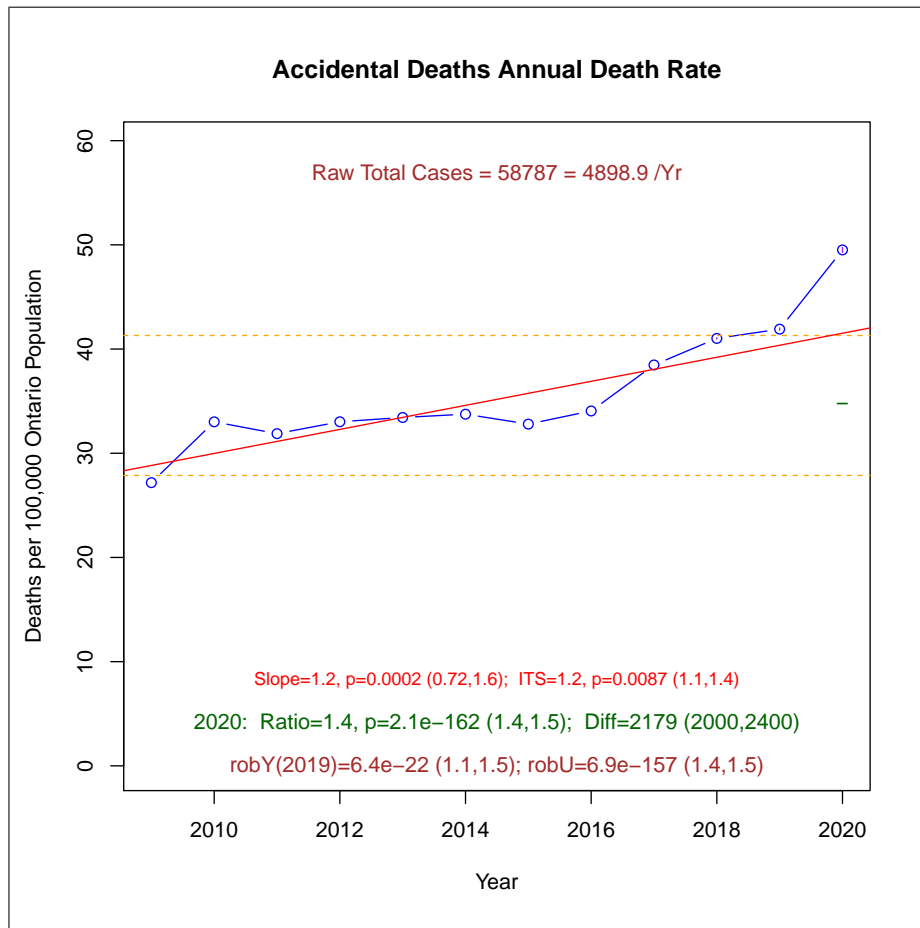


20. AccidentAny Category:

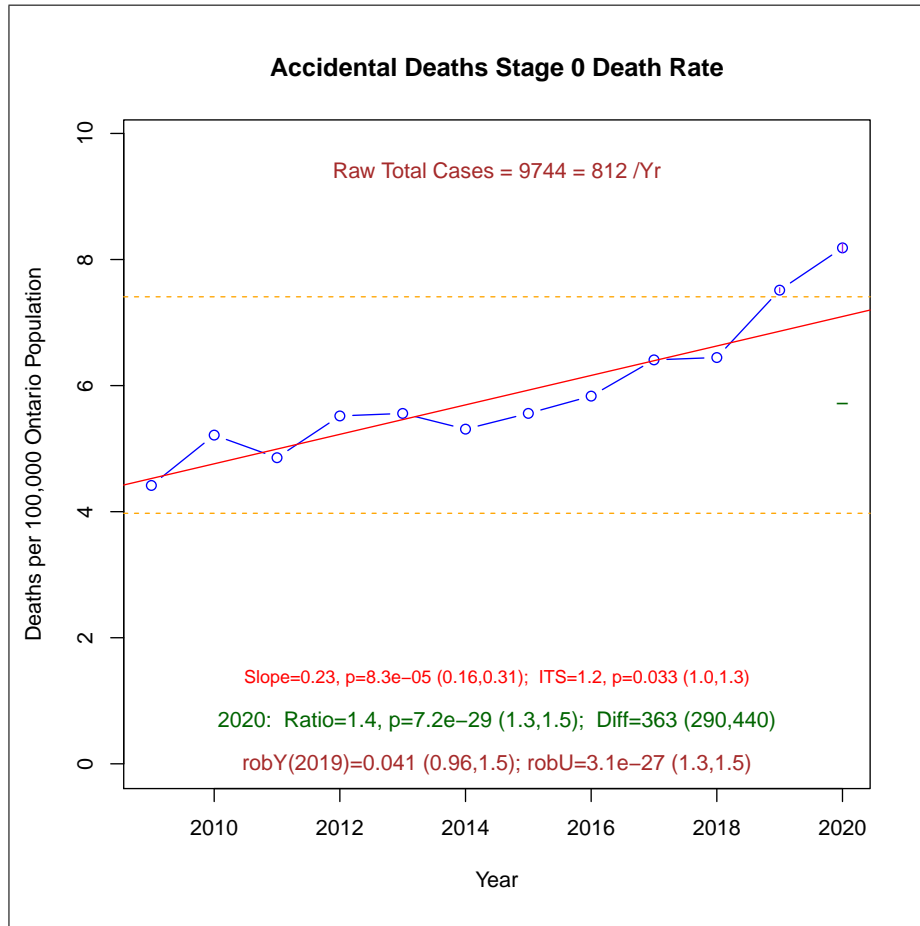
This category is defined by:
manner = "Accident"; and factor = any.

The corresponding correction multiplier is: $1125 / 2790 = 0.40323$.

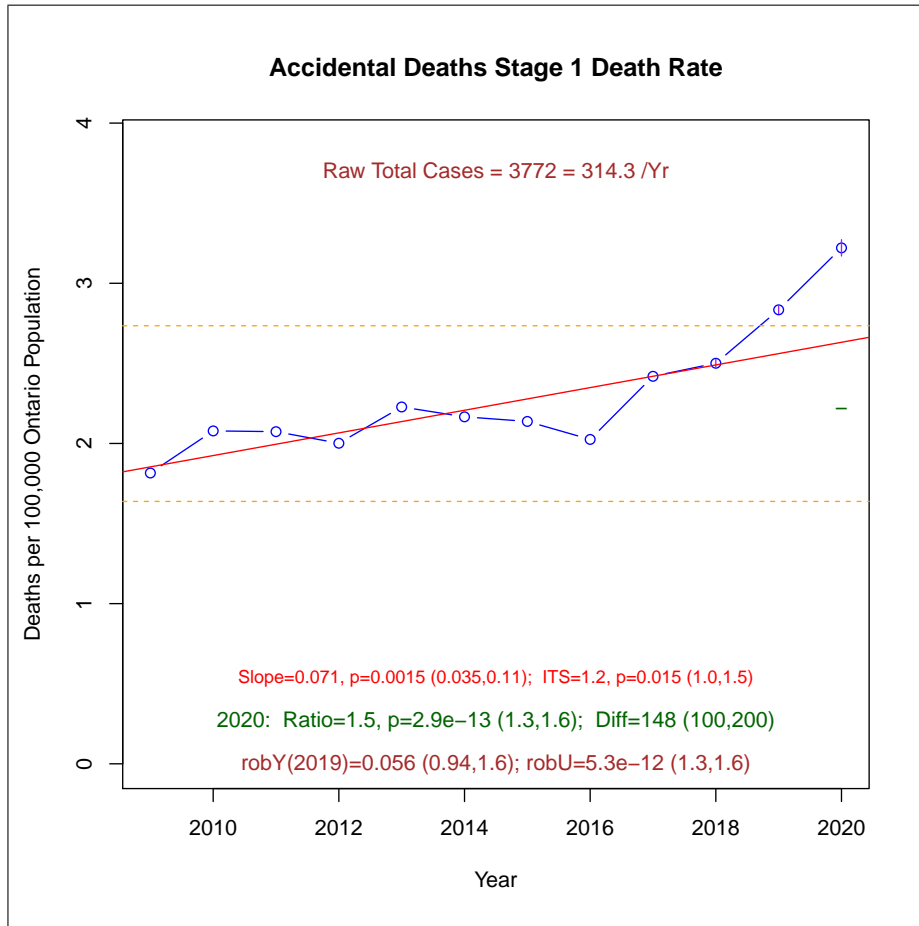
We begin with the Totals for entire years:



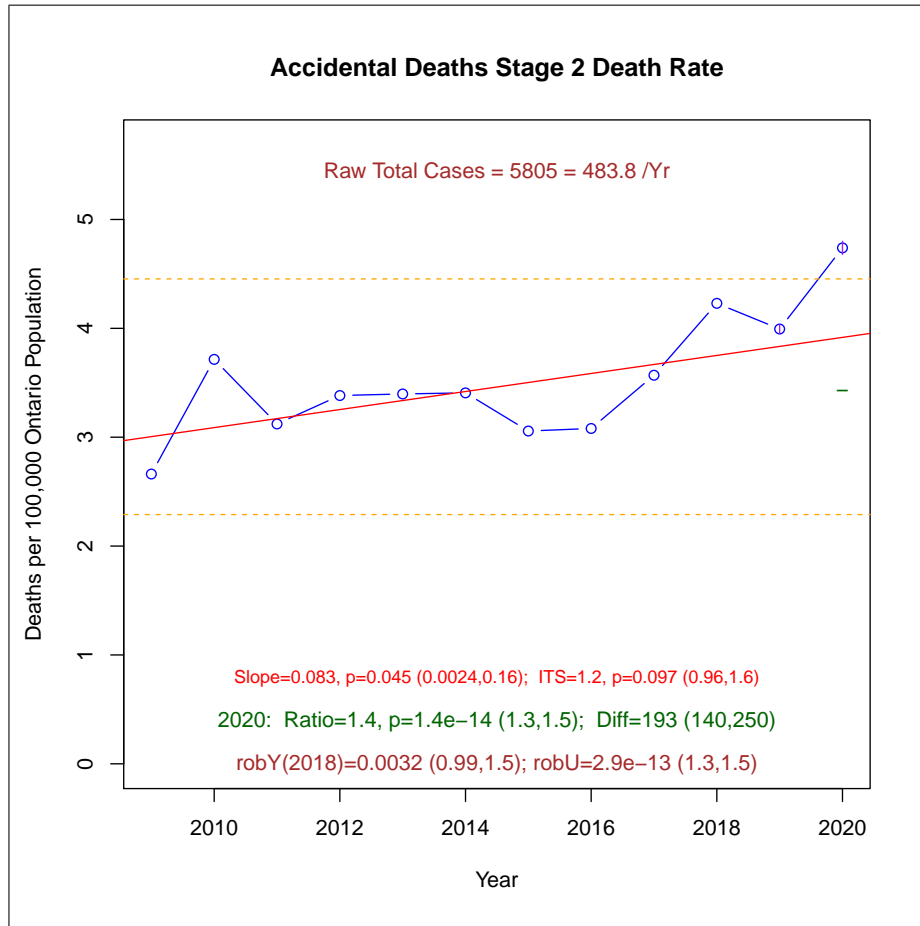
20.0. AccidentAny – Stage 0 (March 17 – May 18):



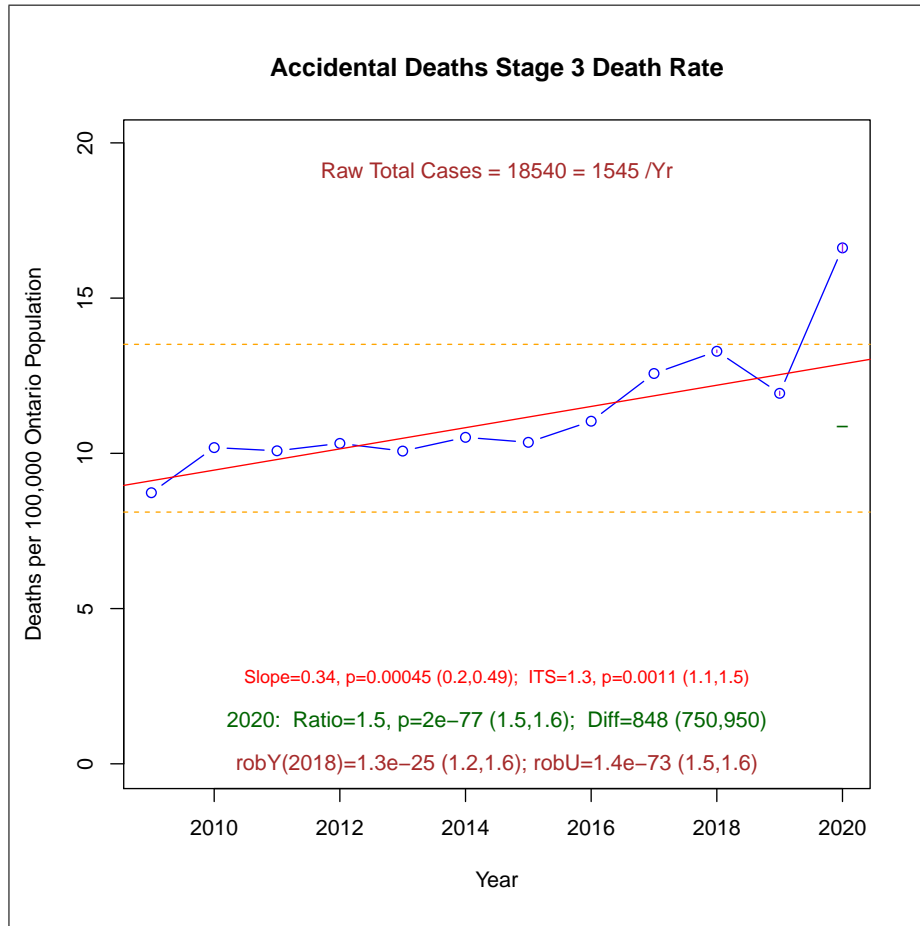
20.1. AccidentAny – Stage 1 (May 19 – June 11):



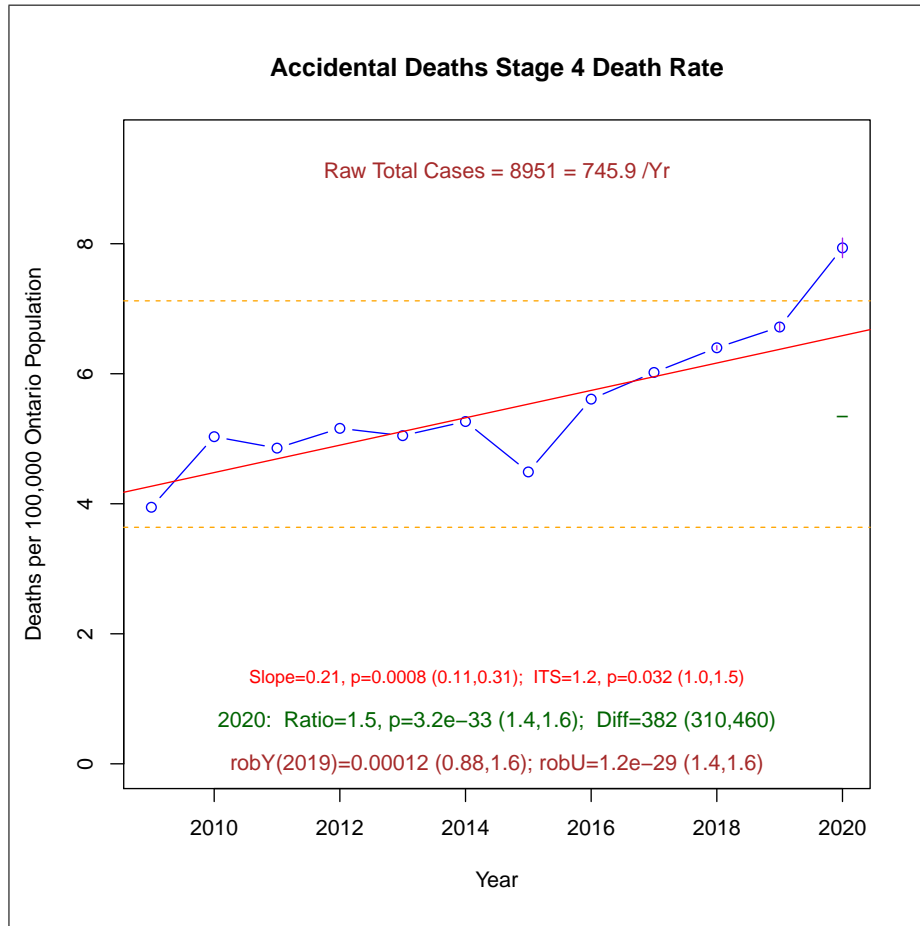
20.2. AccidentAny – Stage 2 (June 12 – July 16):



20.3. AccidentAny – Stage 3 (July 17 – November 7):



20.4. AccidentAny – Stage 4 (November 8 – December 31):

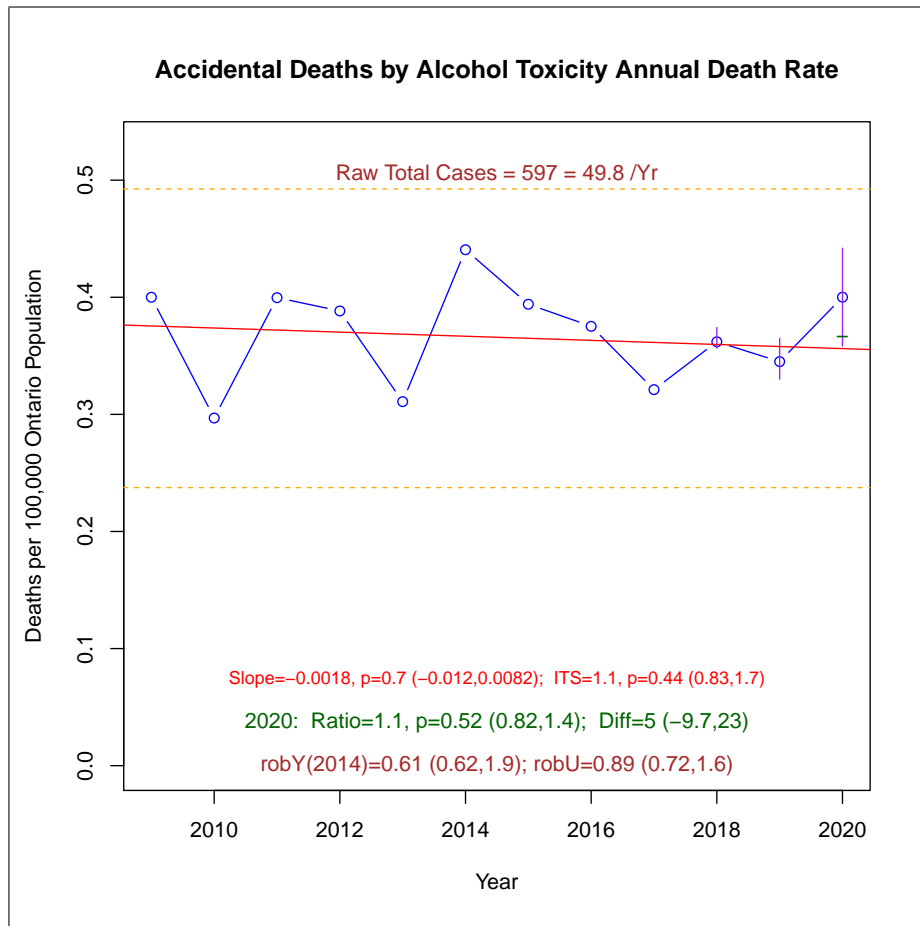


21. AccidentAlcoholToAlcoholTo Category:

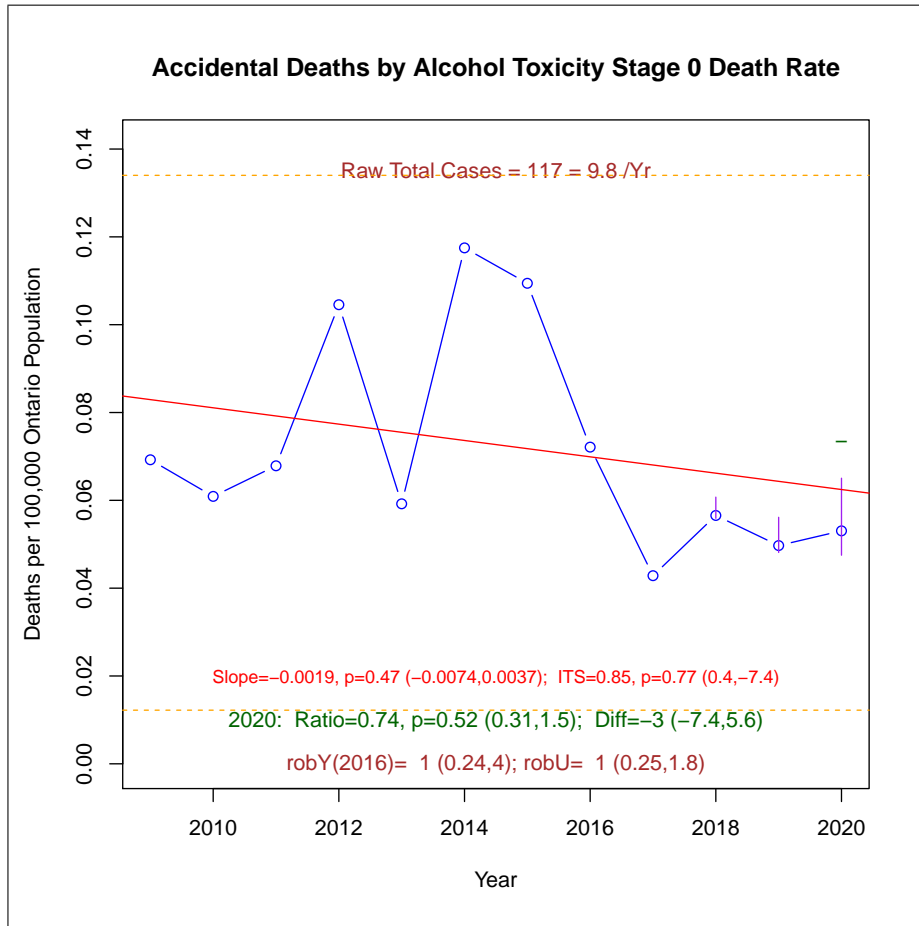
This category is defined by:
manner = “Accident”; and factor = “Alcohol Toxicity (Acute)” or “Alcohol Toxicity (other alcohols)”.

The corresponding correction multiplier is: $20 / 2790 = 0.00717$.

