Analysis

2025-03-20

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

##
## Attaching package: 'janitor'

## The following objects are masked from 'package:stats':
##
##     chisq.test, fisher.test

## Rows: 159 Columns: 32
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (1): Neighbourhood Name
## dbl (31): Neighb ID, POPULATION IN LOW-INCOME BASED ON LOW-INCOME CUT-OFFS -...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
## Rows: 159 Columns: 81
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (32): Neighbourhood Name, Age-Standardized † rate (/100) of Diabetes 202...
## dbl (49): Neighb ID, # of people with Diabetes 2021/22 ±, All Ages 20+ Male,...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.

## [1] "Income Data Columns (Trimmed and Unique):"

##  [1] "Neighb.ID"
##  [2] "Neighbourhood.Name"
##  [3] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..Total...Population
##  [4] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT"
##  [5] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...."
##  [6] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..Total...Population
##  [7] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...0.17.y
##  [8] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...0.17.y
##  [9] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..Total...Population
## [10] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...0.5.yr
## [11] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...0.5.yr
## [12] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..Total...Population
```

```
## [13] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...18.64
## [14] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...18.64
## [15] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..Total...Population
## [16] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...65..yr
## [17] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.CUT.OFFS...AFTER.TAX..LICO.AT..In.LICO.AT...65..yr
## [18] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..Total...Population.to
## [19] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT"
## [20] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...."
## [21] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..Total...Population.to
## [22] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...0.17.yrs
## [23] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...0.17.yrs
## [24] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..Total...Population.to
## [25] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...0.5.yrs.
## [26] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...0.5.yrs.
## [27] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..Total...Population.to
## [28] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...18.64.yrs
## [29] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...18.64.yrs
## [30] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..Total...Population.to
## [31] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...65..yrs.
## [32] "POPULATION.IN.LOW.INCOME.BASED.ON.LOW.INCOME.MEASURE...AFTER.TAX..LIM.AT..In.LIM.AT...65..yrs.
```

```
## [1] "Diabetes Data Columns (Trimmed and Unique):"
```

```
##  [1] "Neighb.ID"
##  [2] "Neighbourhood.Name"
##  [3] "X..of.people.with.Diabetes.2021.22....All.Ages.20..Male"
##  [4] "X..of.people.with.Diabetes.2021.22....All.Ages.20..Female"
##  [5] "X..of.people.with.Diabetes.2021.22....All.Ages.20..Total"
##  [6] "Total.Population.2023..RPDB..ª..All.Ages.20..Male"
##  [7] "Total.Population.2023..RPDB..ª..All.Ages.20..Female"
##  [8] "Total.Population.2023..RPDB..ª..All.Ages.20..Total"
##  [9] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20..Male"
## [10] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20..Female"
## [11] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20..Total"
## [12] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20..Rate.Ratio....Total"
## [13] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20..H..L..NS..Total"
## [14] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Male"
## [15] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL...Male"
## [16] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Female"
## [17] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL..Female"
## [18] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Total"
## [19] "Age.Standardized...rate...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL..Total"
## [20] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20..Male"
## [21] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20..Female"
## [22] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20..Total"
## [23] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20..Rate.Ratio....Total"
## [24] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20..H..L..NS..Total"
## [25] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Male"
## [26] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL...Male"
## [27] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Female"
## [28] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL..Female"
## [29] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..LL..Total"
## [30] "Prevalence...100..of.Diabetes.2021.22..All.Ages.20...95..CI..UL..Total"
## [31] "X..of.people.with.Diabetes.2021.22....Age.20.44.Male"
## [32] "X..of.people.with.Diabetes.2021.22....Age.20.44.Female"
```

```
## [33] "X..of.people.with.Diabetes.2021.22....Age.20.44.Total"
## [34] "Total.Population.2023..RPDB..ª..Age.20.44.Male"
## [35] "Total.Population.2023..RPDB..ª..Age.20.44.Female"
## [36] "Total.Population.2023..RPDB..ª..Age.20.44.Total"
## [37] "Prevalence...100..of.Diabetes.2021.22..Age.20.44.Male"
## [38] "Prevalence...100..of.Diabetes.2021.22..Age.20.44.Female"
## [39] "Prevalence...100..of.Diabetes.2021.22..Age.20.44.Total"
## [40] "Prevalence...100..of.Diabetes.2021.22..Age.20.44.Rate.Ratio....Total"
## [41] "Prevalence...100..of.Diabetes.2021.22..Age.20.44.H..L..NS..Total"
## [42] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..LL..Male"
## [43] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..UL...Male"
## [44] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..LL..Female"
## [45] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..UL..Female"
## [46] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..LL..Total"
## [47] "Prevalence...100..of.Diabetes.2021.22..Age.20.44..95..CI..UL..Total"
## [48] "X..of.people.with.Diabetes.2021.22....Age.45.64.Male"
## [49] "X..of.people.with.Diabetes.2021.22....Age.45.64.Female"
## [50] "X..of.people.with.Diabetes.2021.22....Age.45.64.Total"
## [51] "Total.Population.2023..RPDB..ª..Age.45.64.Male"
## [52] "Total.Population.2023..RPDB..ª..Age.45.64.Female"
## [53] "Total.Population.2023..RPDB..ª..Age.45.64.Total"
## [54] "Prevalence...100..of.Diabetes.2021.22..Age.45.64.Male"
## [55] "Prevalence...100..of.Diabetes.2021.22..Age.45.64.Female"
## [56] "Prevalence...100..of.Diabetes.2021.22..Age.45.64.Total"
## [57] "Prevalence...100..of.Diabetes.2021.22..Age.45.64.Rate.Ratio....Total"
## [58] "Prevalence...100..of.Diabetes.2021.22..Age.45.64.H..L..NS..Total"
## [59] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..LL..Male"
## [60] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..UL...Male"
## [61] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..LL..Female"
## [62] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..UL..Female"
## [63] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..LL..Total"
## [64] "Prevalence...100..of.Diabetes.2021.22..Age.45.64..95..CI..UL..Total"
## [65] "X..of.people.with.Diabetes.2021.22....Age.65..Male"
## [66] "X..of.people.with.Diabetes.2021.22....Age.65..Female"
## [67] "X..of.people.with.Diabetes.2021.22....Age.65..Total"
## [68] "Total.Population.2023..RPDB..ª..Age.65..Male"
## [69] "Total.Population.2023..RPDB..ª..Age.65..Female"
## [70] "Total.Population.2023..RPDB..ª..Age.65..Total"
## [71] "Prevalence...100..of.Diabetes.2021.22..Age.65..Male"
## [72] "Prevalence...100..of.Diabetes.2021.22..Age.65..Female"
## [73] "Prevalence...100..of.Diabetes.2021.22..Age.65..Total"
## [74] "Prevalence...100..of.Diabetes.2021.22..Age.65..Rate.Ratio....Total"
## [75] "Prevalence...100..of.Diabetes.2021.22..Age.65..H..L..NS..Total"
## [76] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..LL..Male"
## [77] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..UL...Male"
## [78] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..LL..Female"
## [79] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..UL..Female"
## [80] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..LL..Total"
## [81] "Prevalence...100..of.Diabetes.2021.22..Age.65...95..CI..UL..Total"
```

R Markdown