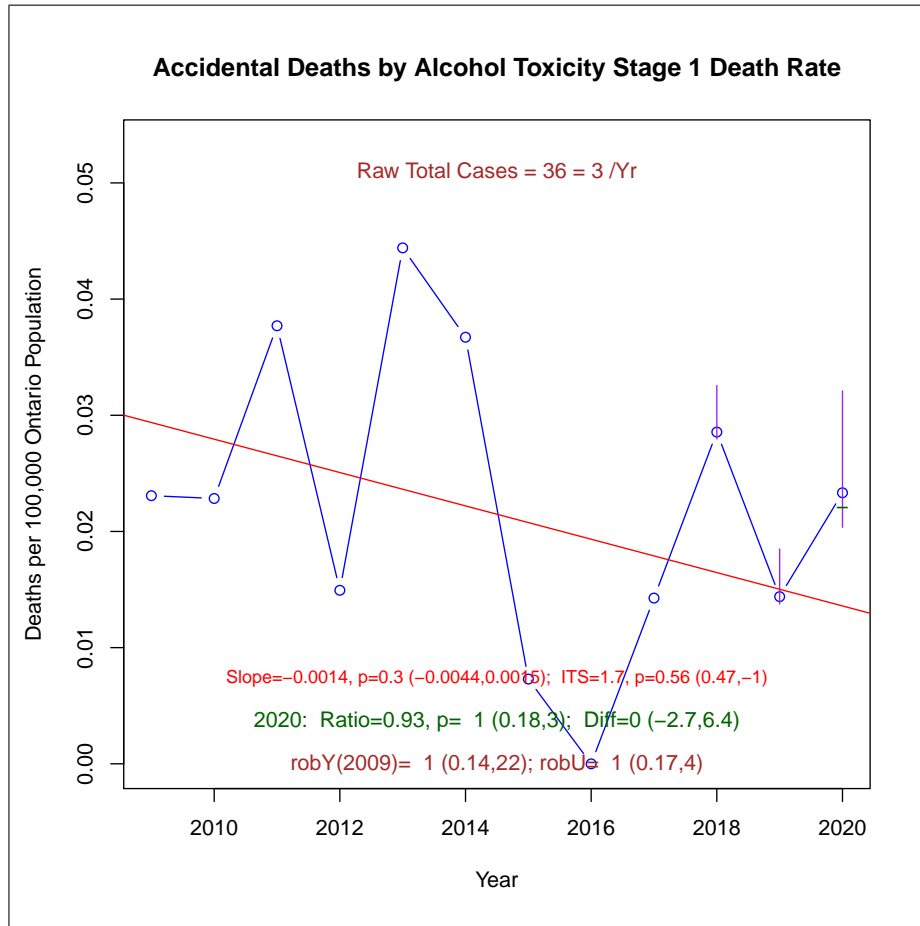
We begin with the Totals for entire years:



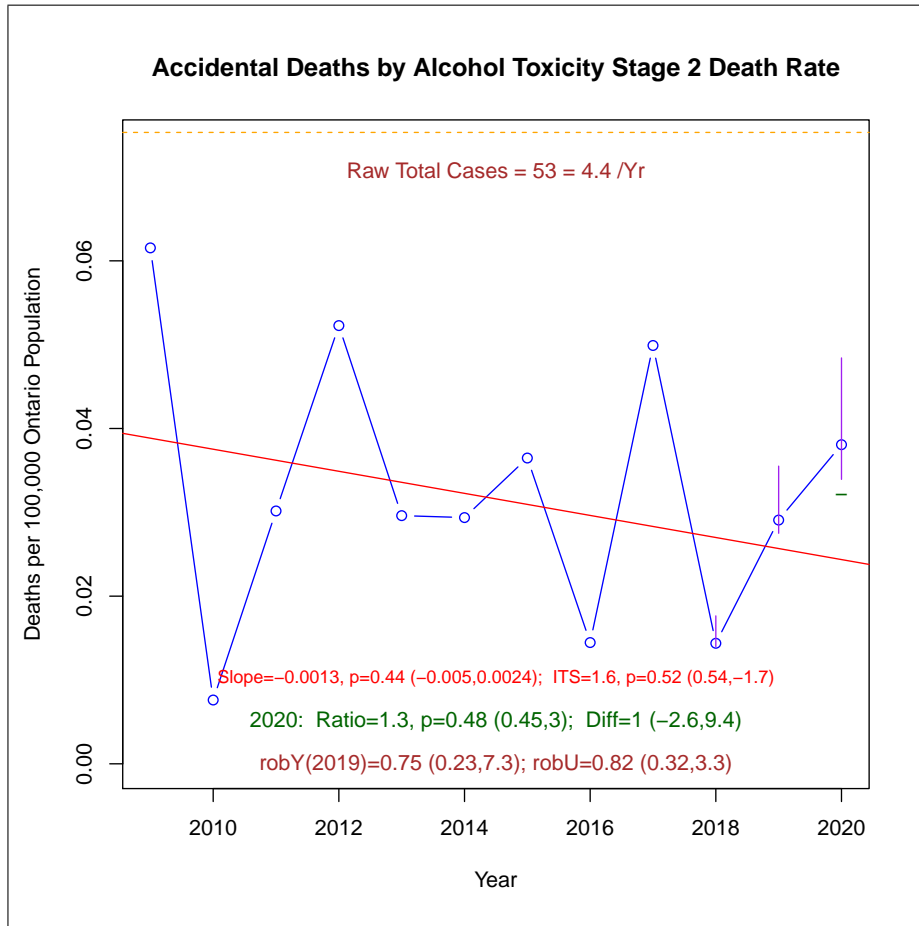
21.0. AccidentAlcoholToAlcoholTo – Stage 0 (March 17 – May 18):



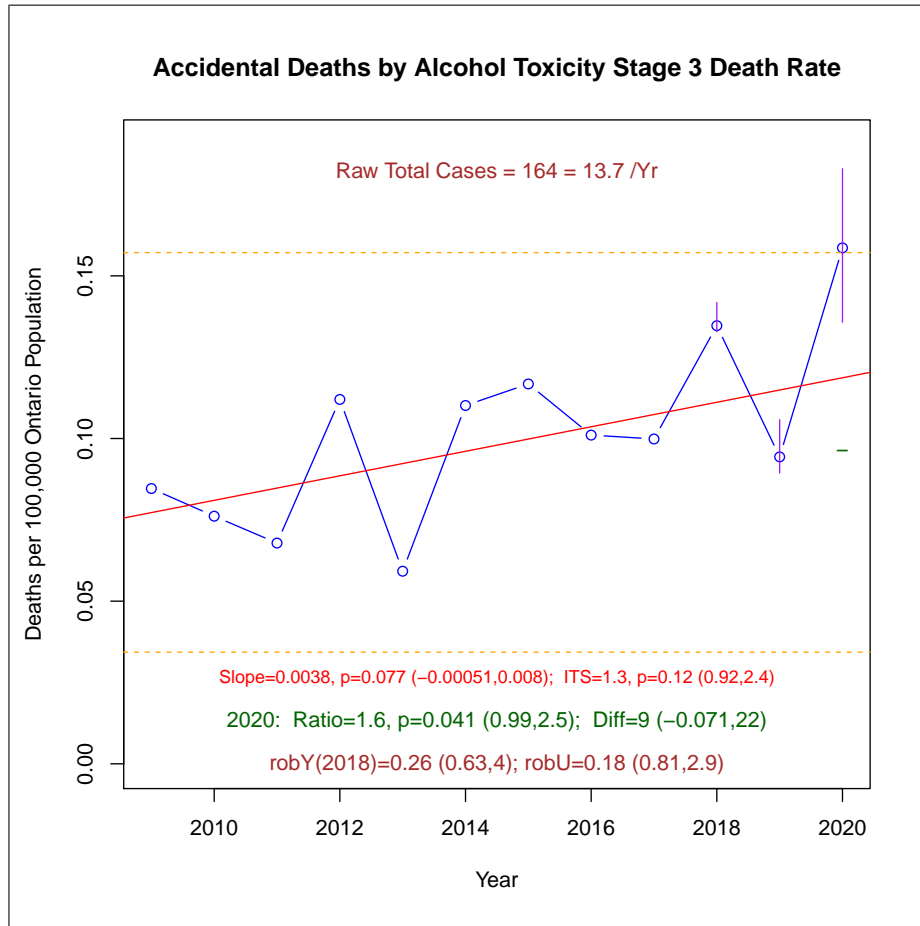
21.1. AccidentAlcoholToAlcoholTo – Stage 1 (May 19 – June 11):



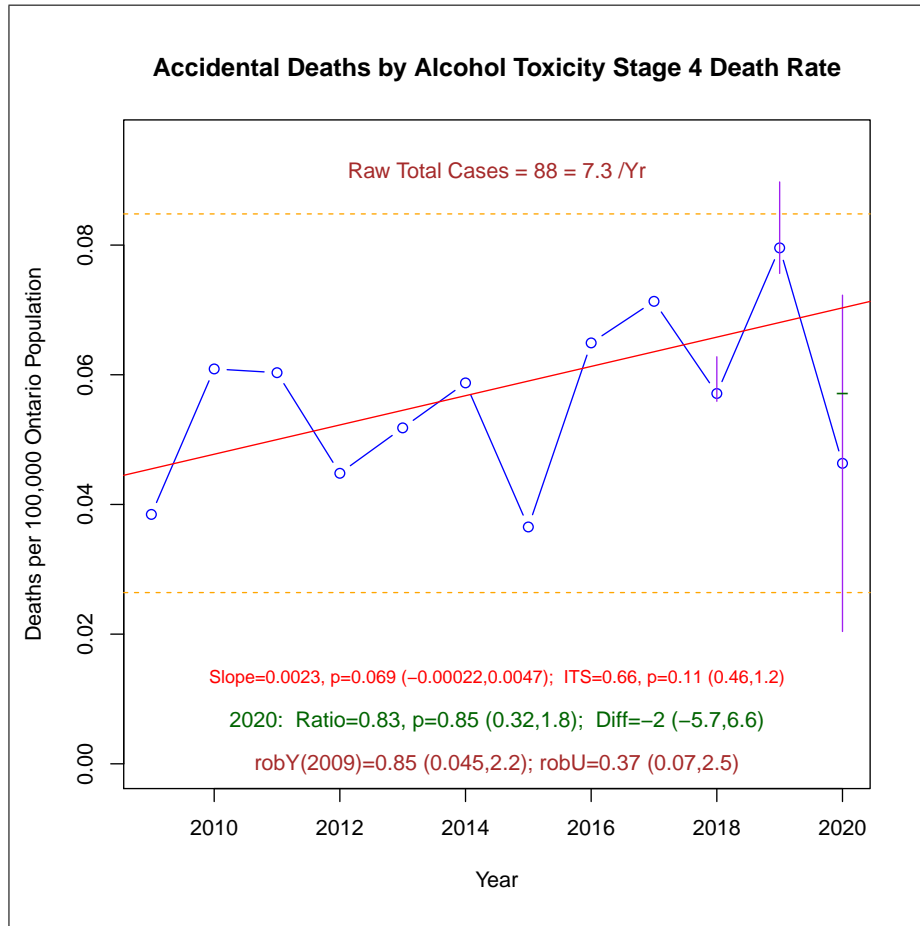
21.2. AccidentAlcoholToAlcoholTo – Stage 2 (June 12 – July 16):



21.3. AccidentAlcoholToAlcoholTo – Stage 3 (July 17 – November 7):



21.4. AccidentAlcoholToAlcoholTo – Stage 4 (November 8 – December 31):

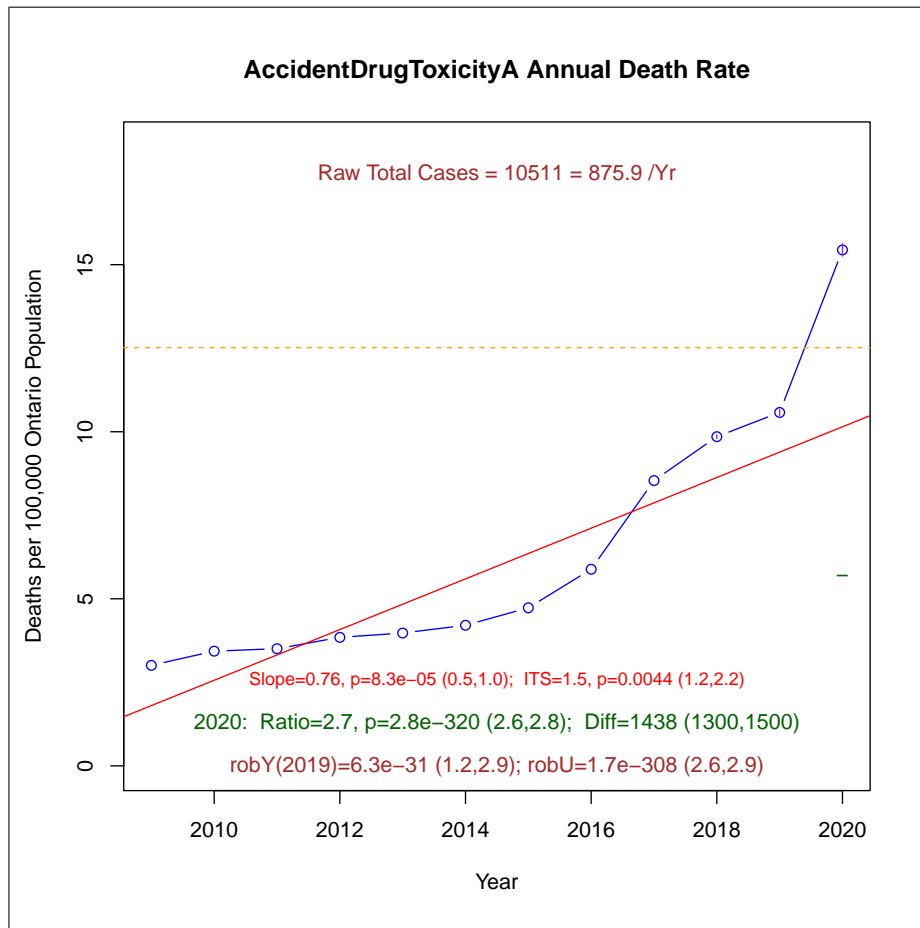


22. AccidentDrugToxicityA Category:

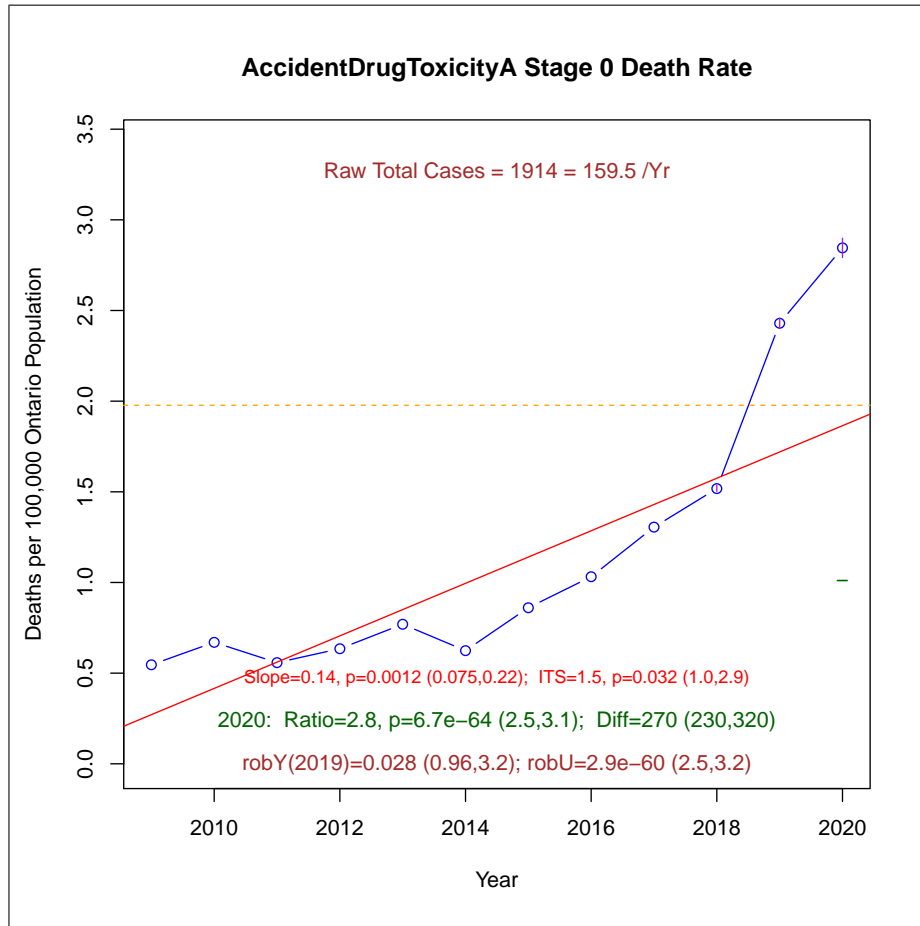
This category is defined by:
manner = “Accident”; and factor = “Drug Toxicity (Acute)”.

The corresponding correction multiplier is: $471 / 2790 = 0.16882$.

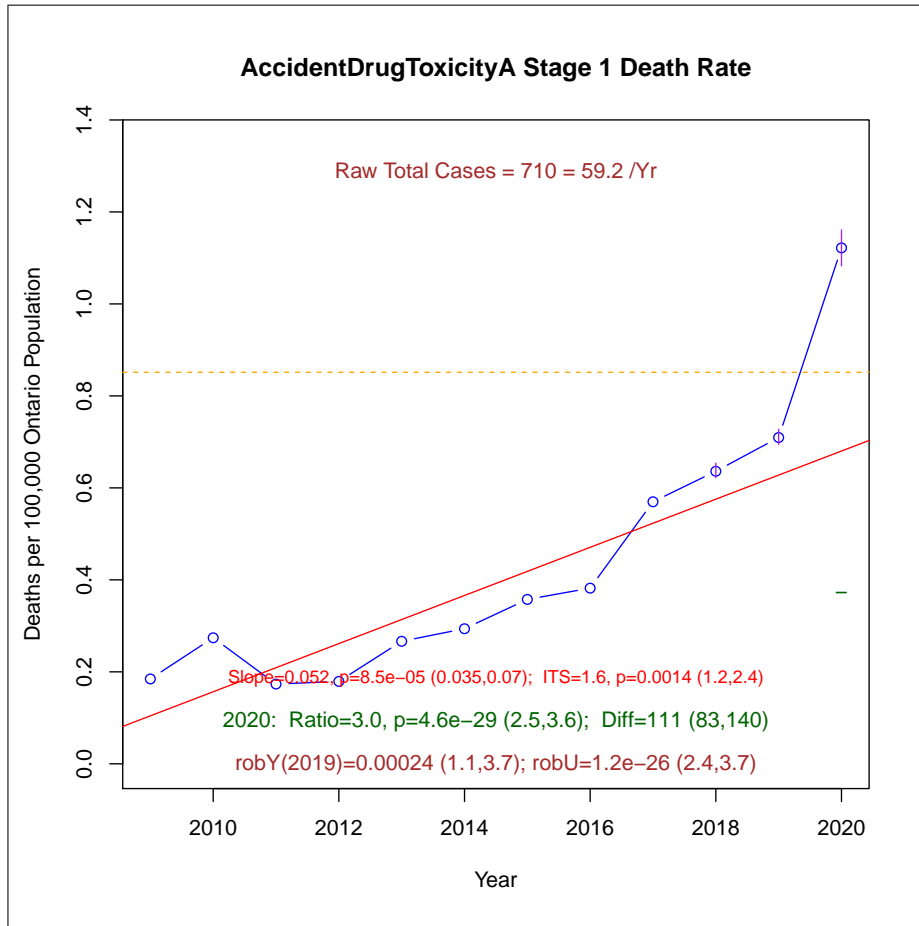
We begin with the Totals for entire years:



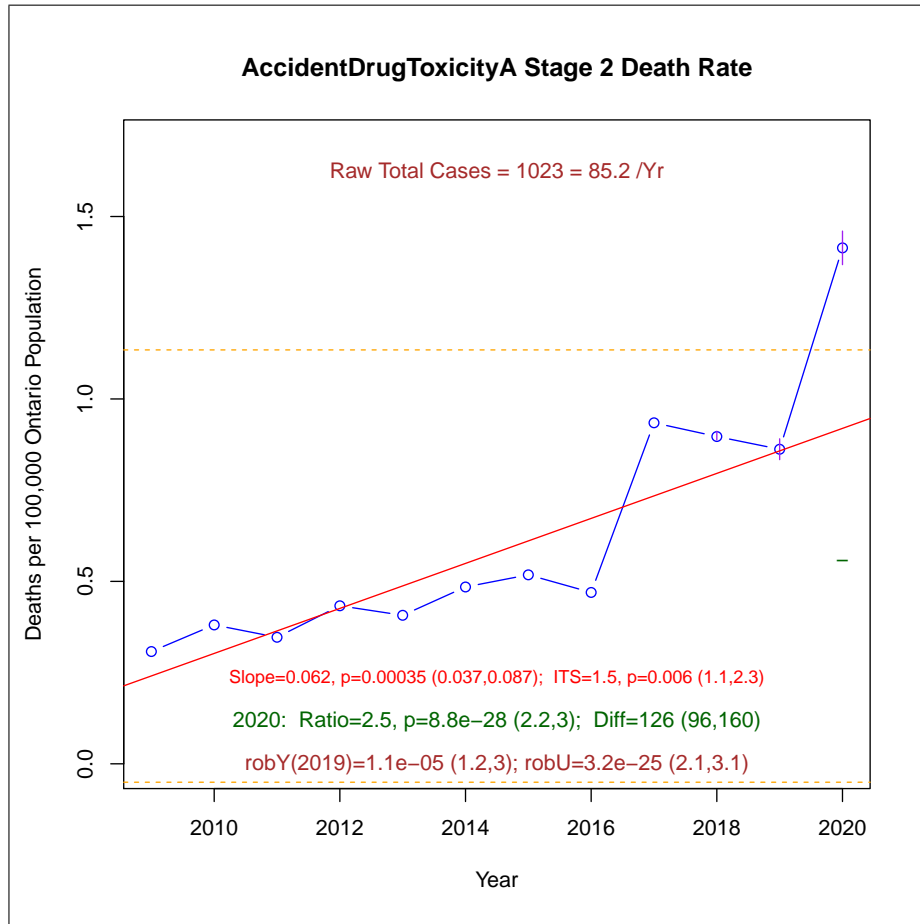
22.0. AccidentDrugToxicityA – Stage 0 (March 17 – May 18):



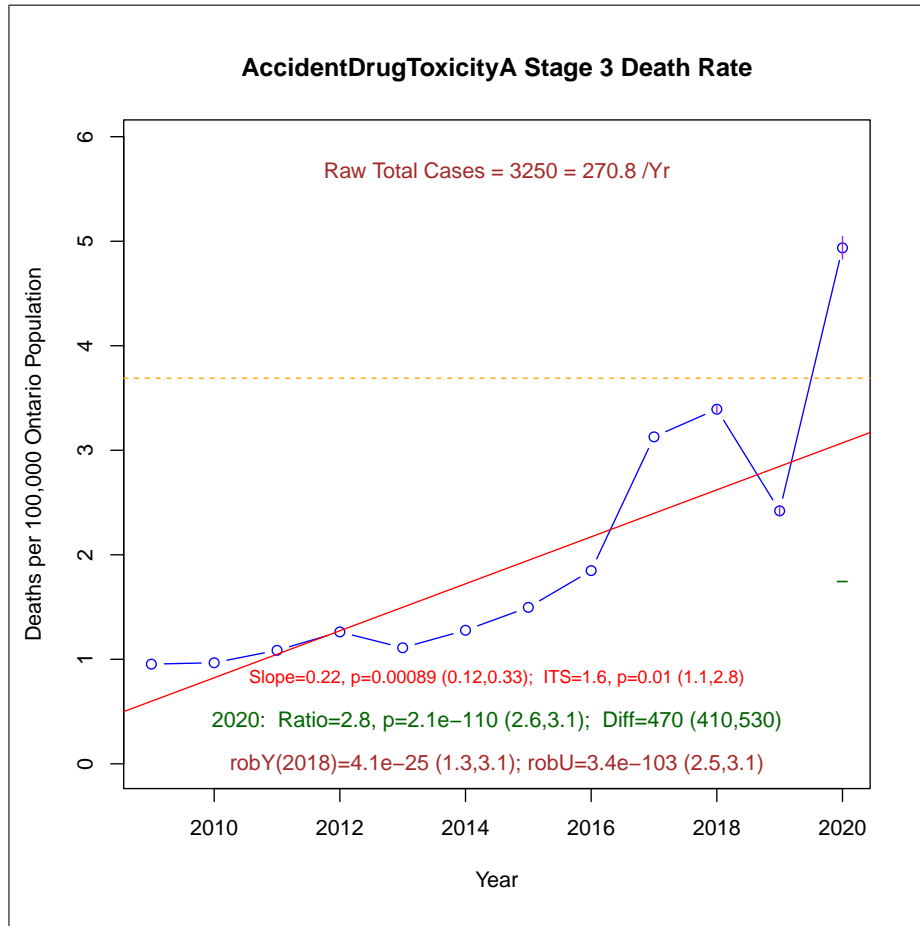
22.1. AccidentDrugToxicityA – Stage 1 (May 19 – June 11):



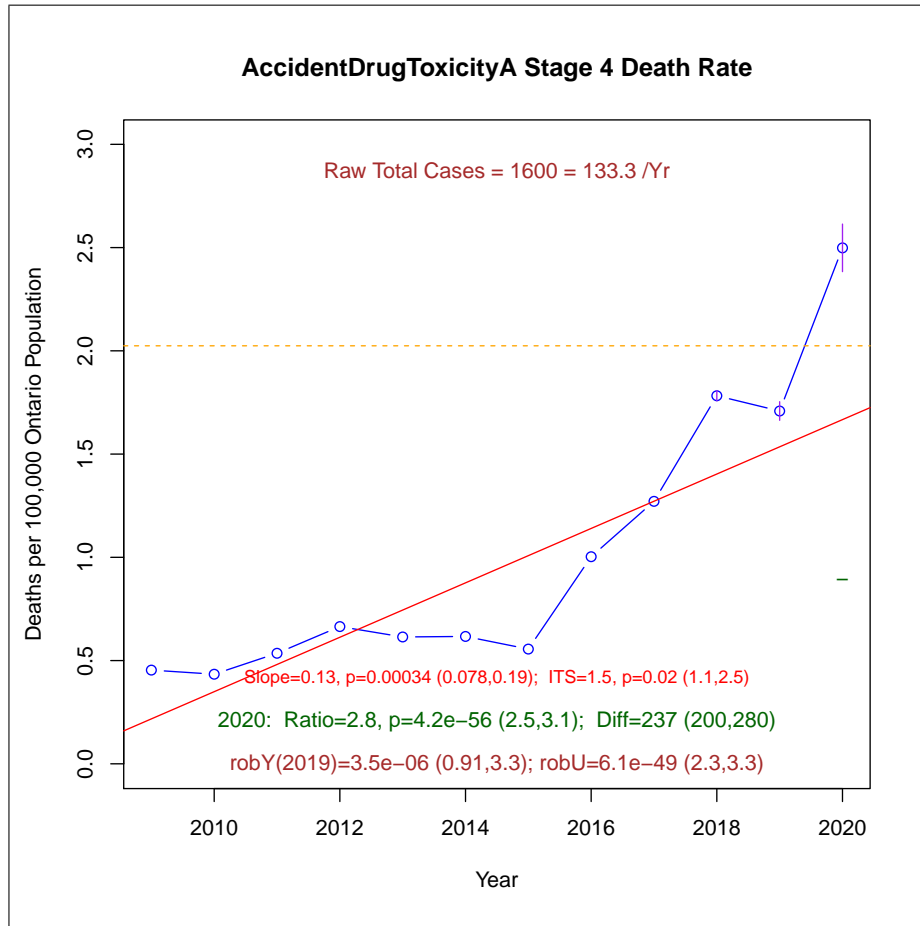
22.2. AccidentDrugToxicityA – Stage 2 (June 12 – July 16):



22.3. AccidentDrugToxicityA – Stage 3 (July 17 – November 7):



22.4. AccidentDrugToxicityA – Stage 4 (November 8 – December 31):

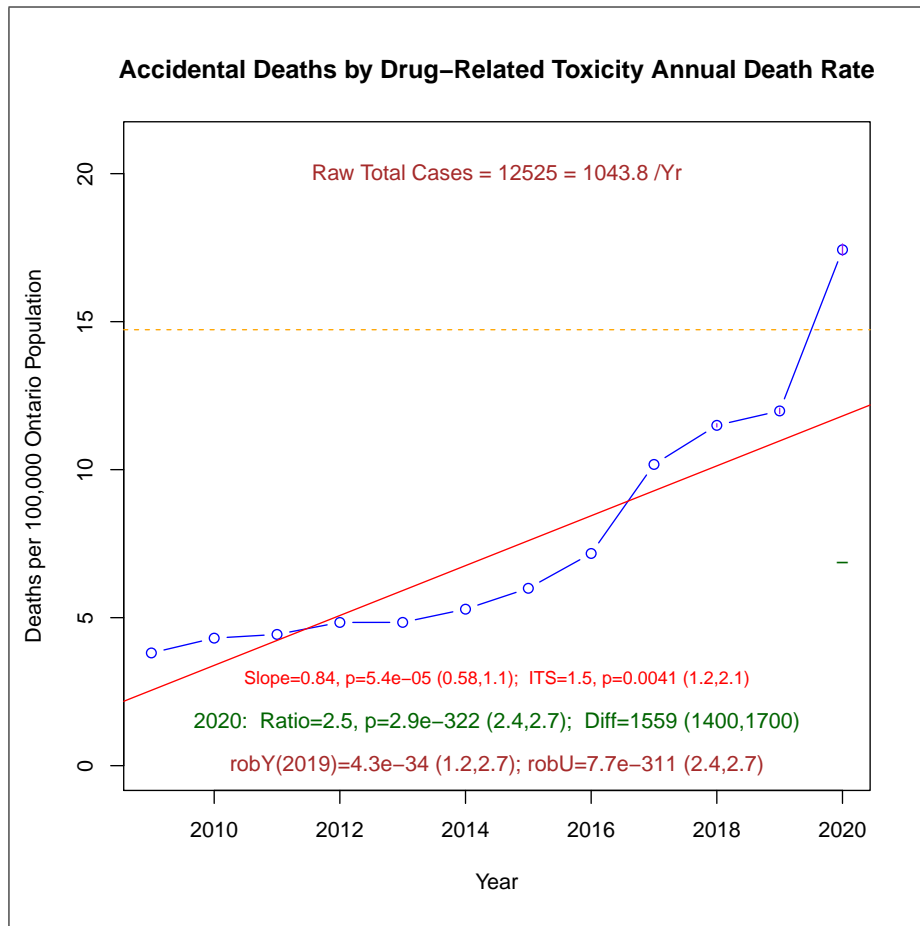


23. AccidentDrugToxicDrugAlcoh Category:

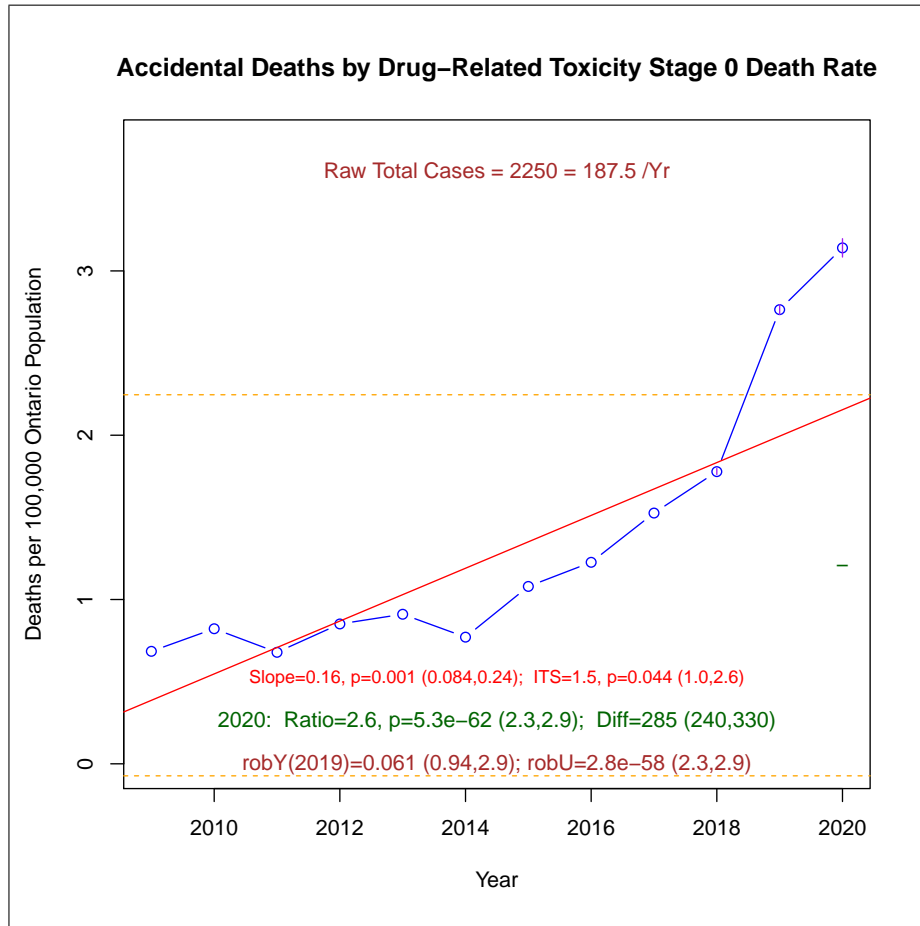
This category is defined by:
 manner = “Accident”; and factor = “Drug Toxicity (Acute)” or “Drug & Alcohol Toxicity (Acute)”.

The corresponding correction multiplier is: $531 / 2790 = 0.19032$.

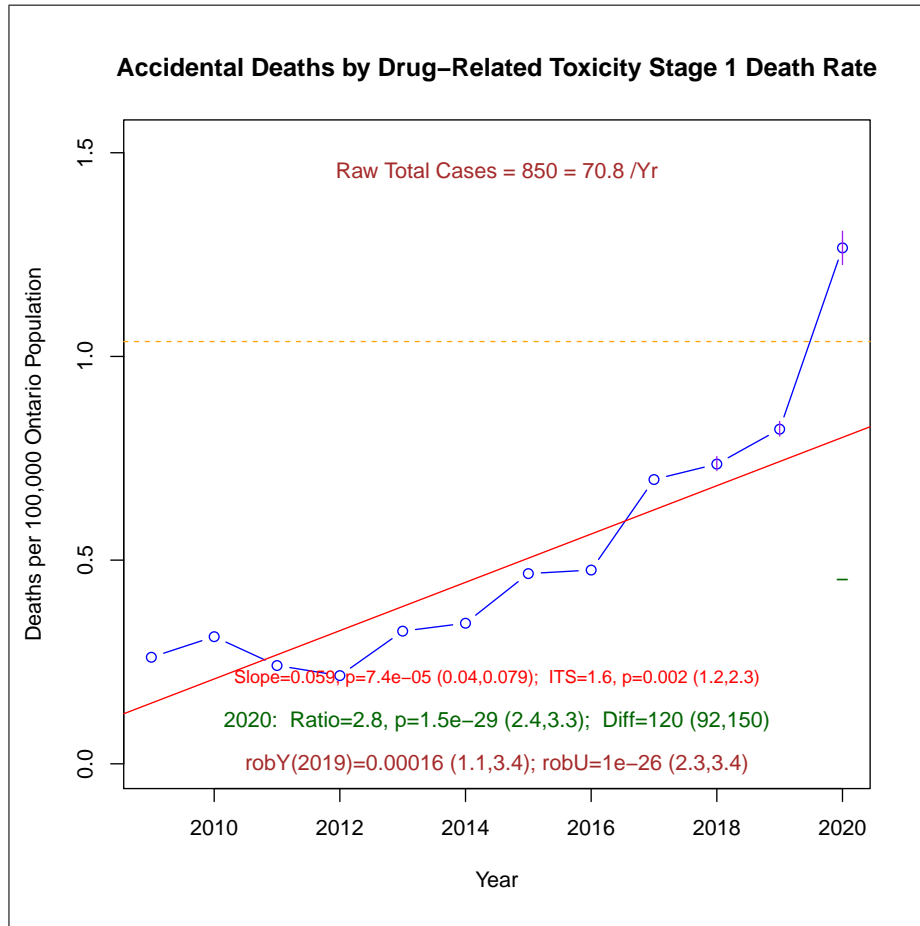
We begin with the Totals for entire years:



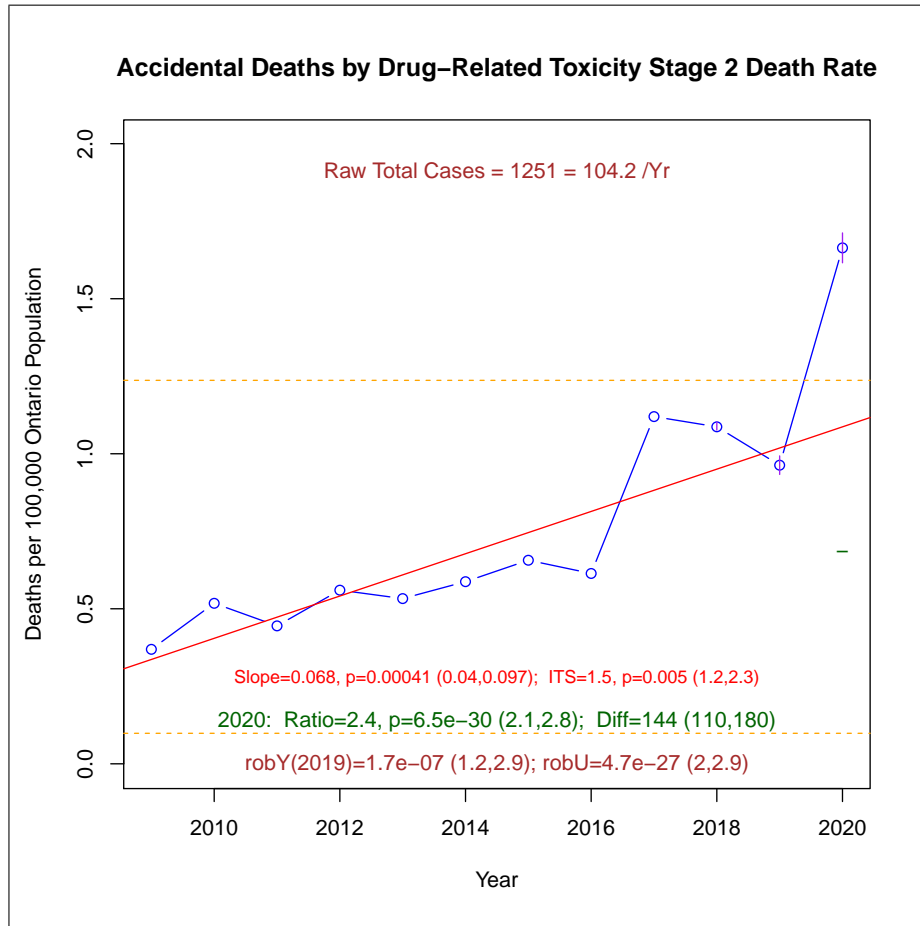
23.0. AccidentDrugToxicDrugAlcoh – Stage 0 (March 17 – May 18):



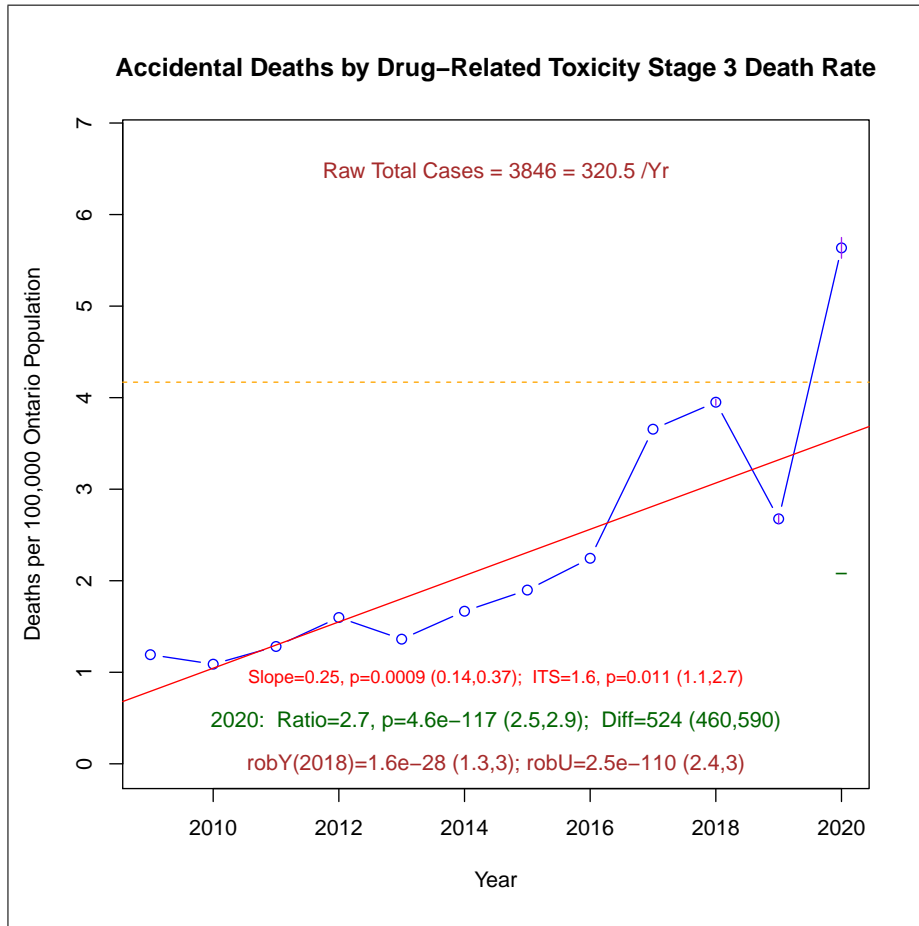
23.1. AccidentDrugToxicDrugAlcohol – Stage 1 (May 19 – June 11):



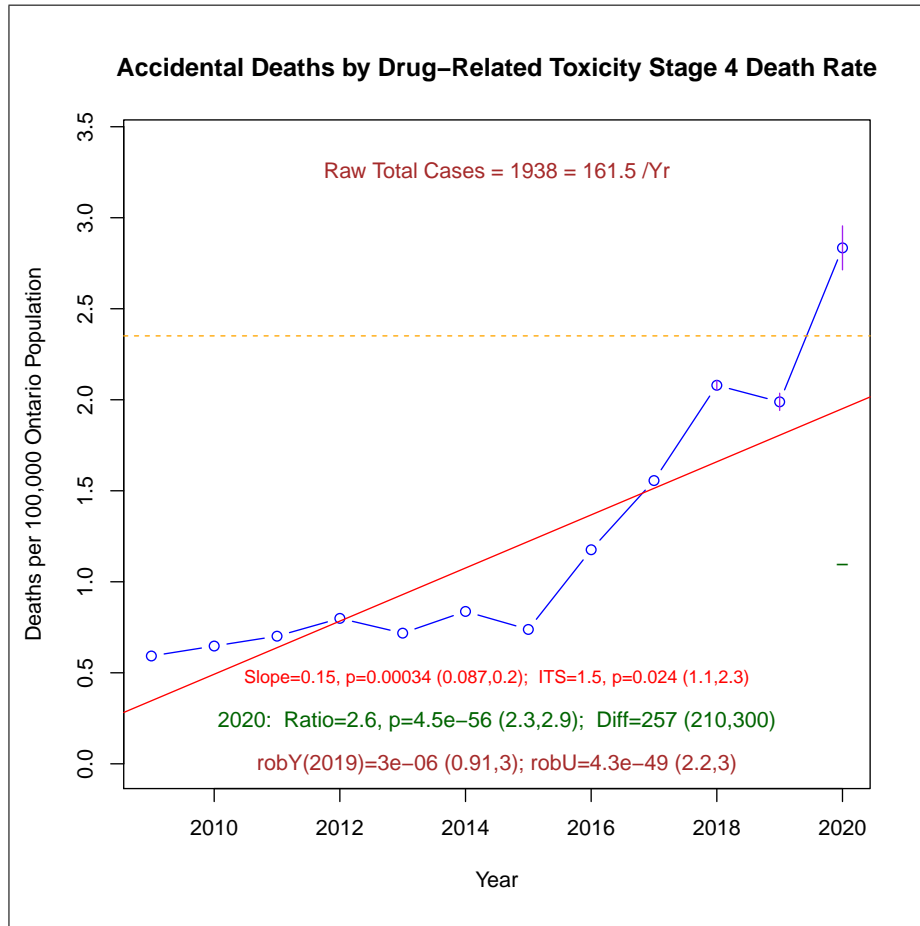
23.2. AccidentDrugToxicDrugAlcoh – Stage 2 (June 12 – July 16):



23.3. AccidentDrugToxicDrugAlcoh – Stage 3 (July 17 – November 7):



23.4. AccidentDrugToxicDrugAlcoh – Stage 4 (November 8 – December 31):

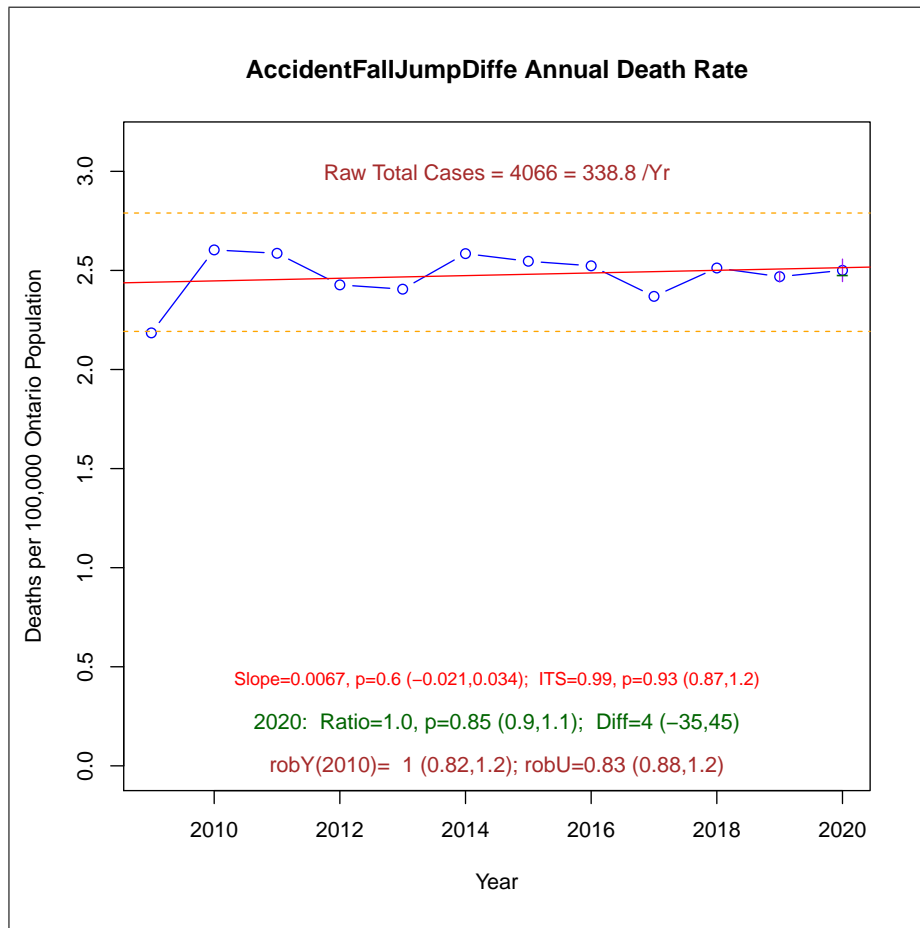


24. AccidentFallJumpDiffe Category:

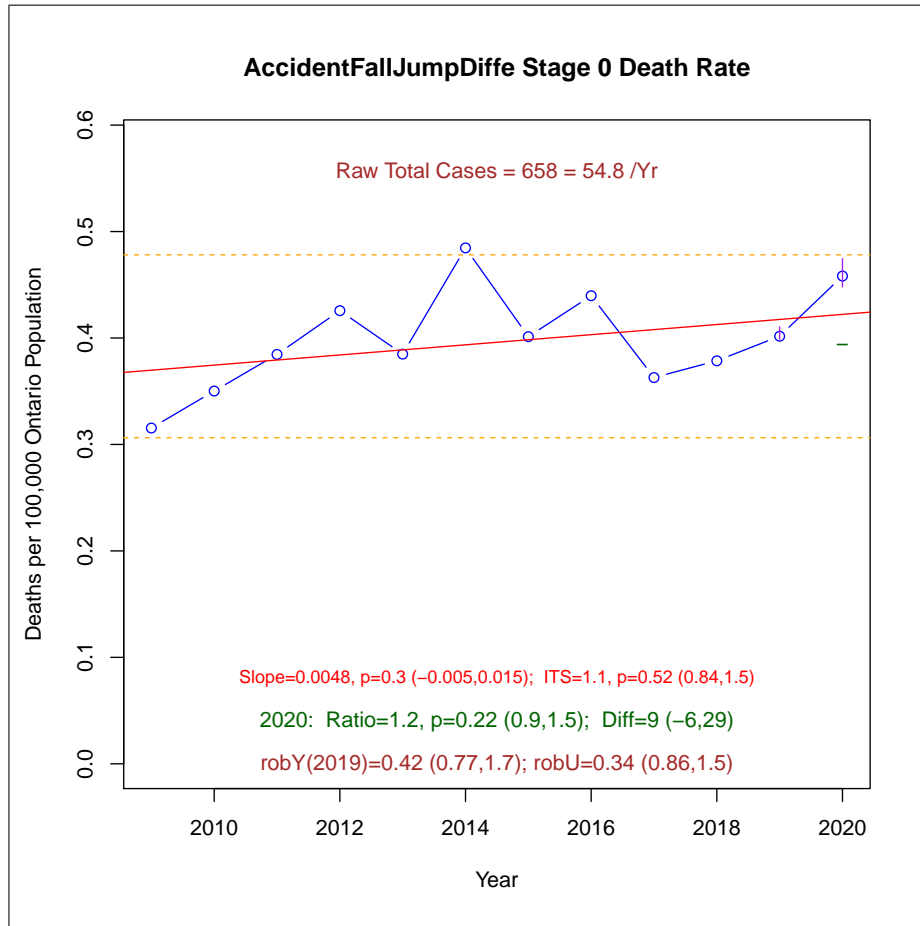
This category is defined by:
manner = “Accident”; and factor = “Fall / Jump - Different Level/Height”.

The corresponding correction multiplier is: $37 / 2790 = 0.01326$.

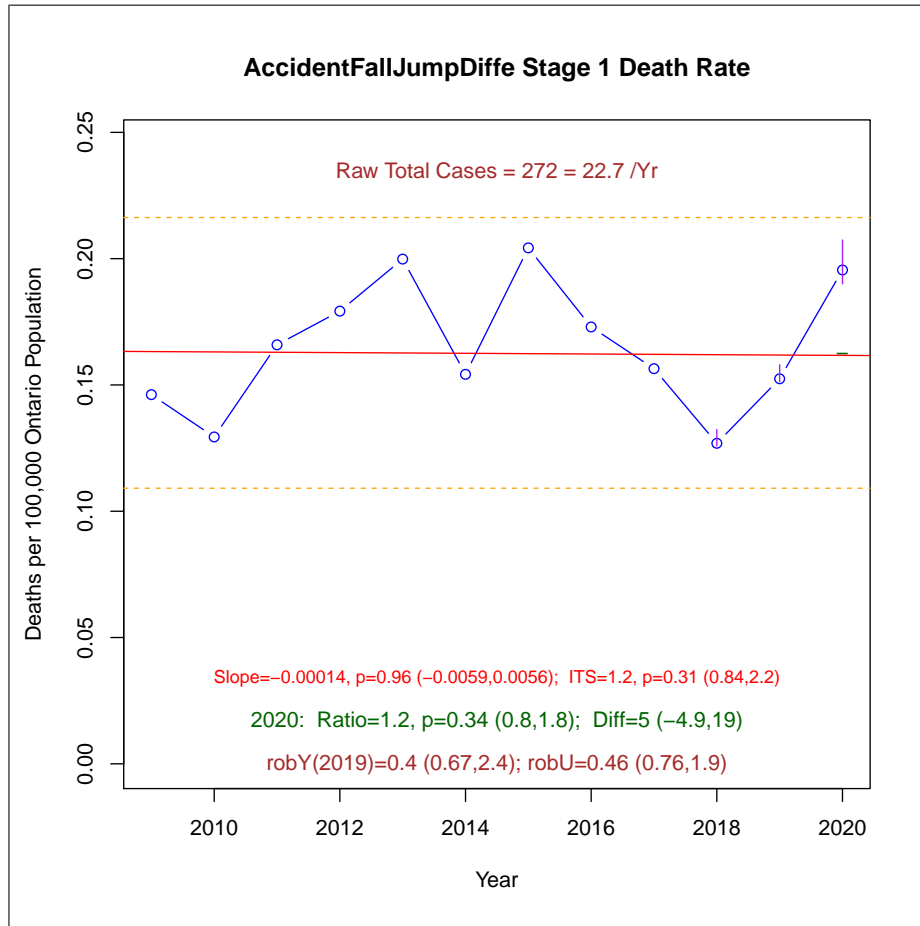
We begin with the Totals for entire years:



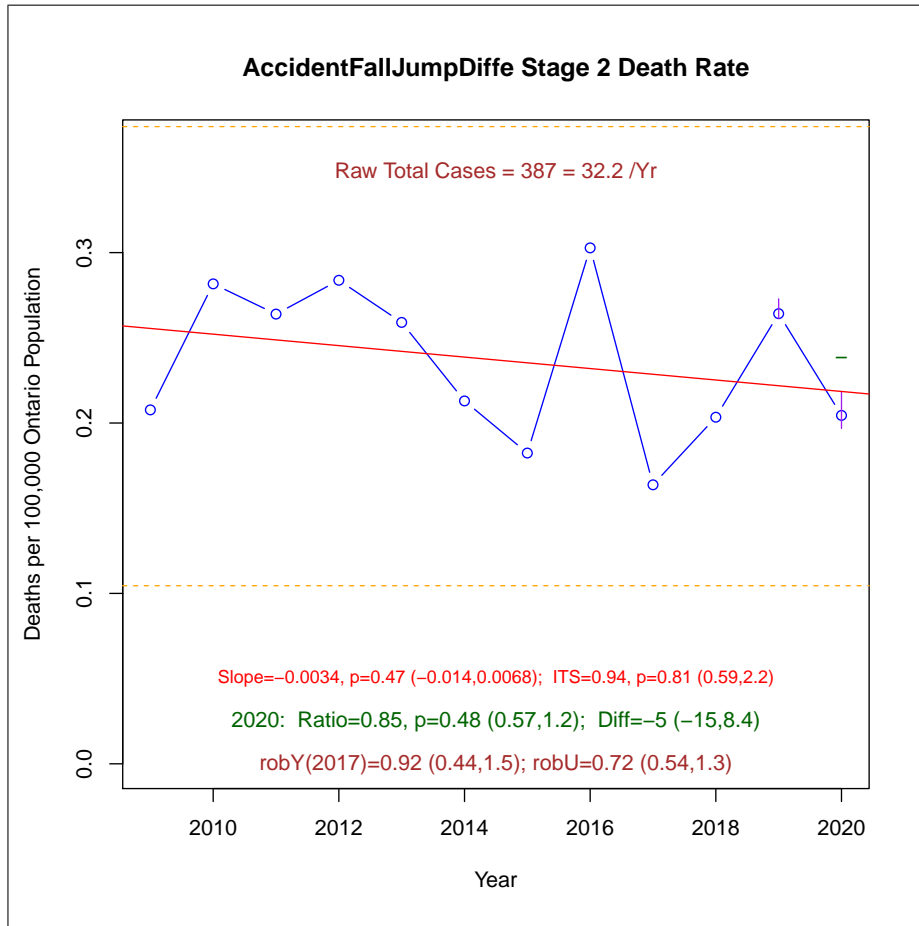
24.0. AccidentFallJumpDiffe – Stage 0 (March 17 – May 18):



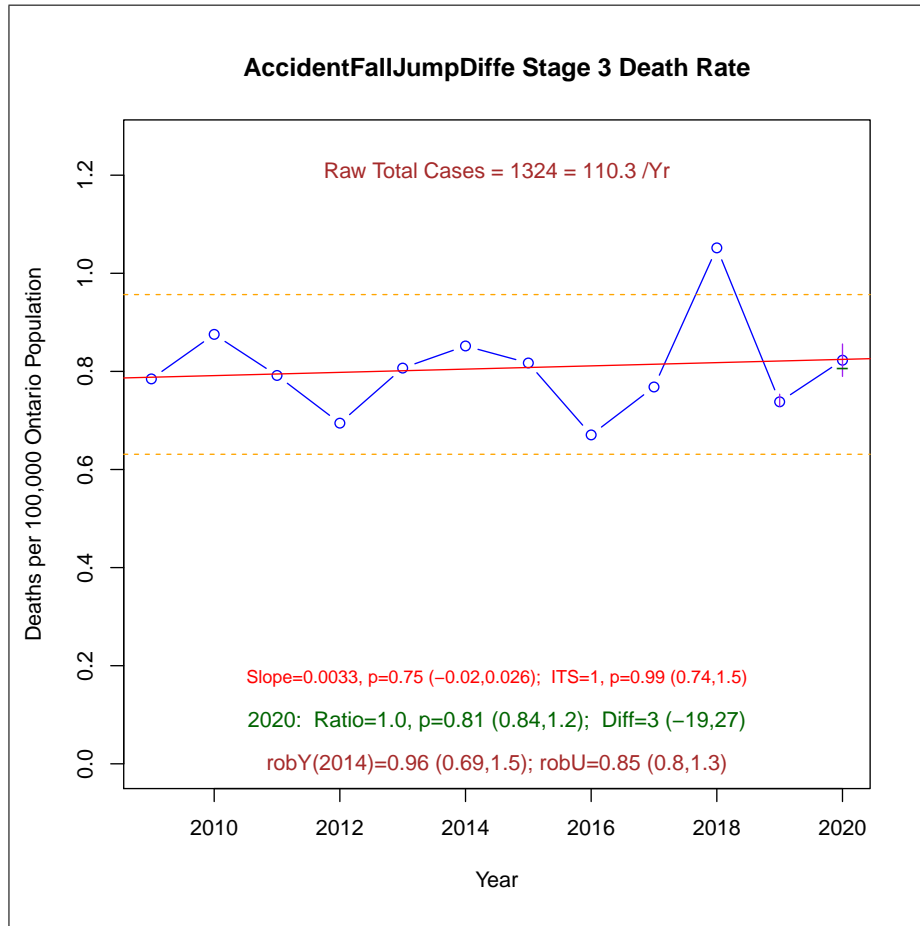
24.1. AccidentFallJumpDiffe – Stage 1 (May 19 – June 11):



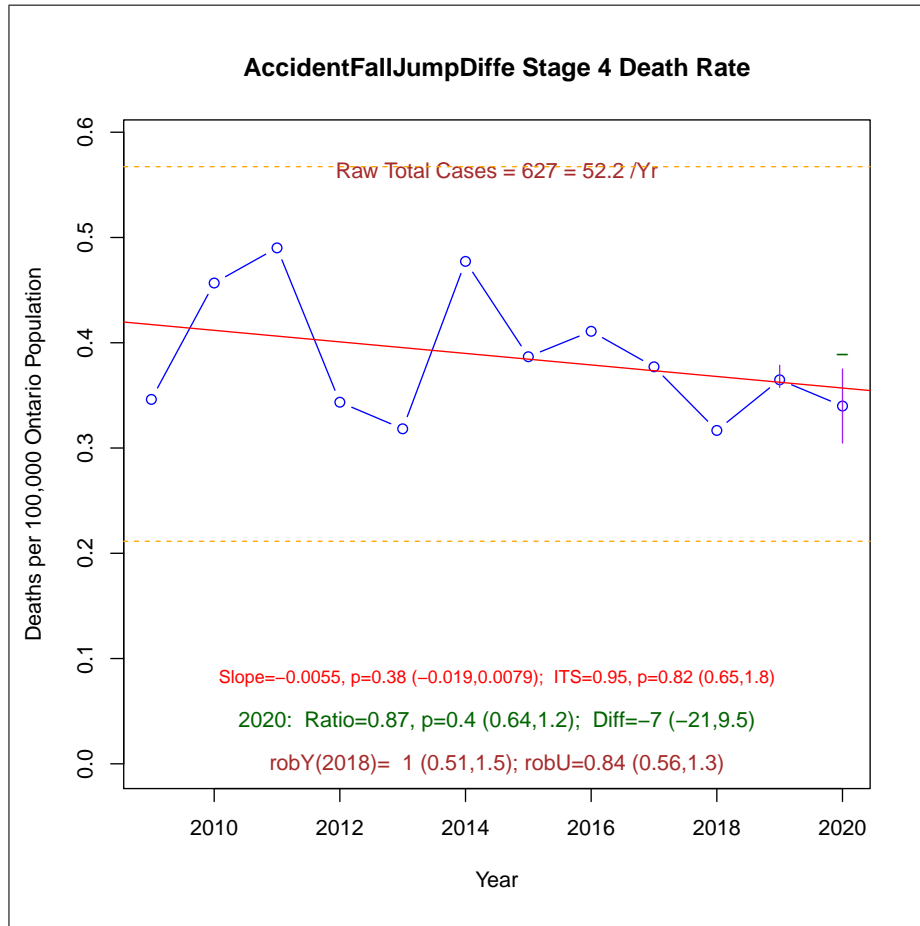
24.2. AccidentFallJumpDiffe – Stage 2 (June 12 – July 16):



24.3. AccidentFallJumpDiffe – Stage 3 (July 17 – November 7):



24.4. AccidentFallJumpDiffe – Stage 4 (November 8 – December 31):



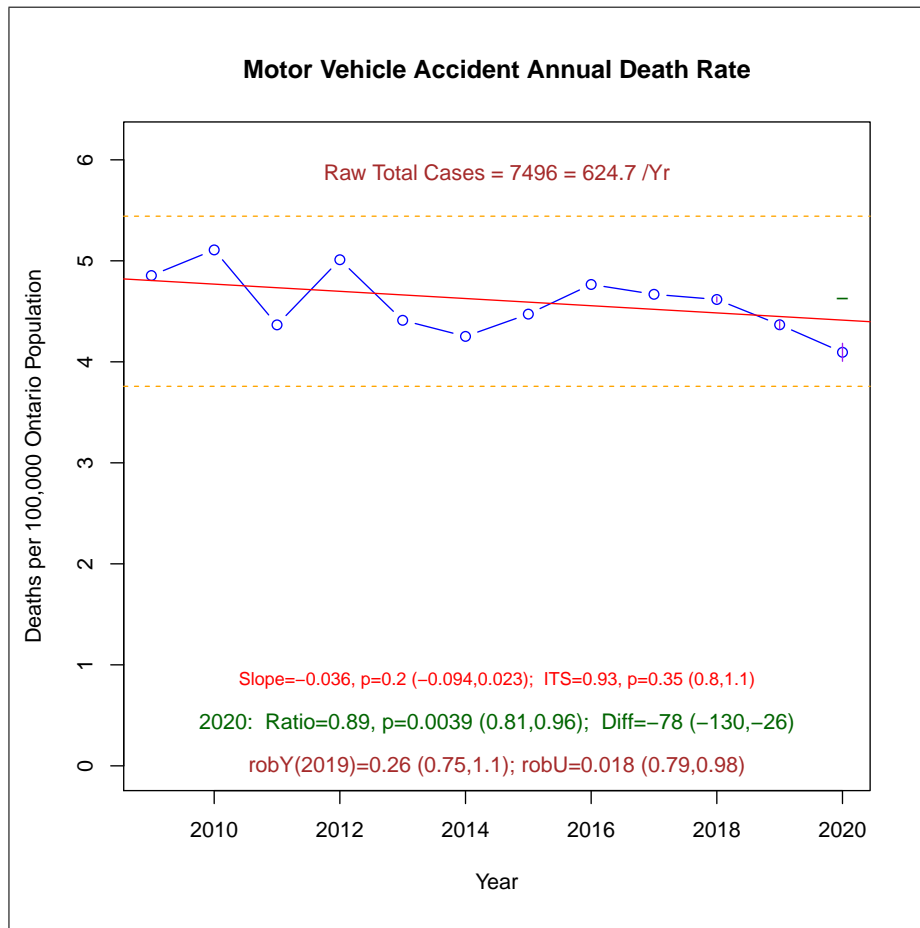
25. AccidentTraumaMotorVe Category:

This category is defined by:

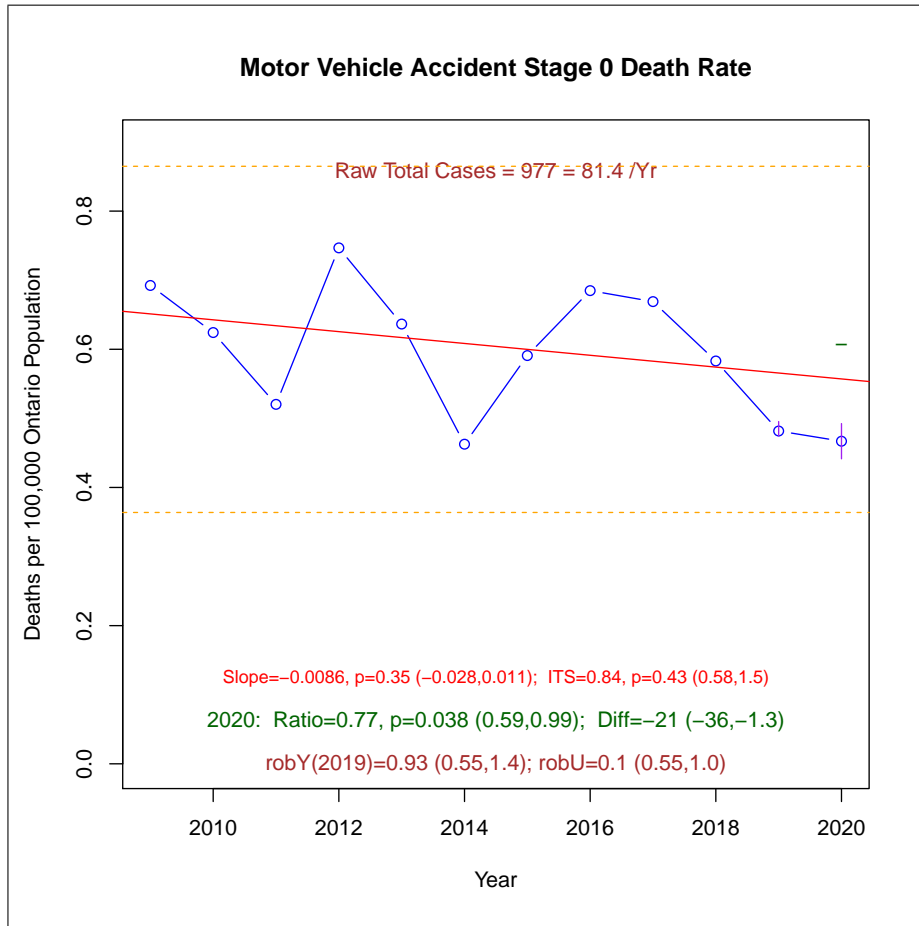
manner = “Accident”; and factor = “Trauma - Motor Vehicle, Vehicle/Pedestrian collision”.

The corresponding correction multiplier is: $93 / 2790 = 0.03333$.

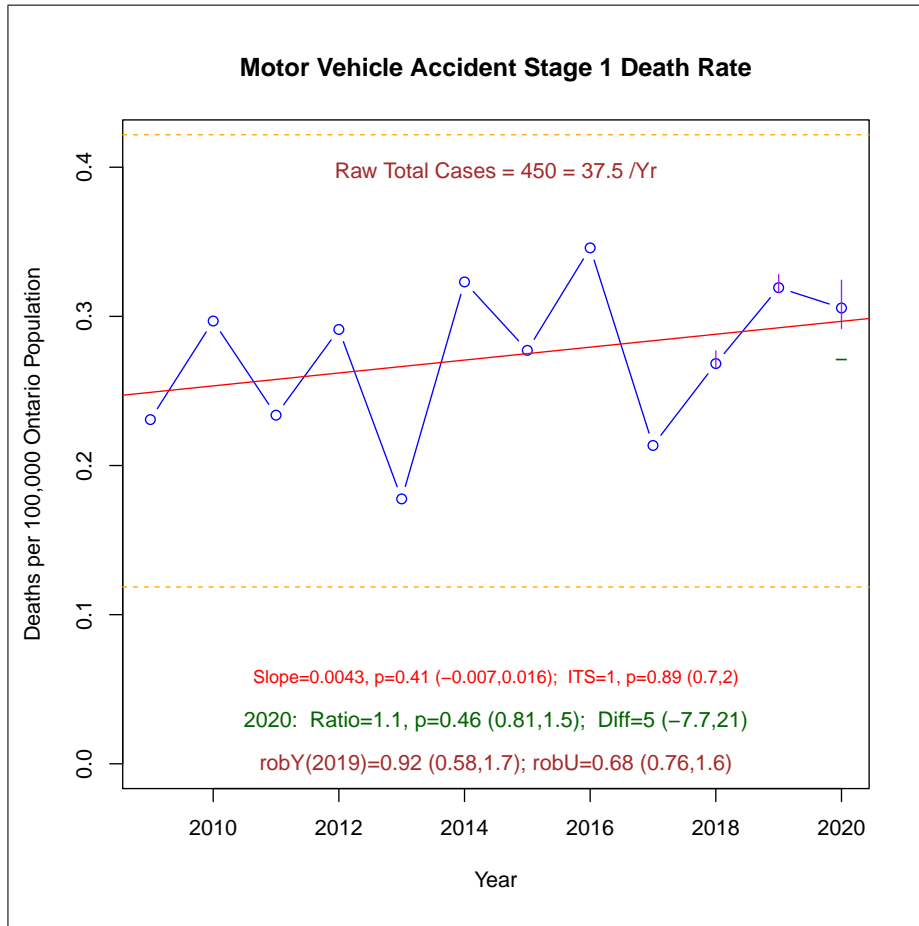
We begin with the Totals for entire years:



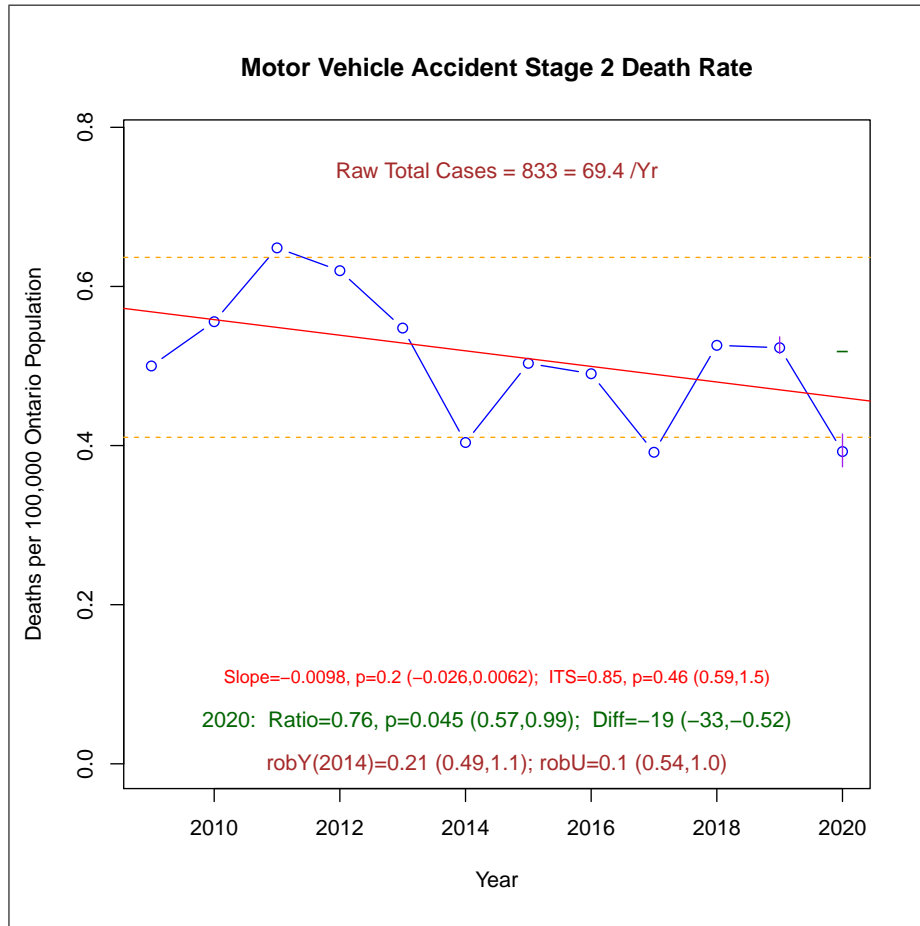
25.0. AccidentTraumaMotorVe – Stage 0 (March 17 – May 18):



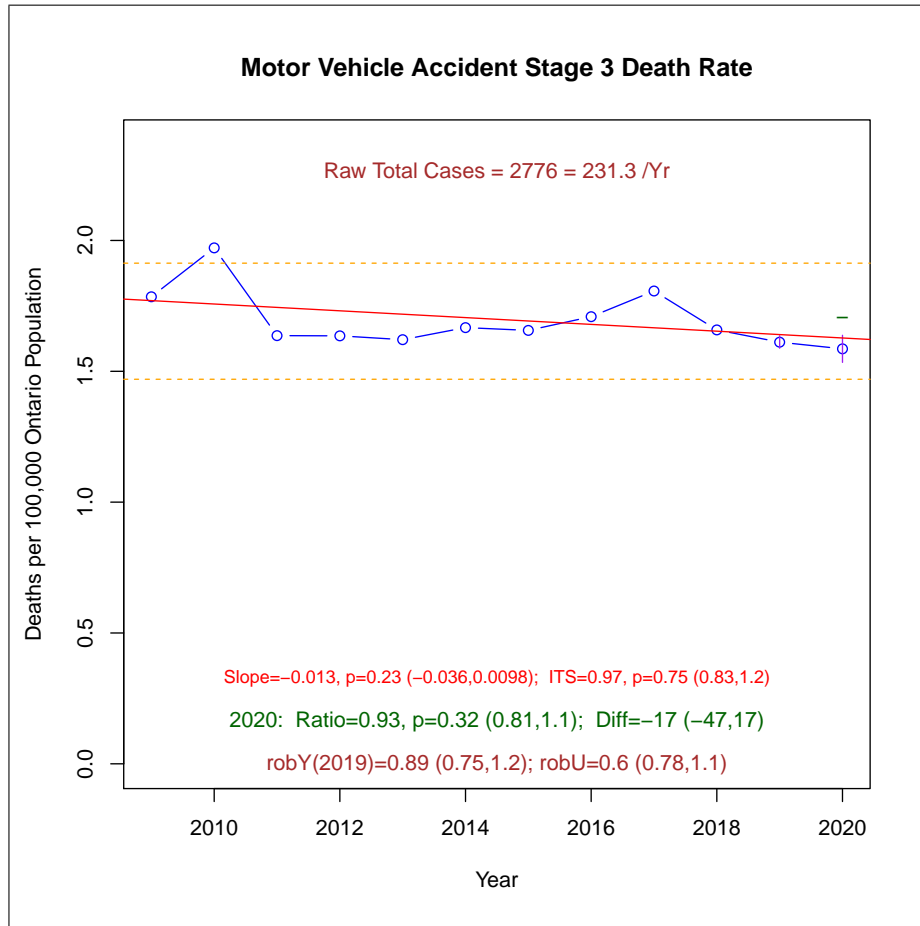
25.1. AccidentTraumaMotorVe – Stage 1 (May 19 – June 11):



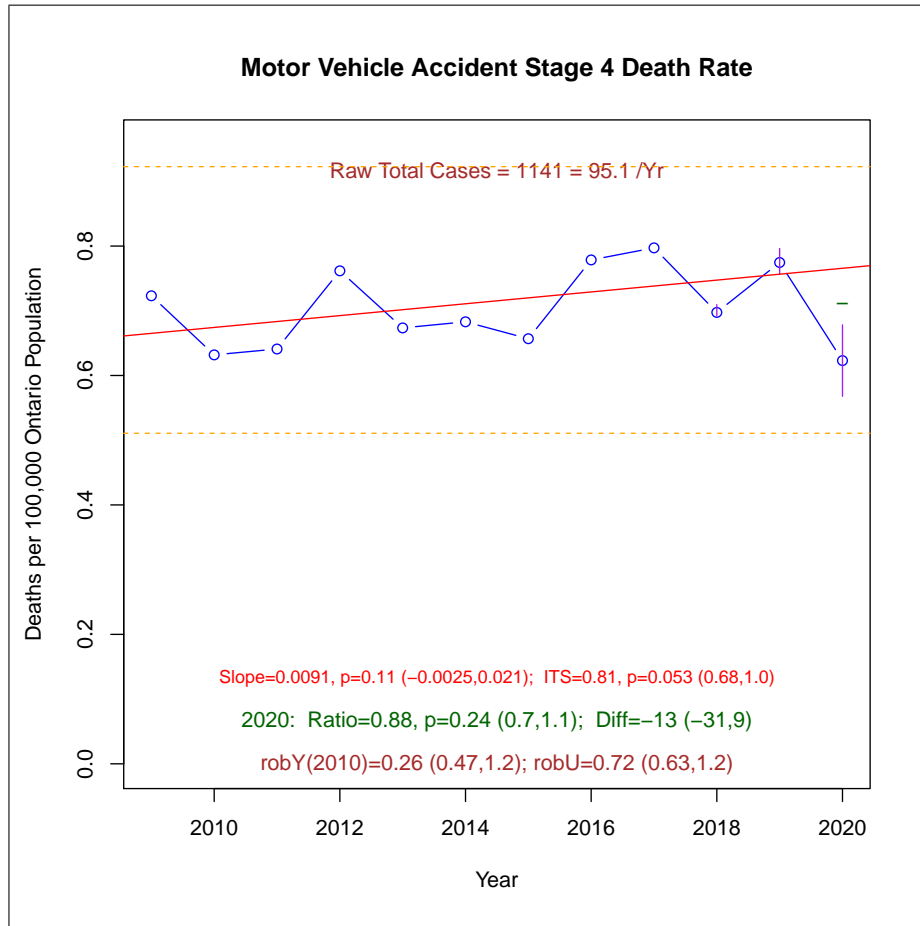
25.2. AccidentTraumaMotorVe – Stage 2 (June 12 – July 16):



25.3. AccidentTraumaMotorVe – Stage 3 (July 17 – November 7):



25.4. AccidentTraumaMotorVe – Stage 4 (November 8 – December 31):



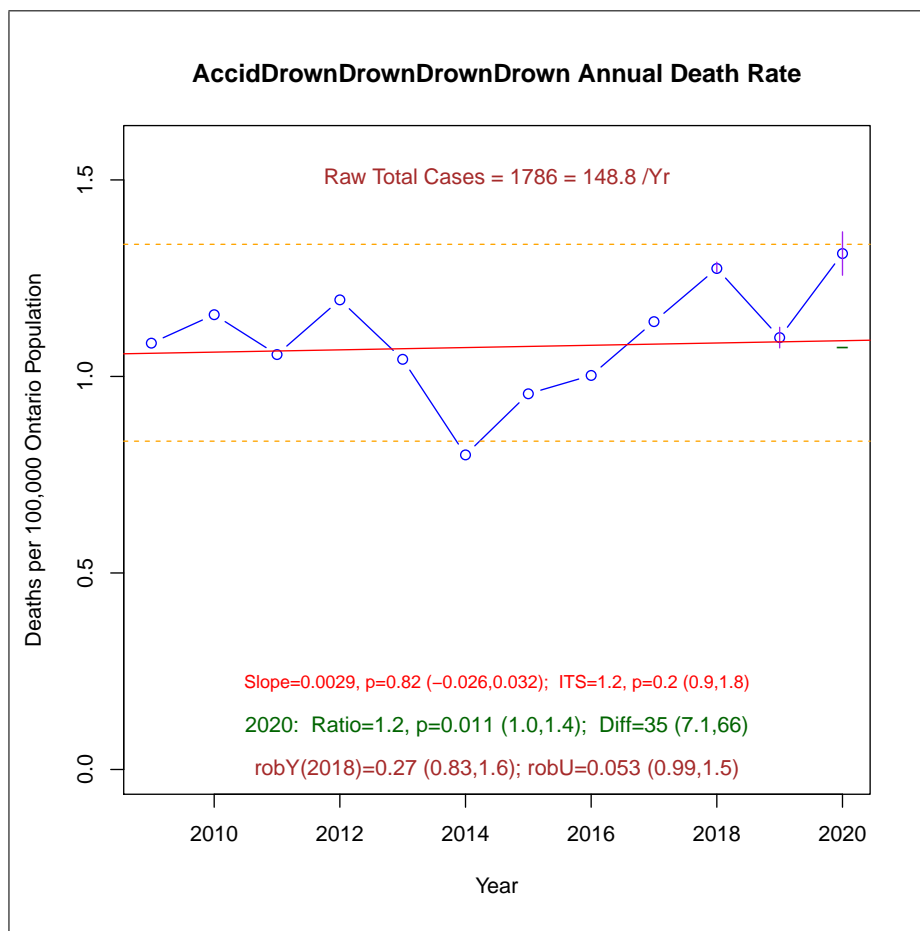
26. AccidDrownDrownDrownDrown Category:

This category is defined by:

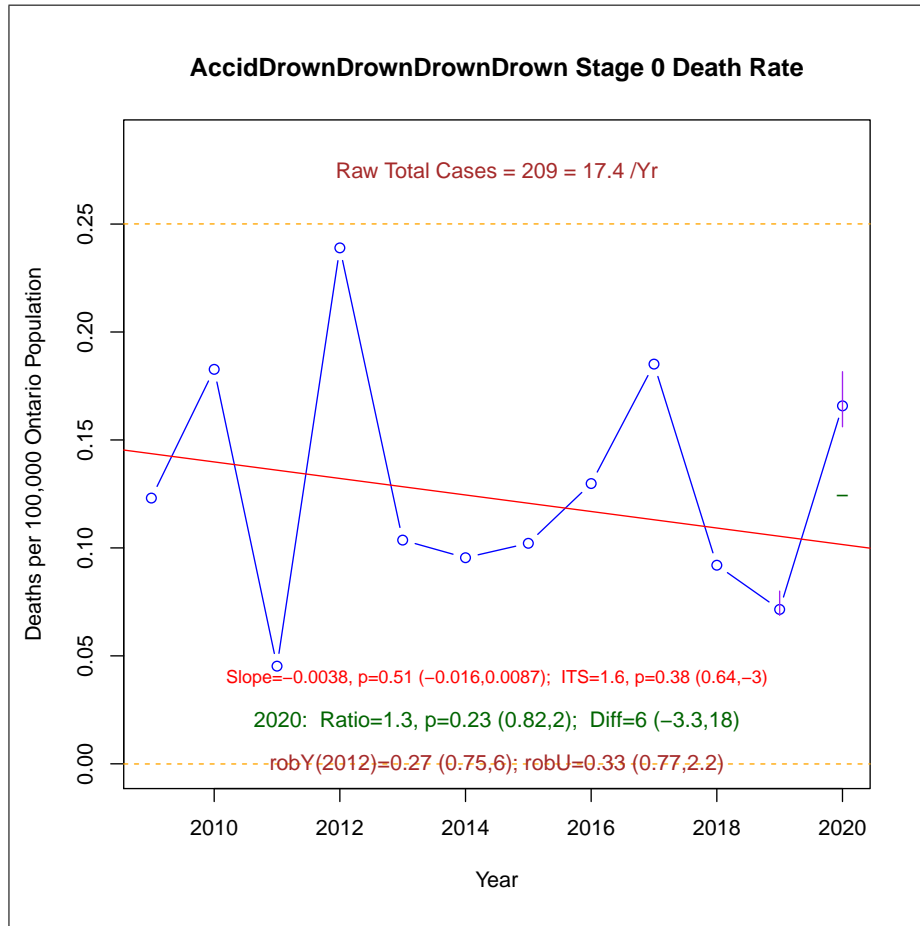
manner = “Accident”; and factor = “Drowning - Bathtub, whirlpool, hot tub” or “Drowning - Lakes, ponds, rivers, streams, quarries” or “Drowning - Private Pool” or “Drowning - Public Pool”.

The corresponding correction multiplier is: $35 / 2790 = 0.01254$.

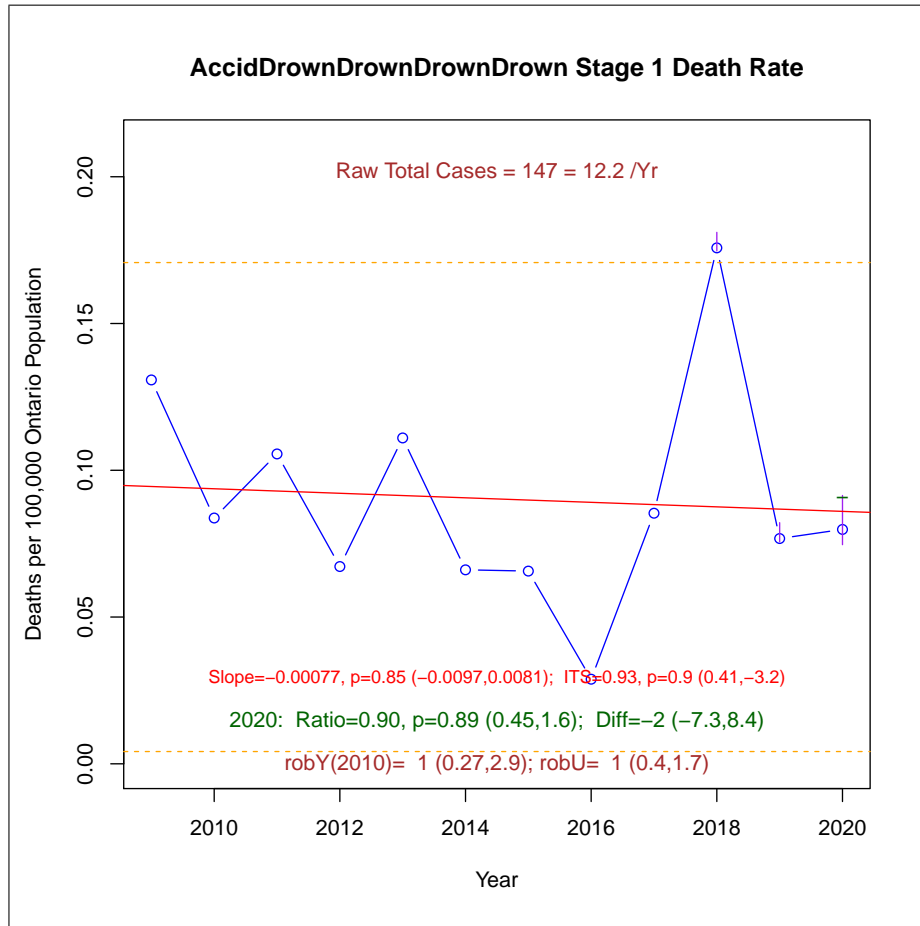
We begin with the Totals for entire years:



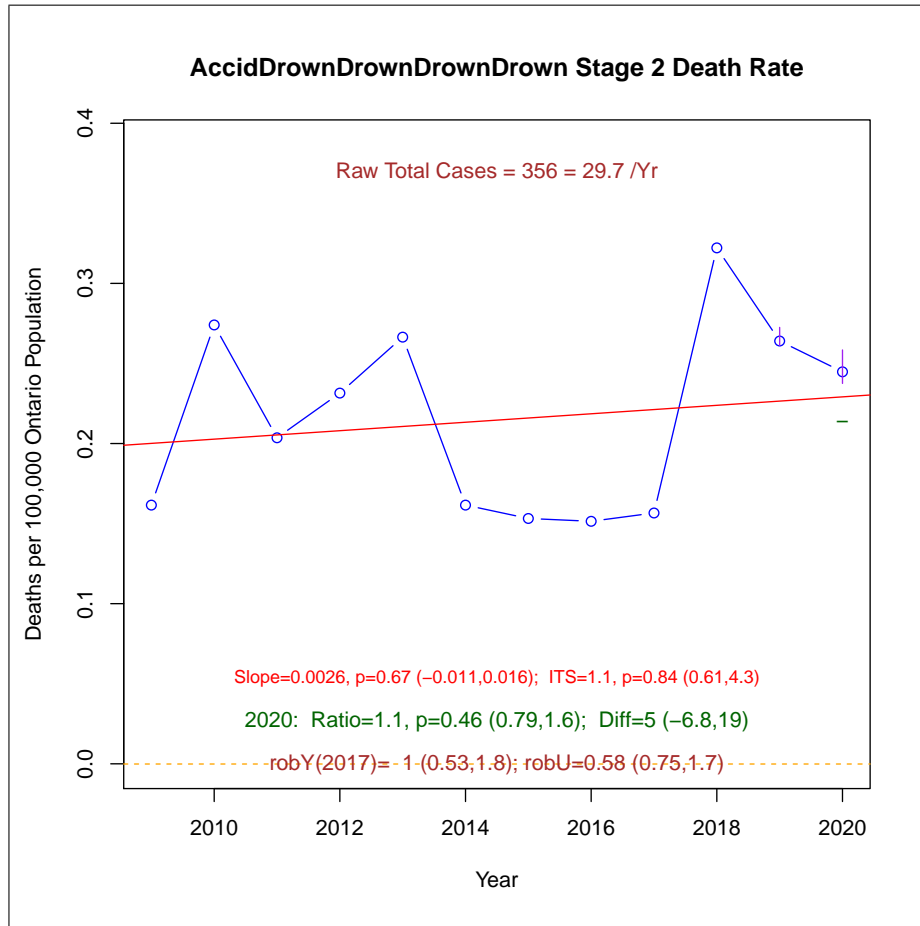
26.0. AccidDrownDrownDrownDrown – Stage 0 (March 17 – May 18):



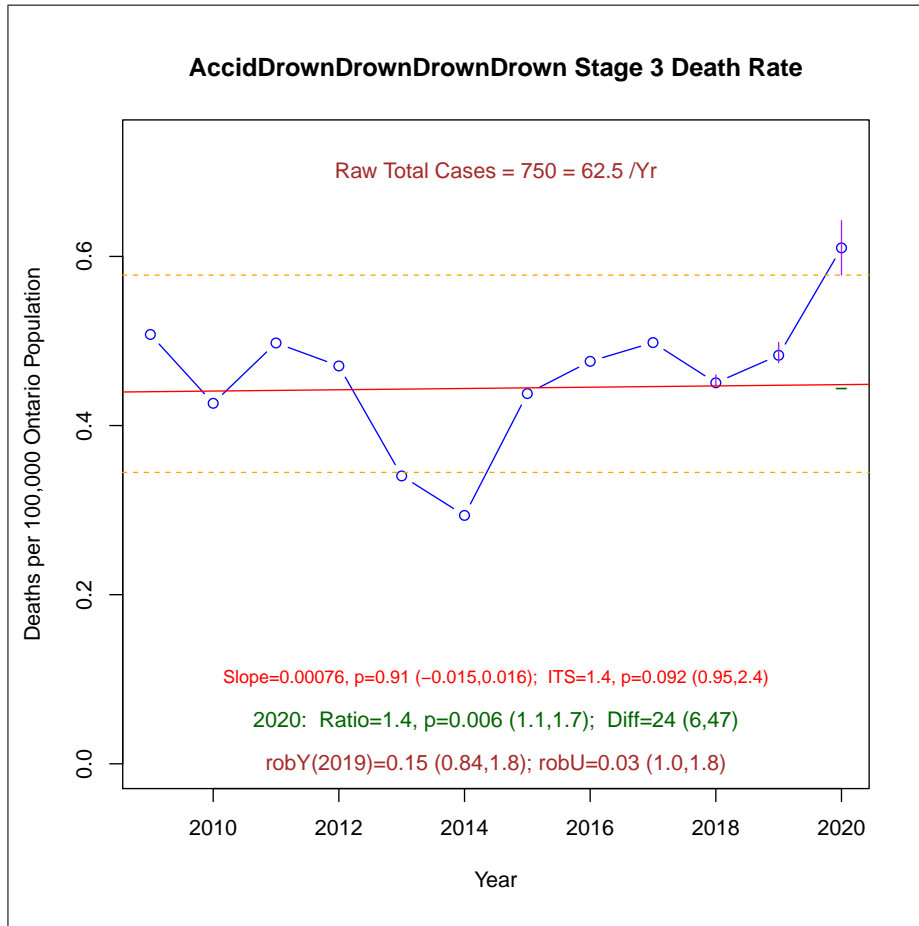
26.1. AccidDrownDrownDrownDrown – Stage 1 (May 19 – June 11):



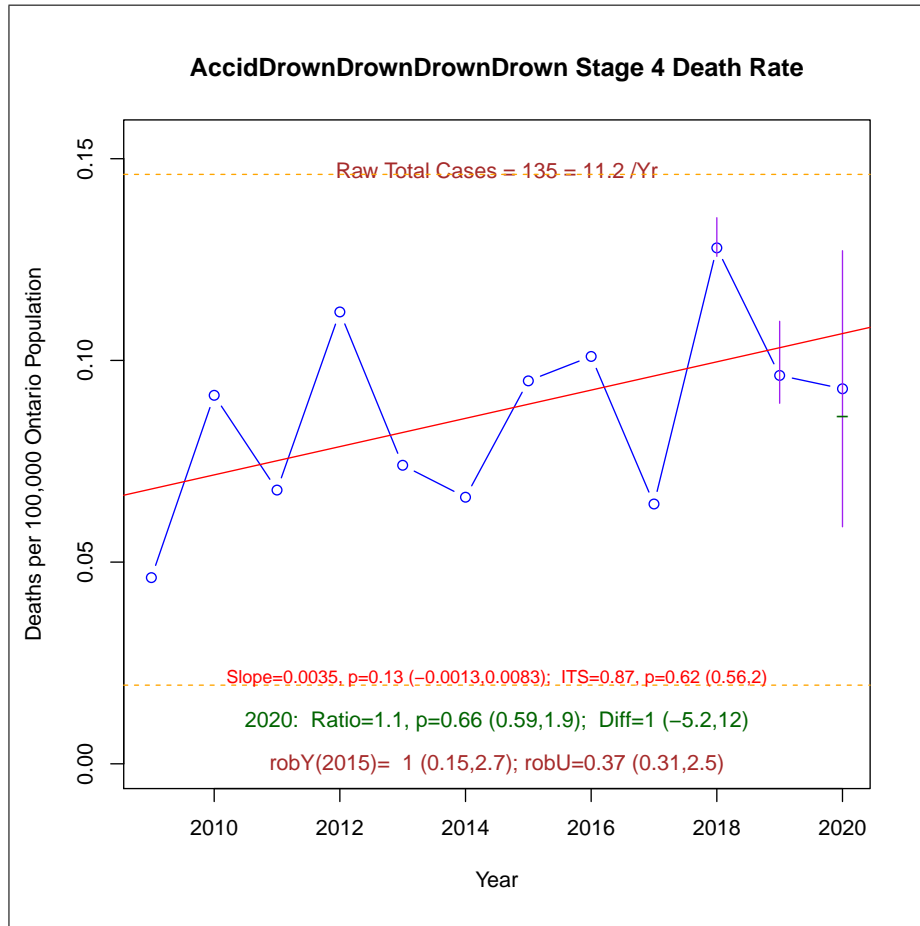
26.2. AccidDrownDrownDrownDrown – Stage 2 (June 12 – July 16):



26.3. AccidDrownDrownDrownDrown – Stage 3 (July 17 – November 7):



26.4. AccidDrownDrownDrownDrown – Stage 4 (November 8 – December 31):

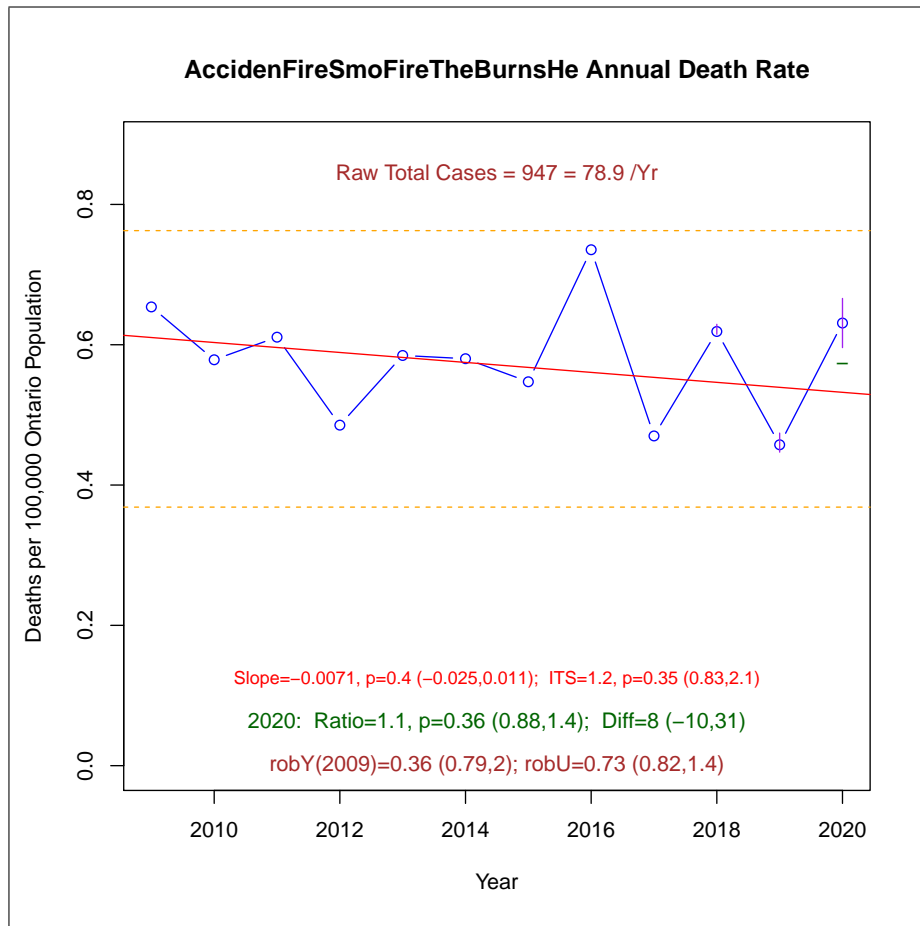


27. AccidenFireSmoFireTheBurnsHe Category:

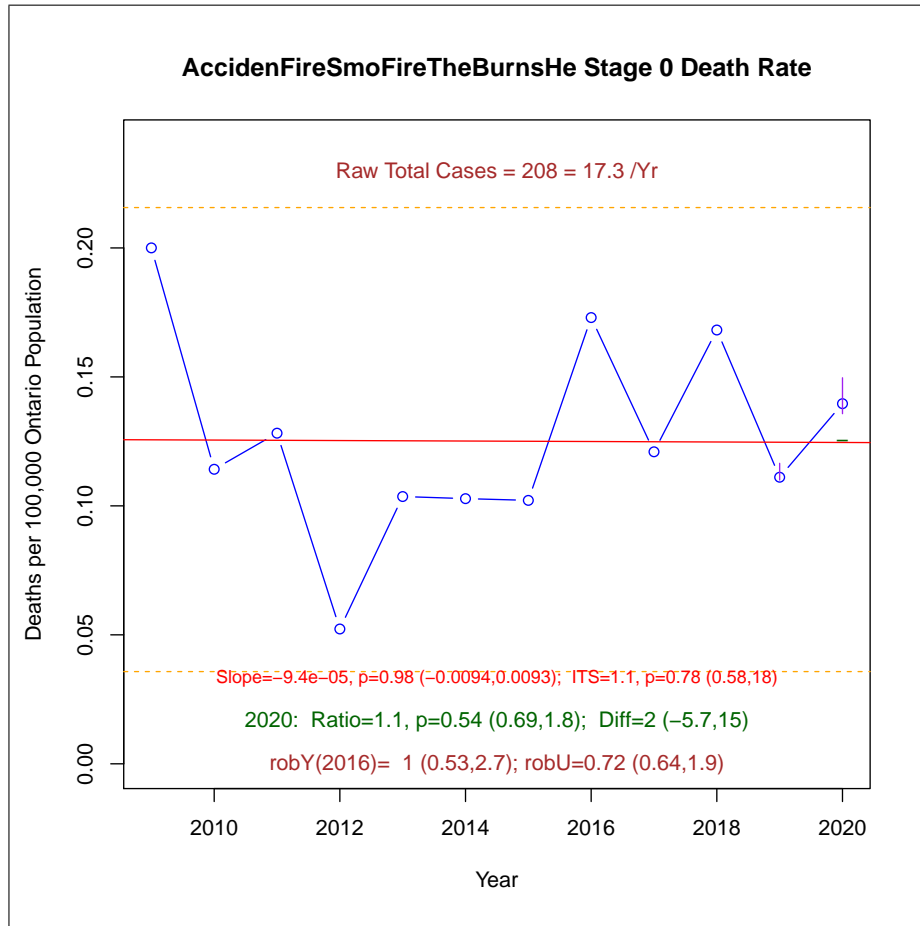
This category is defined by:
 manner = “Accident”; and factor = “Fire - Smoke Inhalation” or “Fire - Thermal Injury”
 or “Burns - Heat”.

The corresponding correction multiplier is: $14 / 2790 = 0.00502$.

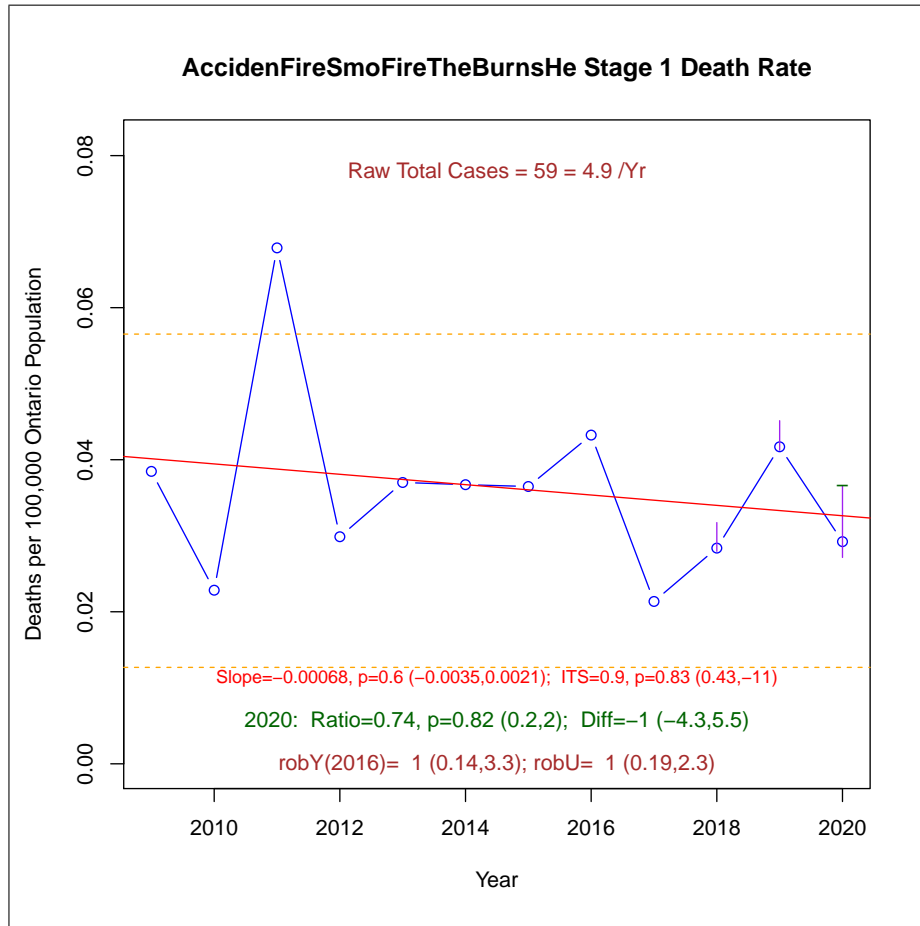
We begin with the Totals for entire years:



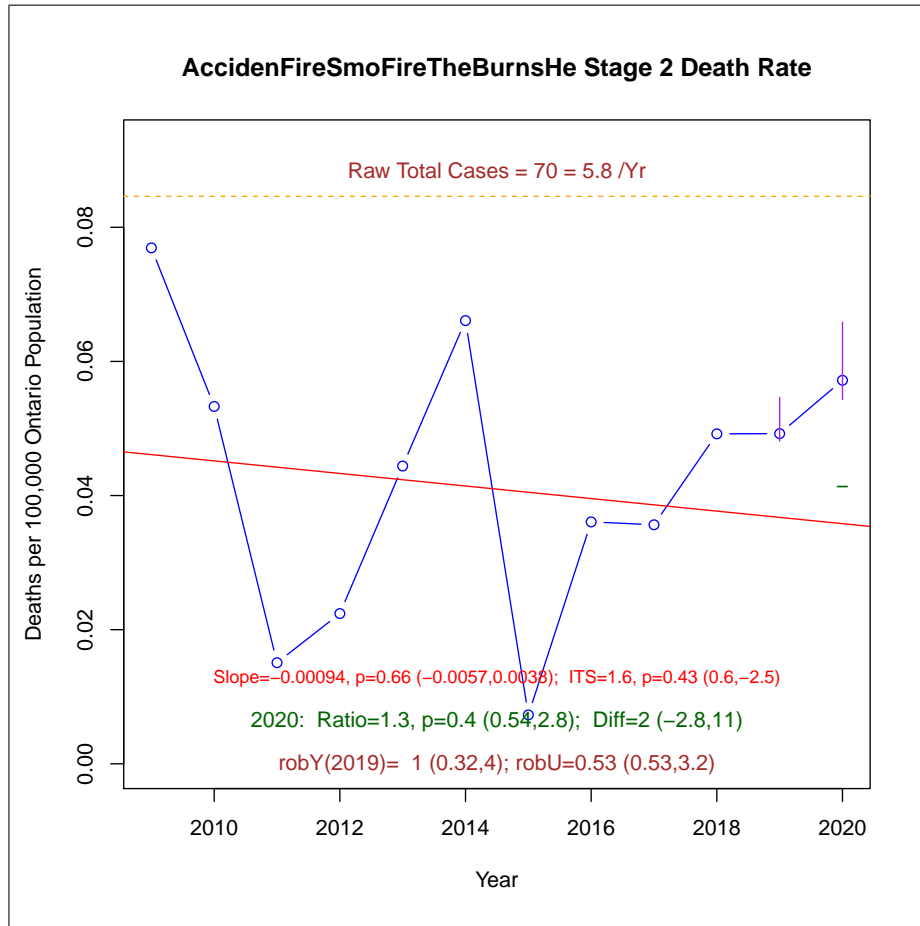
27.0. AccidenFireSmoFireTheBurnsHe – Stage 0 (March 17 – May 18):



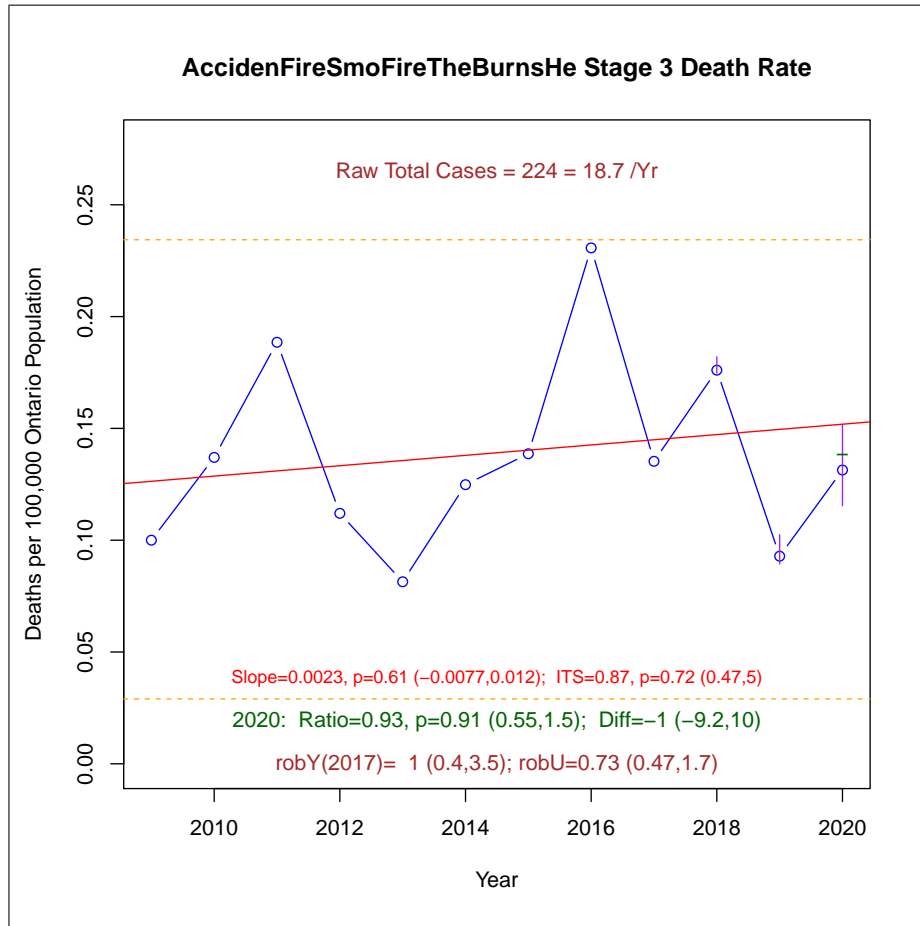
27.1. AccidenFireSmoFireTheBurnsHe – Stage 1 (May 19 – June 11):



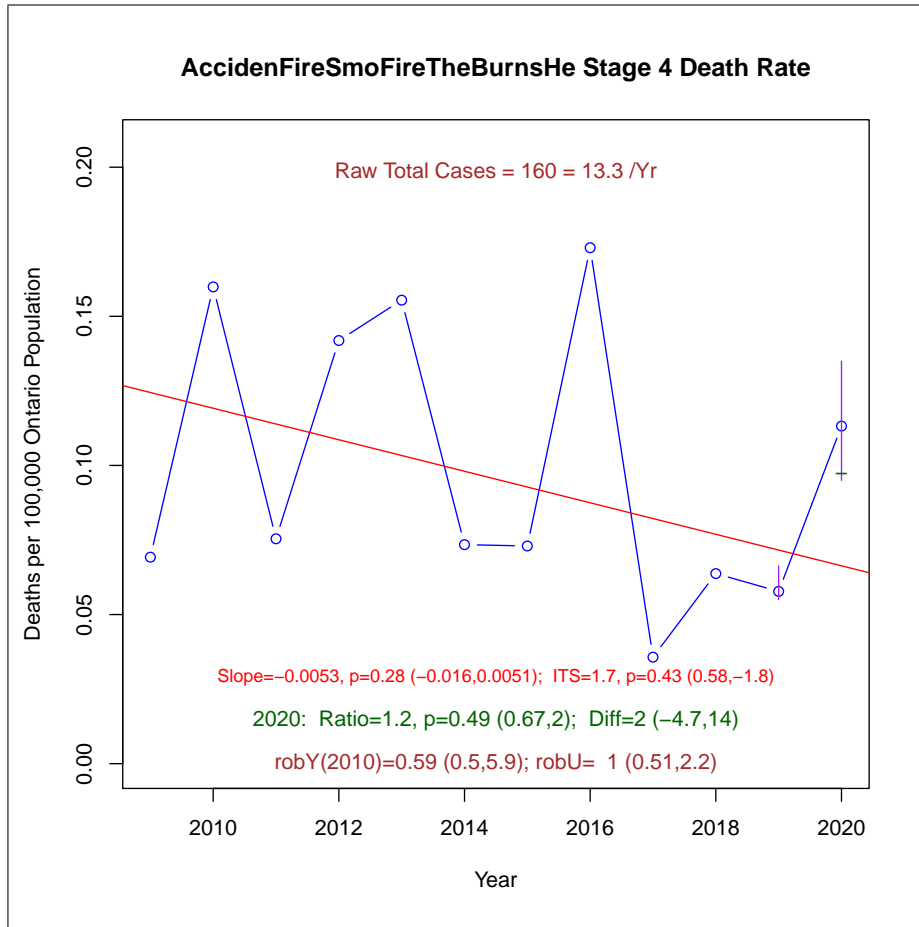
27.2. AccidenFireSmoFireTheBurnsHe – Stage 2 (June 12 – July 16):



27.3. AccidenFireSmoFireTheBurnsHe – Stage 3 (July 17 – November 7):



27.4. AccidenFireSmoFireTheBurnsHe – Stage 4 (November 8 – December 31):



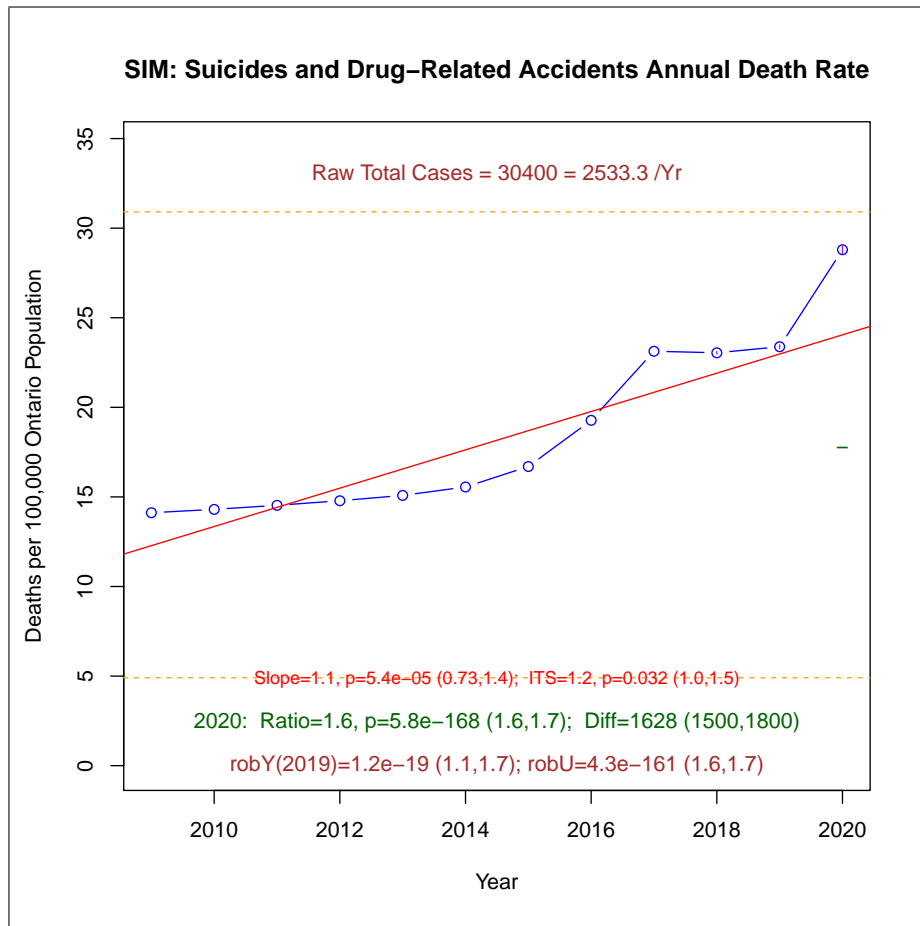
28. SIM Category:

This category is defined by:

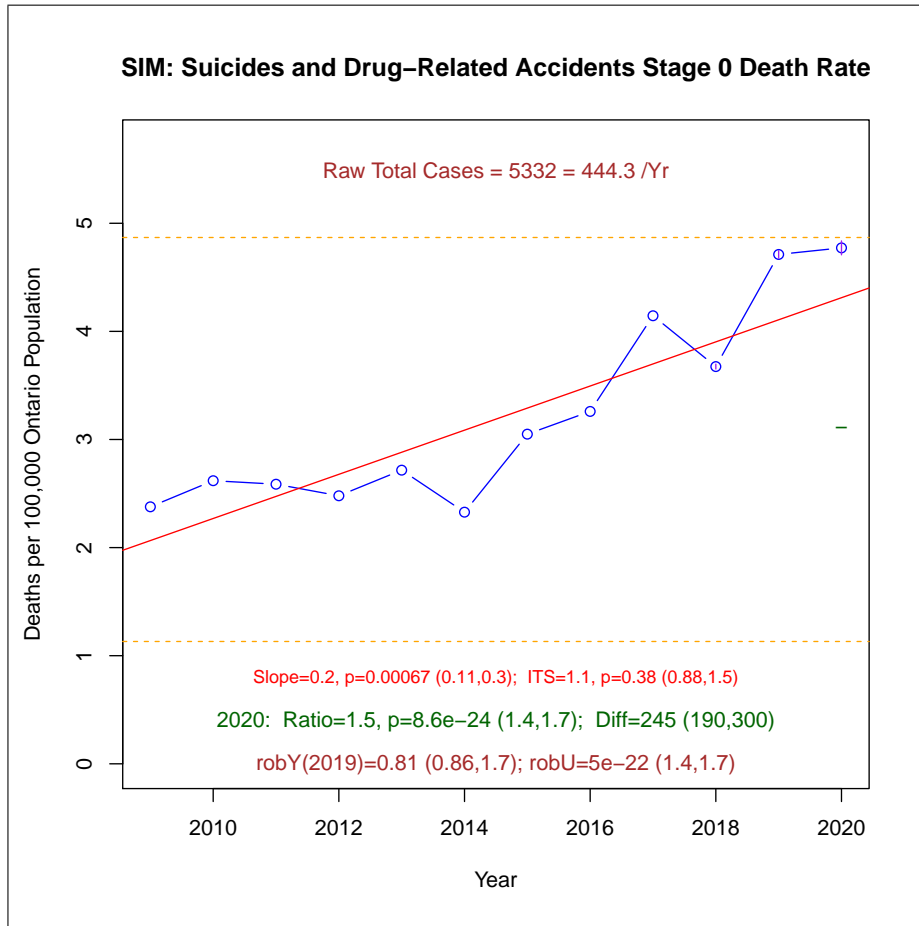
Either {manner = “Suicide”}, or {manner = “Accident”, and factor = “Drug Toxicity (Acute)” or “Drug & Alcohol Toxicity (Acute)”}.

The corresponding correction multiplier is: $812 / 2790 = 0.29104$.

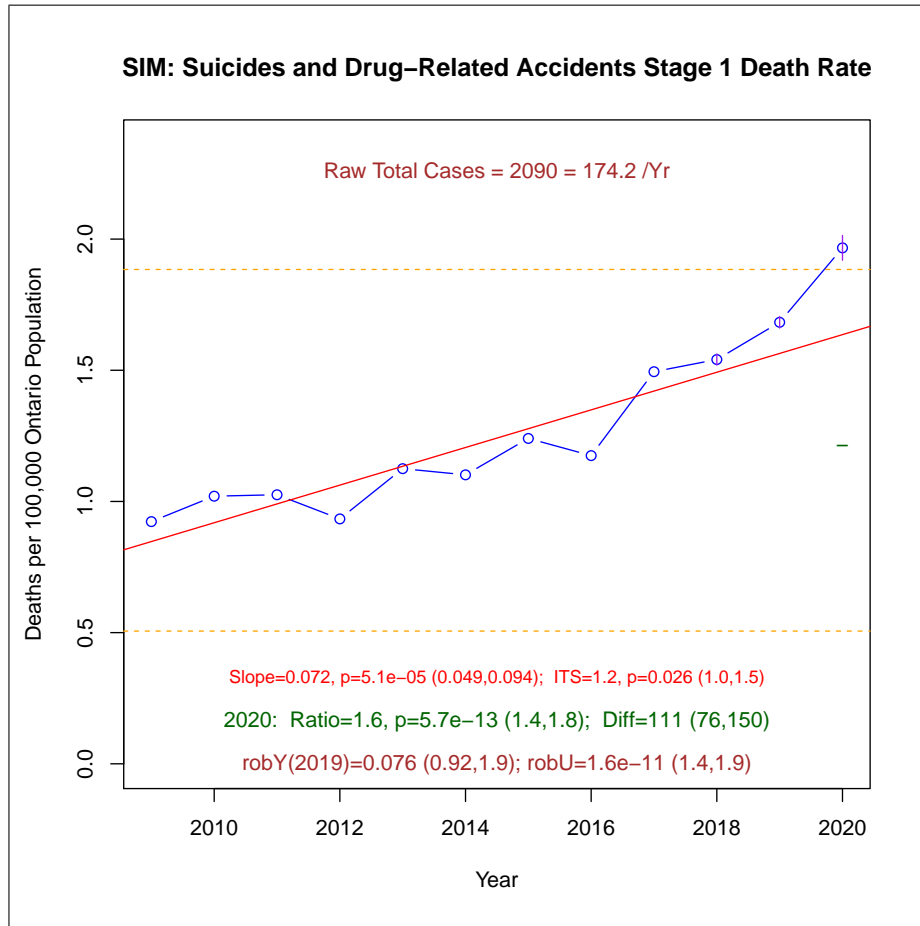
We begin with the Totals for entire years:



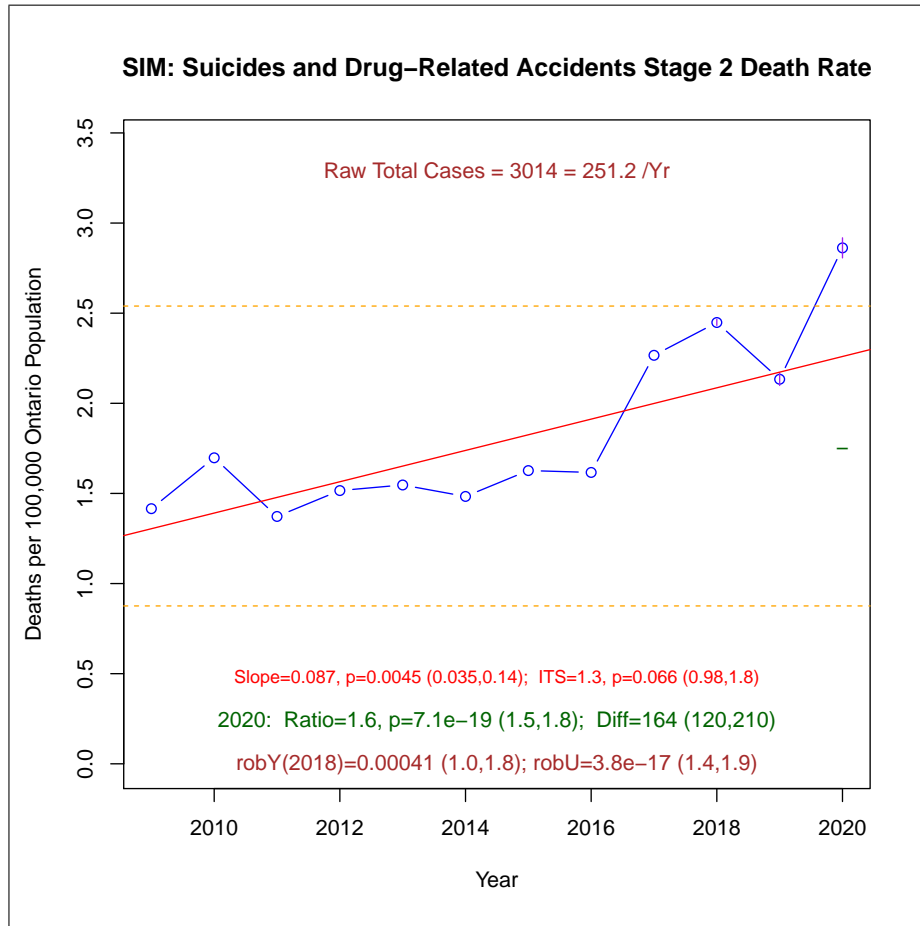
28.0. SIM – Stage 0 (March 17 – May 18):



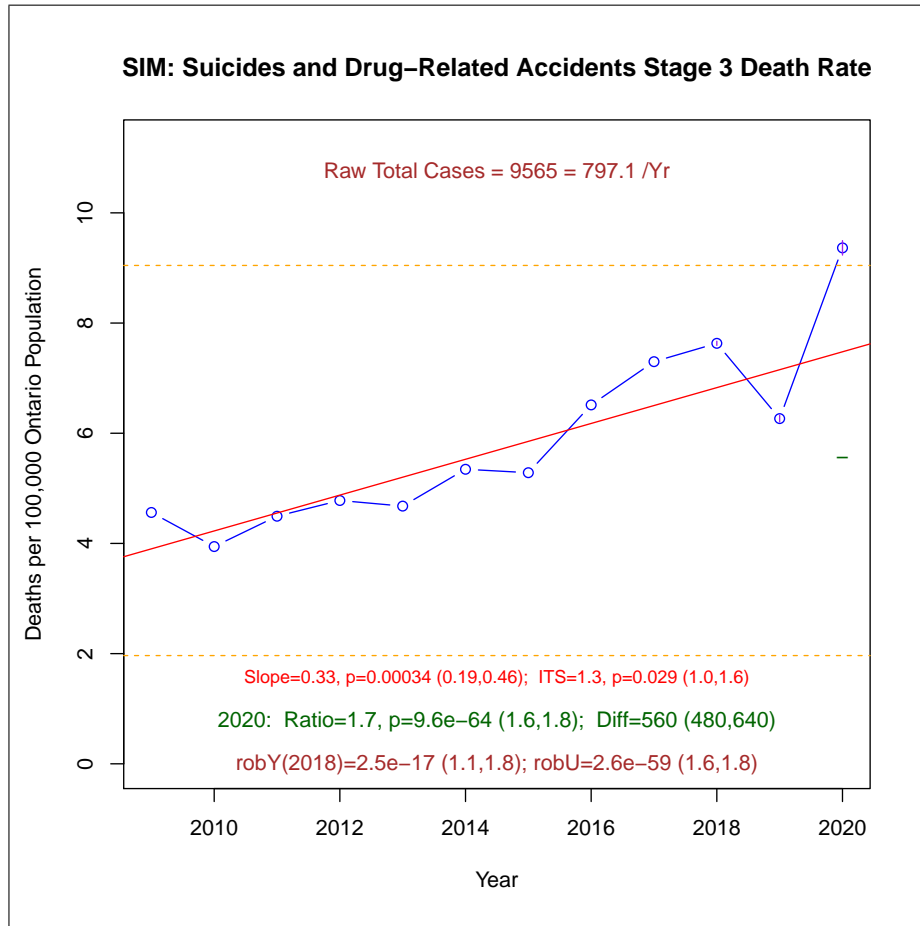
28.1. SIM – Stage 1 (May 19 – June 11):



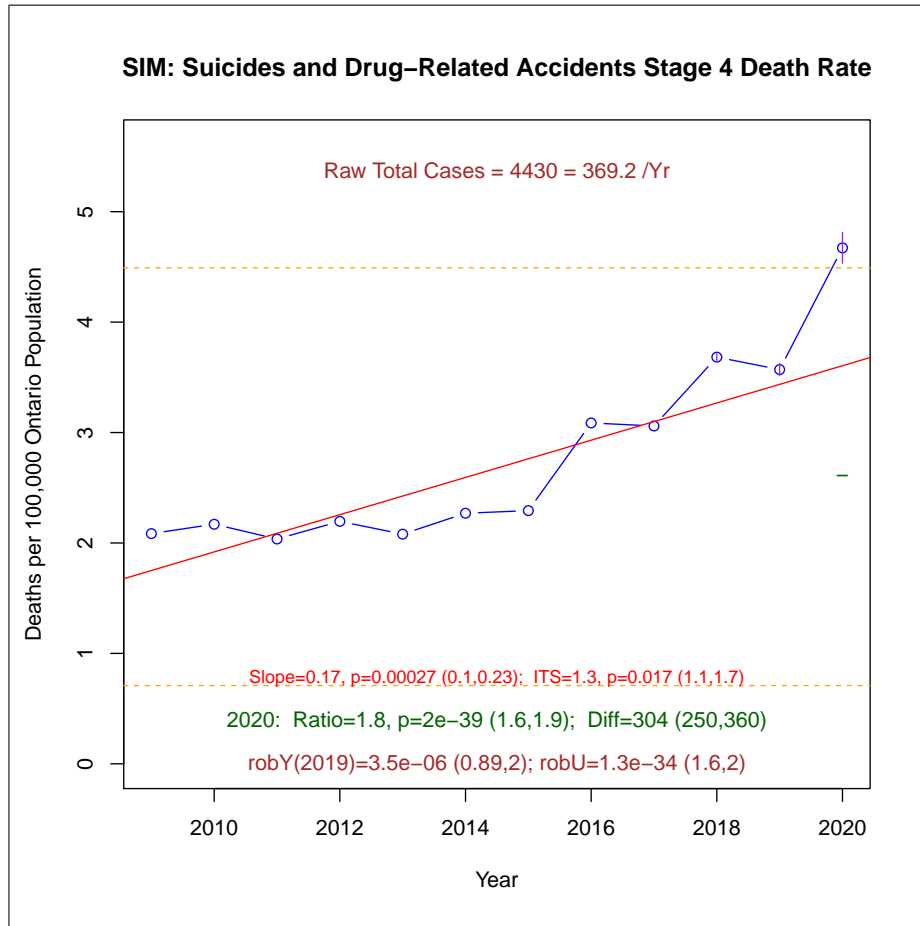
28.2. SIM – Stage 2 (June 12 – July 16):



28.3. SIM – Stage 3 (July 17 – November 7):



28.4. SIM – Stage 4 (November 8 – December 31):



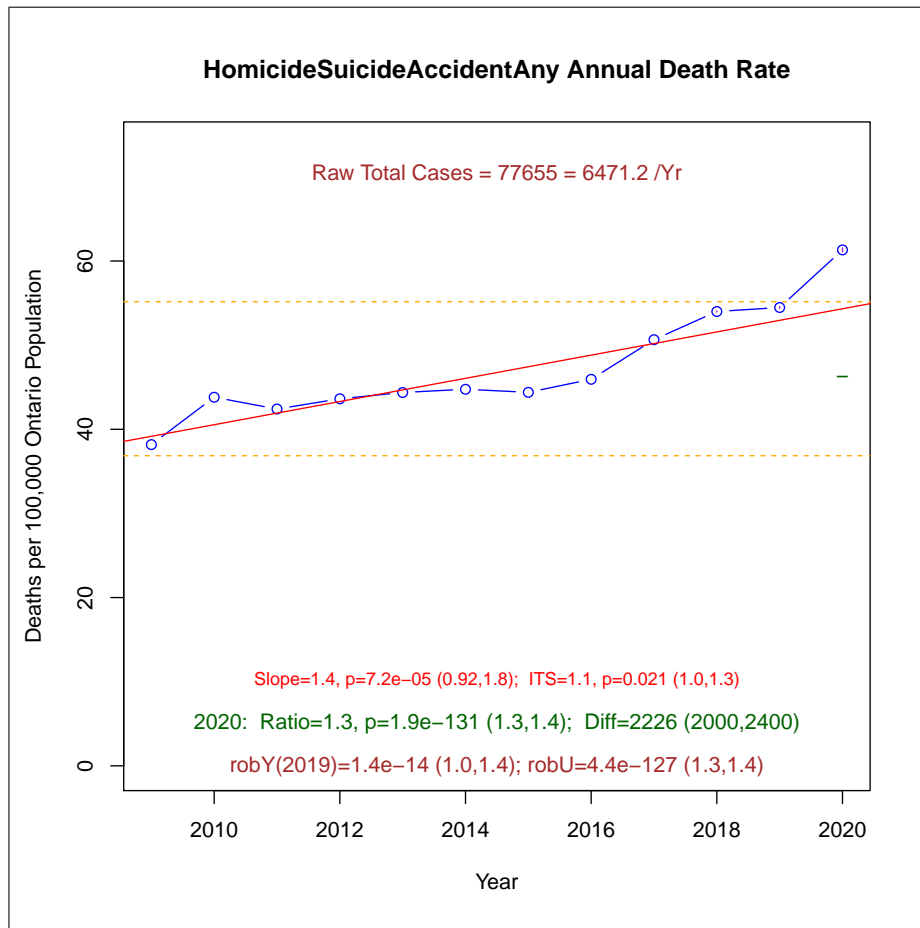
29. HomicideSuicideAccidentAny Category:

This category is defined by:

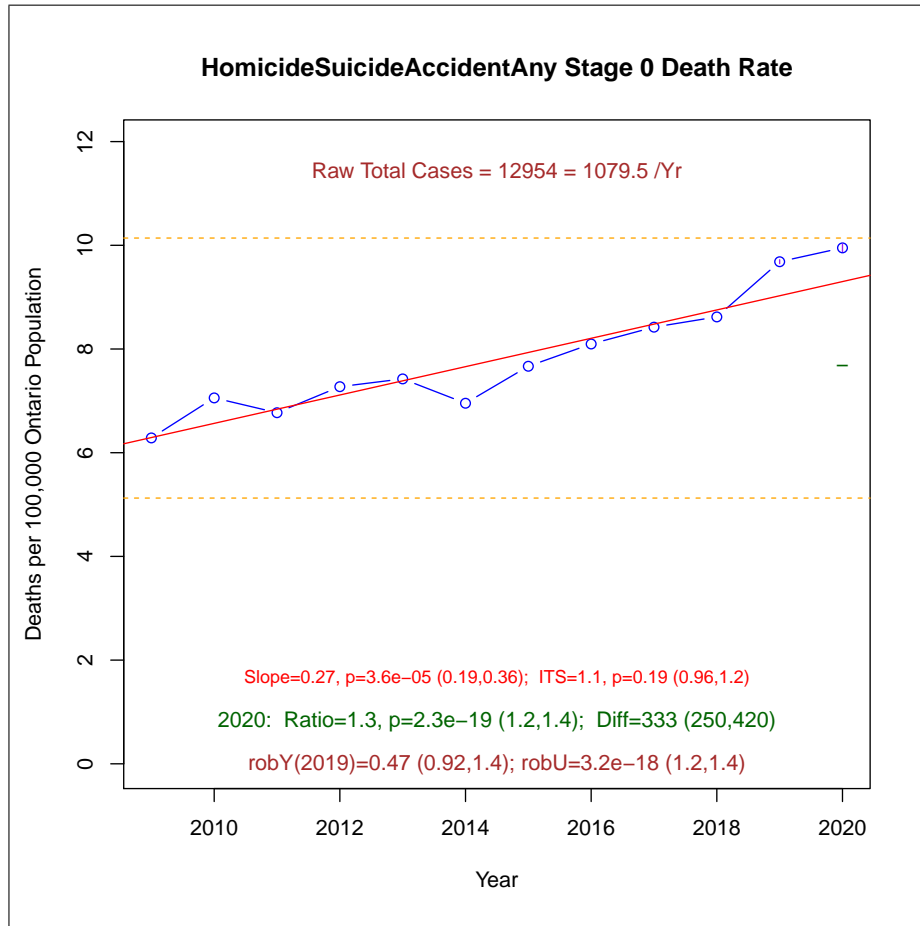
manner = “Homicide” or “Suicide” or “Accident”; and factor = any.

The corresponding correction multiplier is: $1349 / 2790 = 0.48351$.

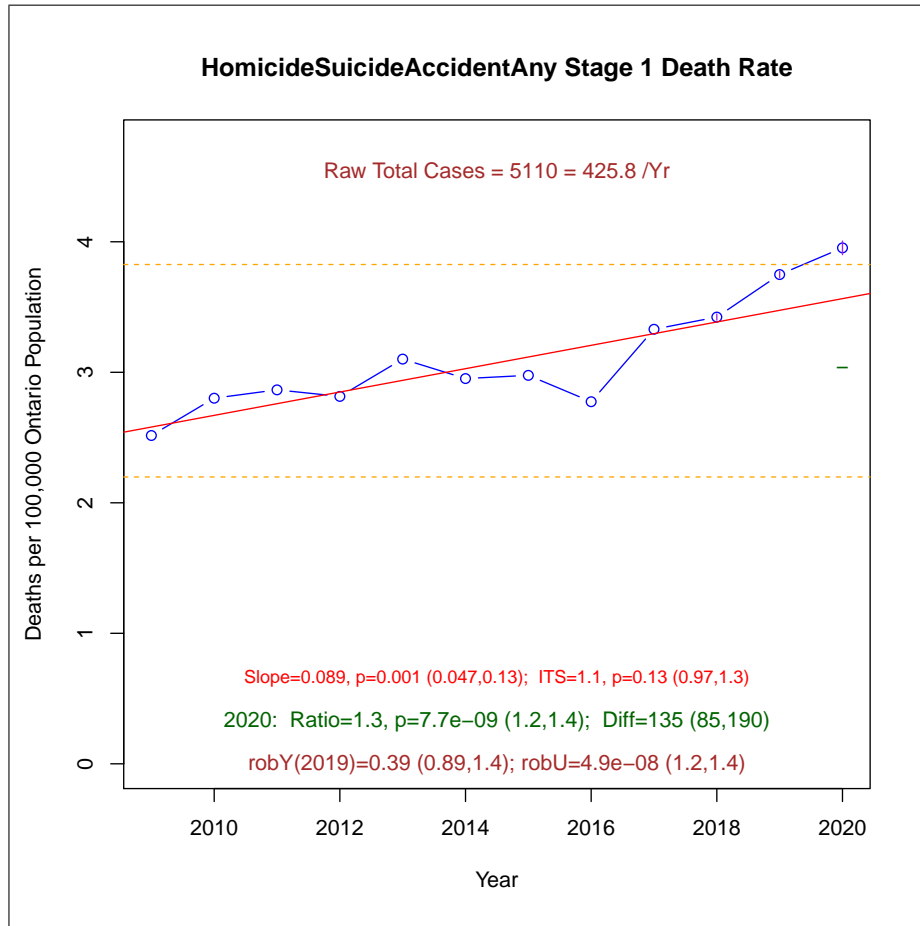
We begin with the Totals for entire years:



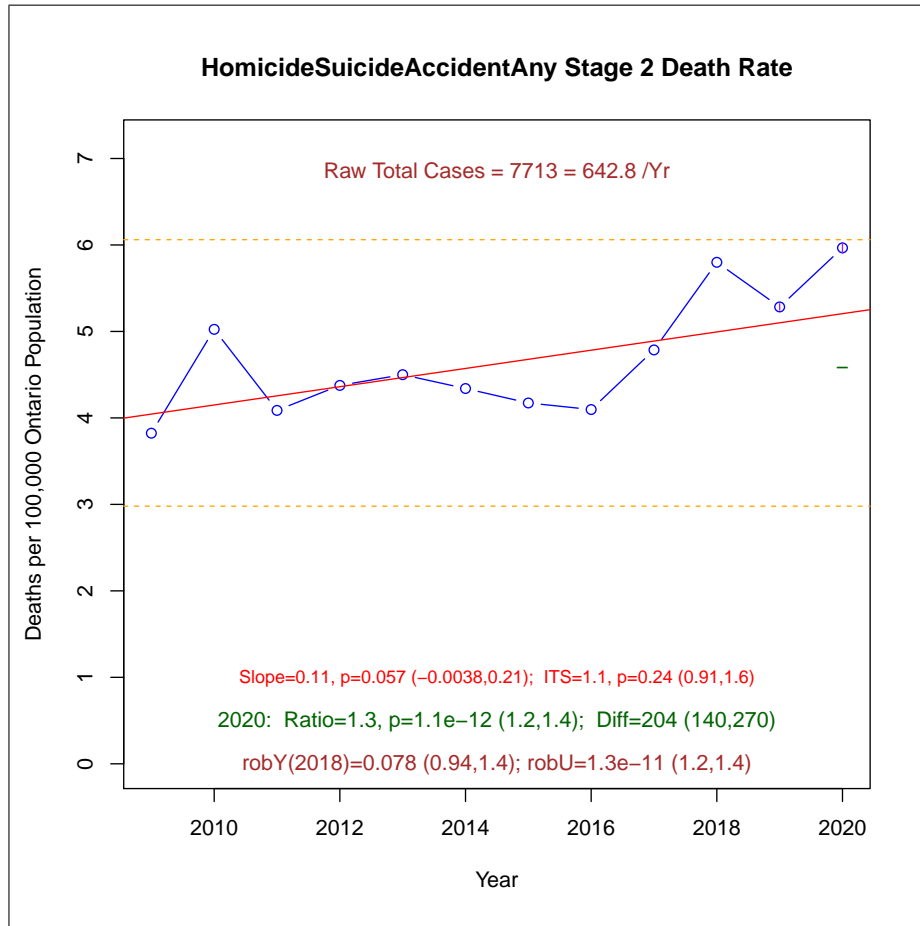
29.0. HomicideSuicideAccidentAny – Stage 0 (March 17 – May 18):



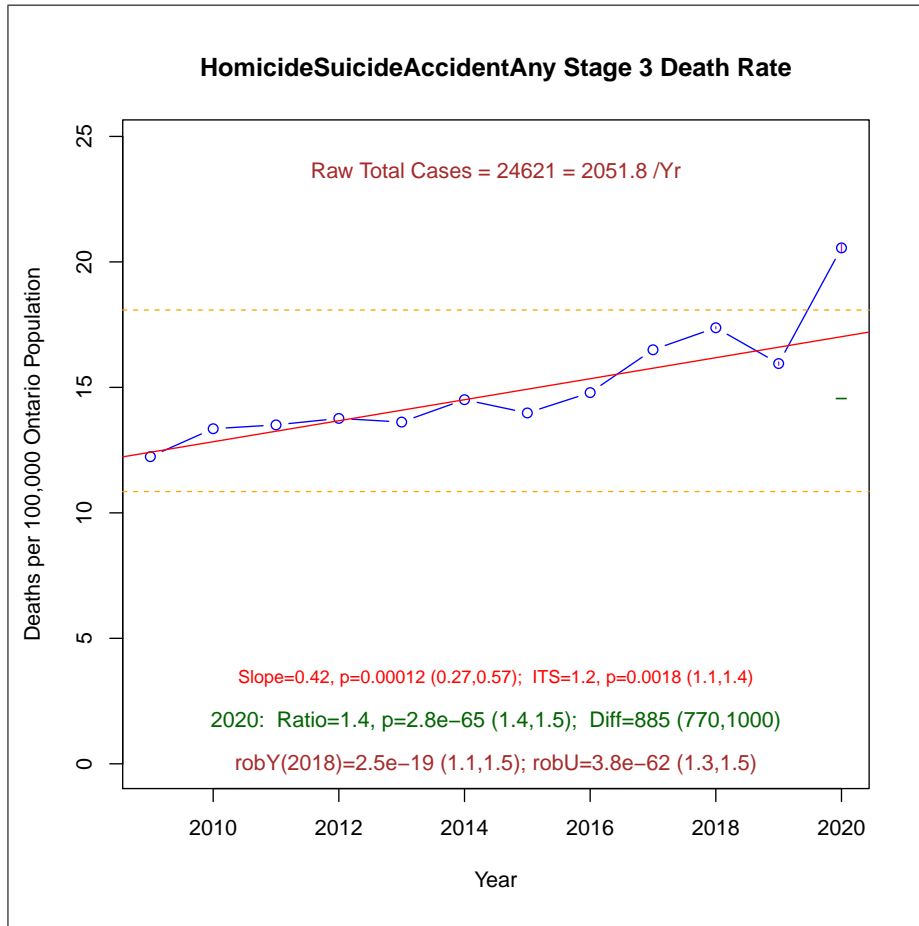
29.1. HomicideSuicideAccidentAny – Stage 1 (May 19 – June 11):



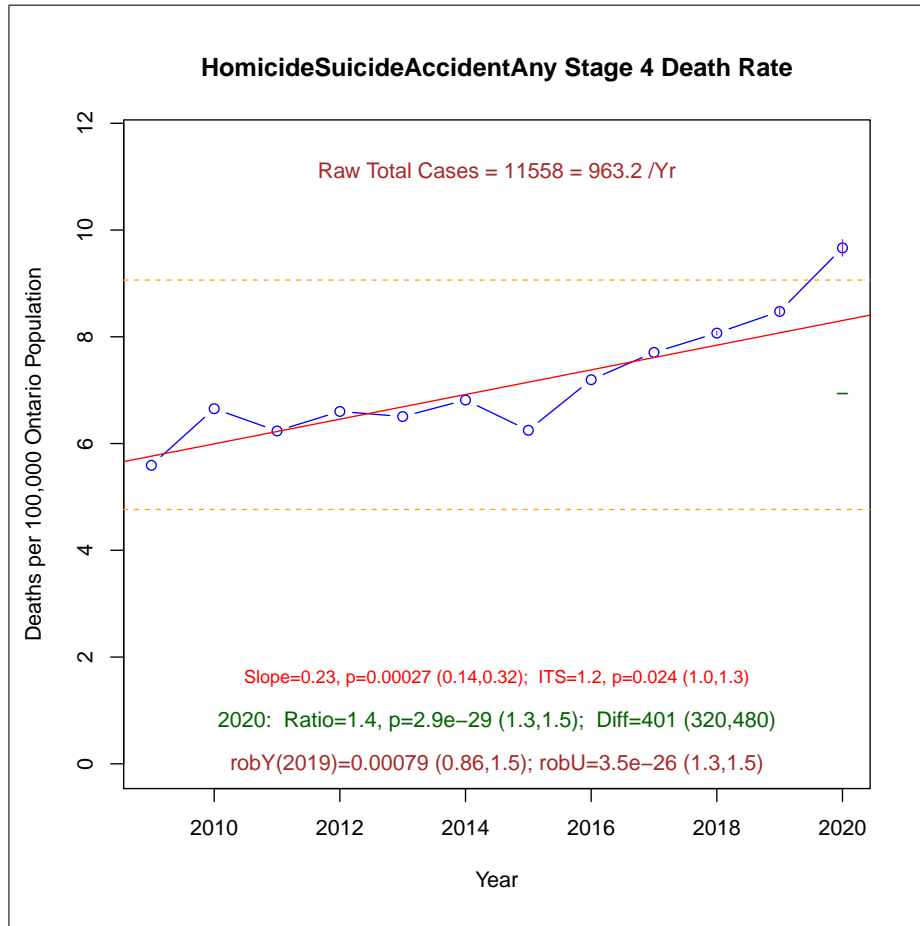
29.2. HomicideSuicideAccidentAny – Stage 2 (June 12 – July 16):



29.3. HomicideSuicideAccidentAny – Stage 3 (July 17 – November 7):



29.4. HomicideSuicideAccidentAny – Stage 4 (November 8 – December 31):

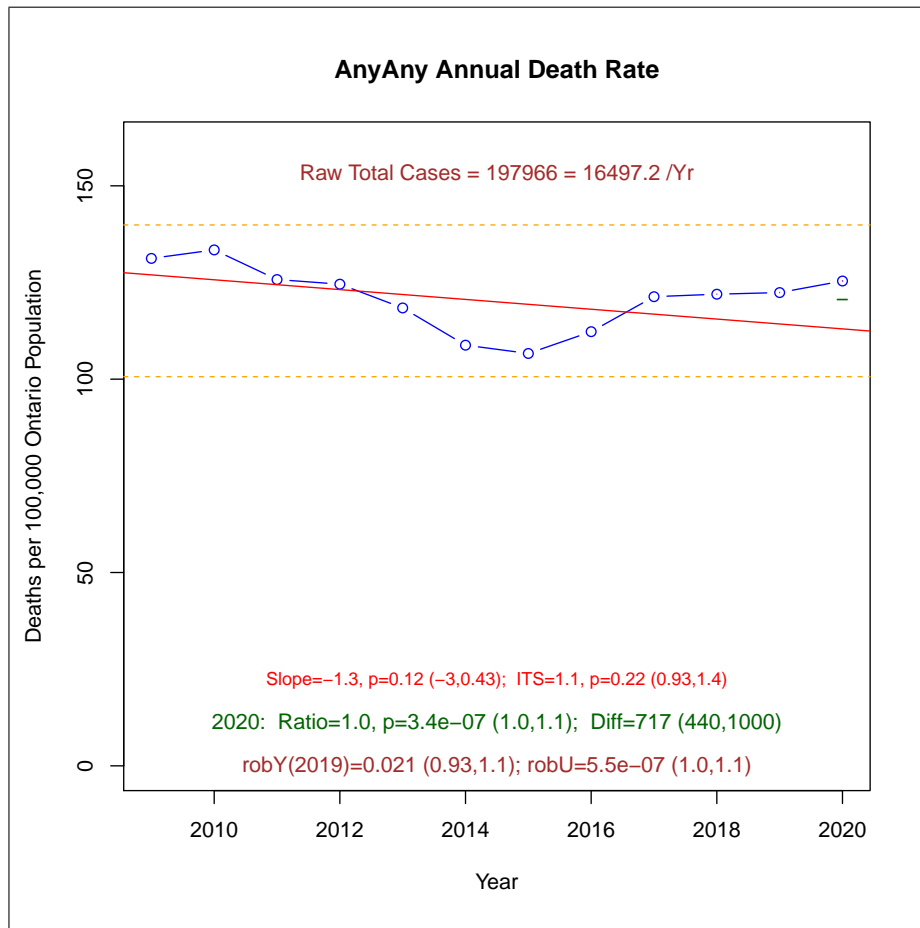


30. AnyAny Category:

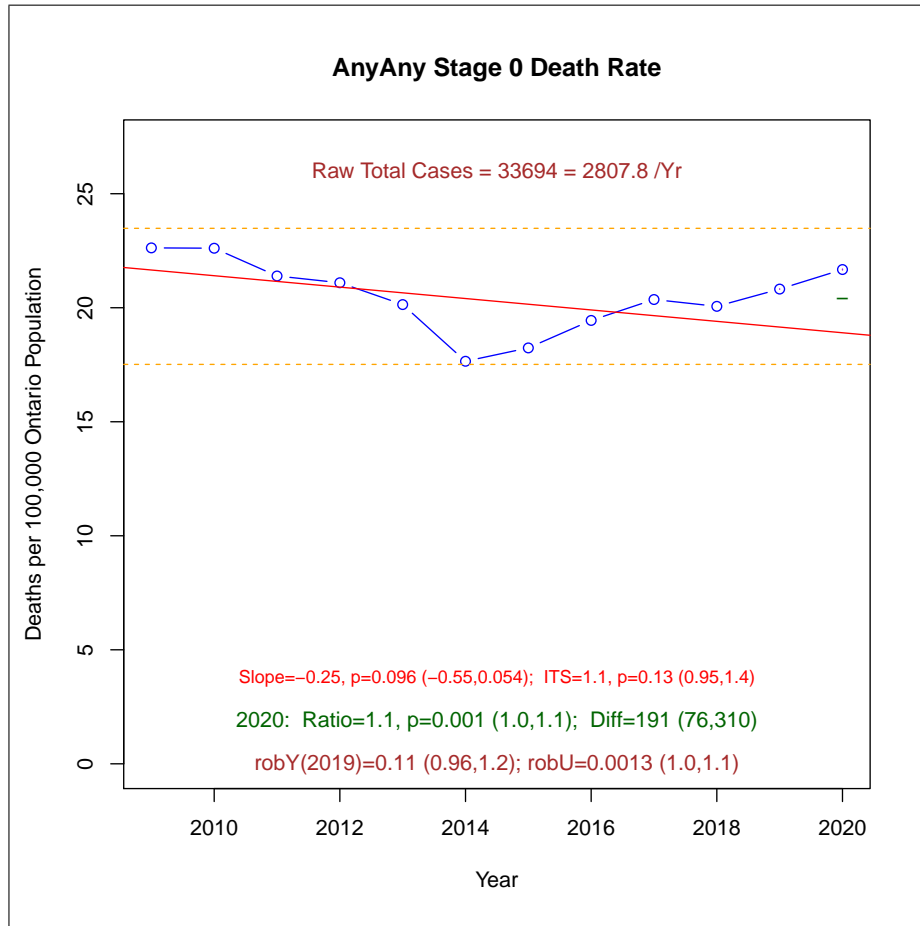
This category is defined by:
manner = any; and factor = any.

The corresponding correction multiplier is: $2712 / 2790 = 0.97204$.

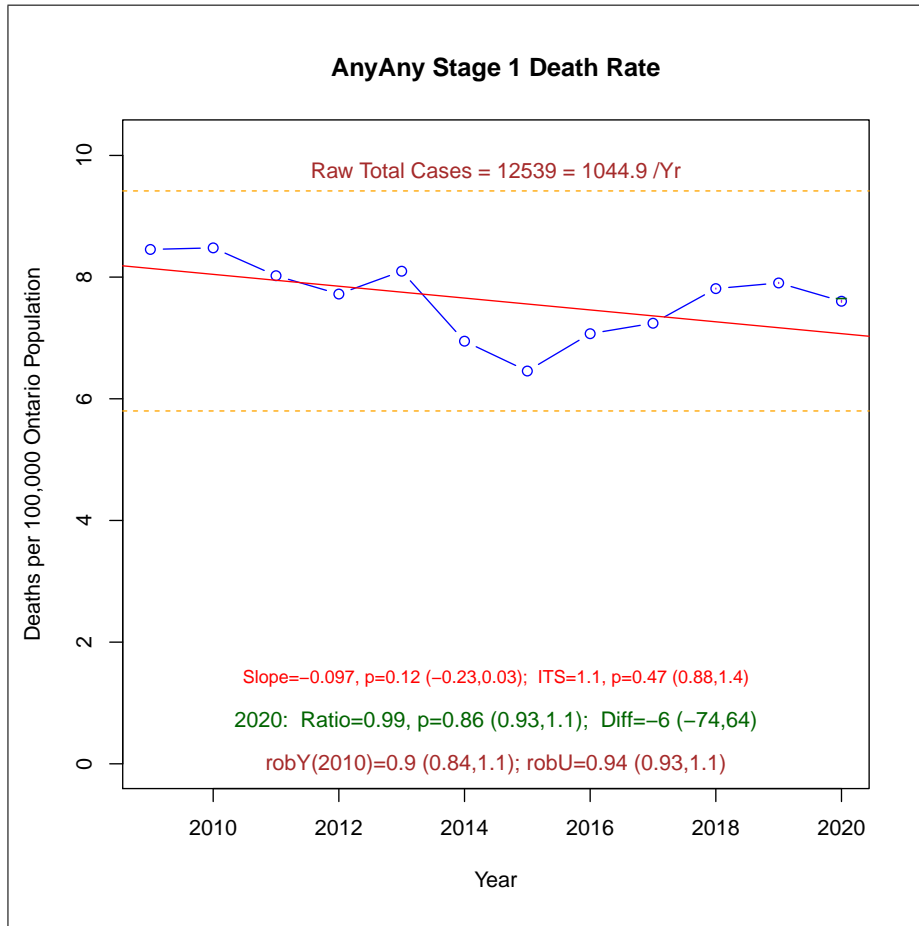
We begin with the Totals for entire years:



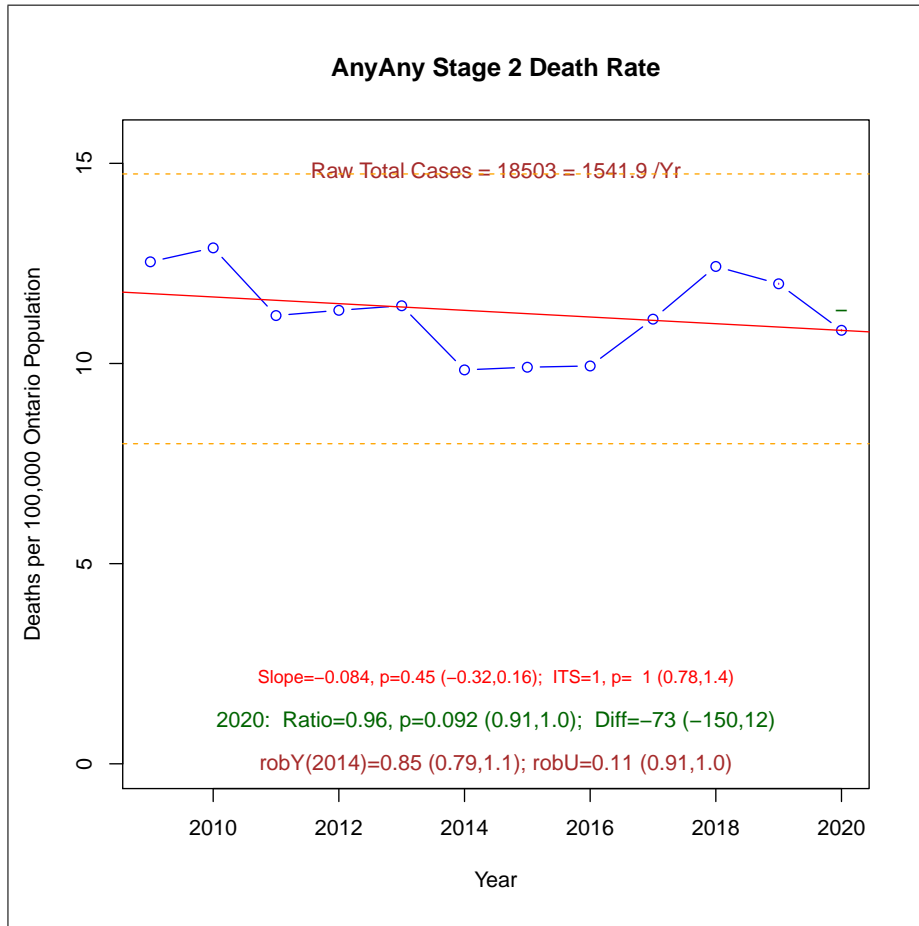
30.0. AnyAny – Stage 0 (March 17 – May 18):



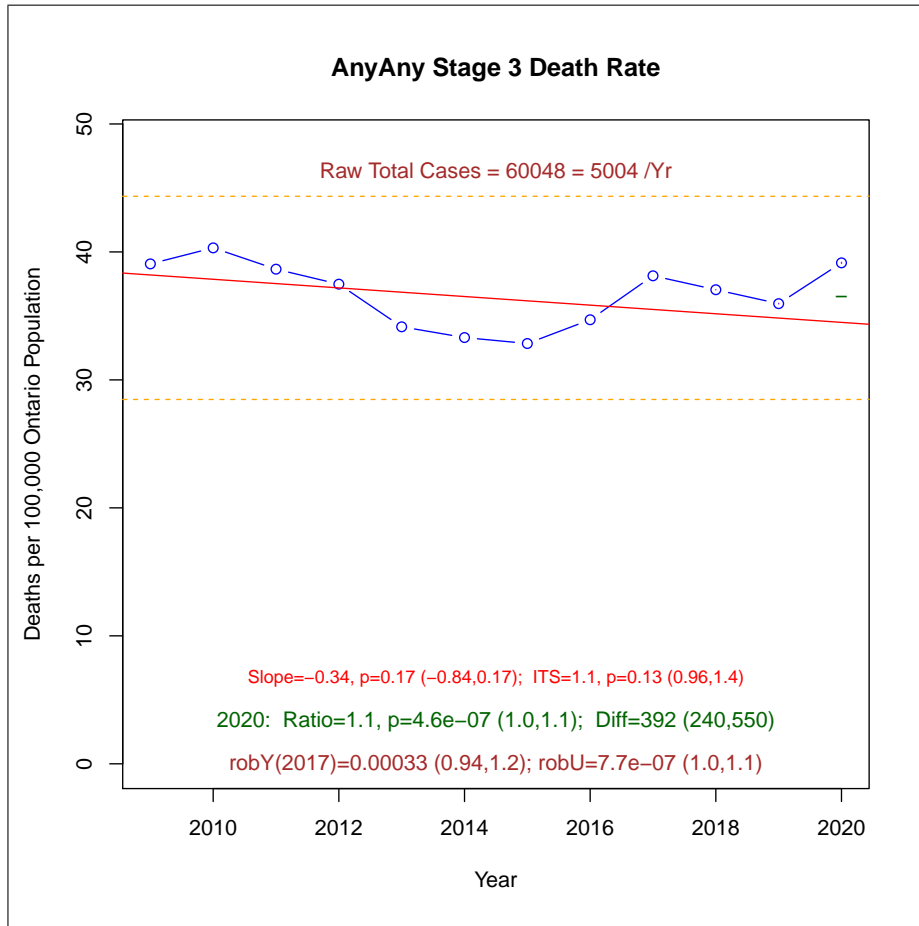
30.1. AnyAny – Stage 1 (May 19 – June 11):



30.2. AnyAny – Stage 2 (June 12 – July 16):



30.3. AnyAny – Stage 3 (July 17 – November 7):



30.4. AnyAny – Stage 4 (November 8 – December 31):