```
##  Neighbourhood        asr_lim_at      diabetes_asr
##  Length:158         Min.   : 3.866   Min.   : 4.80
```

```
##  Class :character   1st Qu.: 9.951   1st Qu.: 8.65
##  Mode  :character   Median :11.921   Median :11.05
##                     Mean   :12.566   Mean   :11.77
##                     3rd Qu.:14.815   3rd Qu.:15.00
##                     Max.   :29.241   Max.   :22.70
```

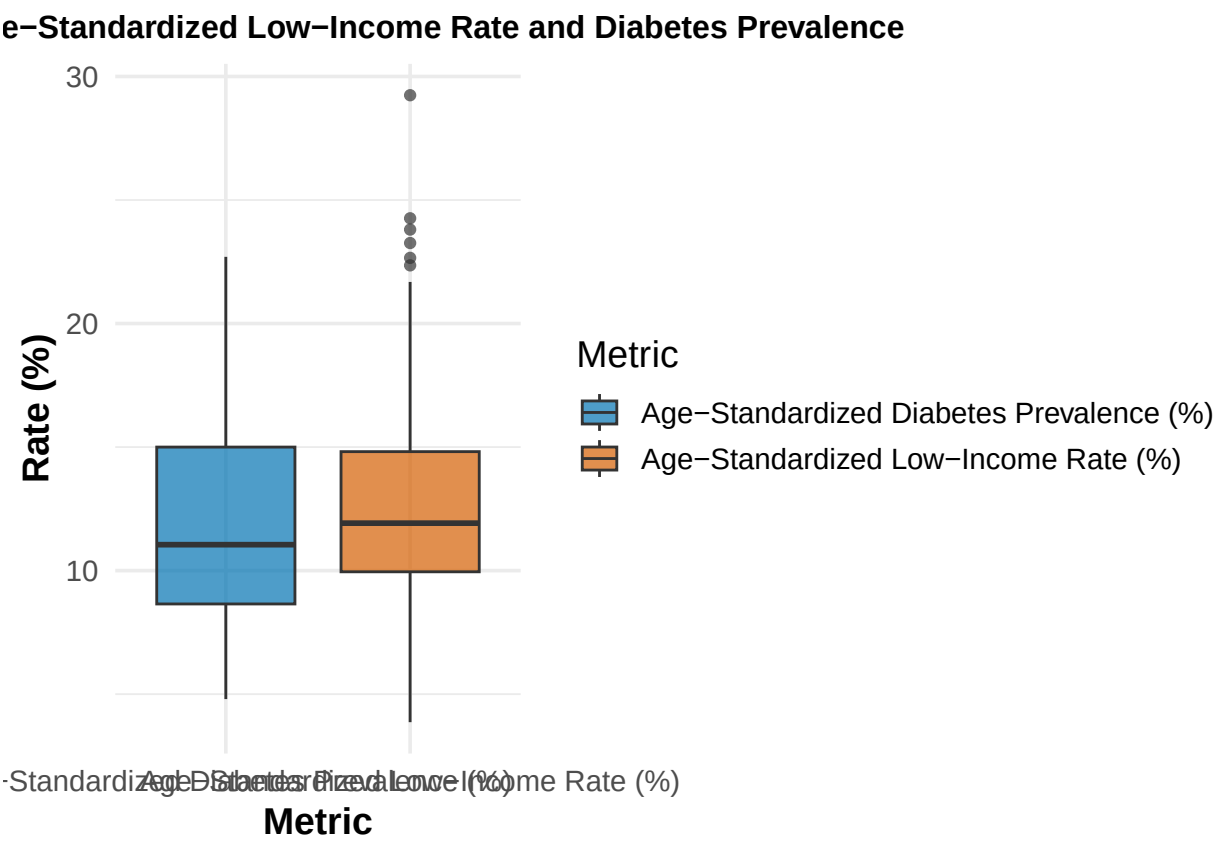


Table 1: Summary Statistics for Age-Standardized Low-Income Rate and Diabetes Prevalence

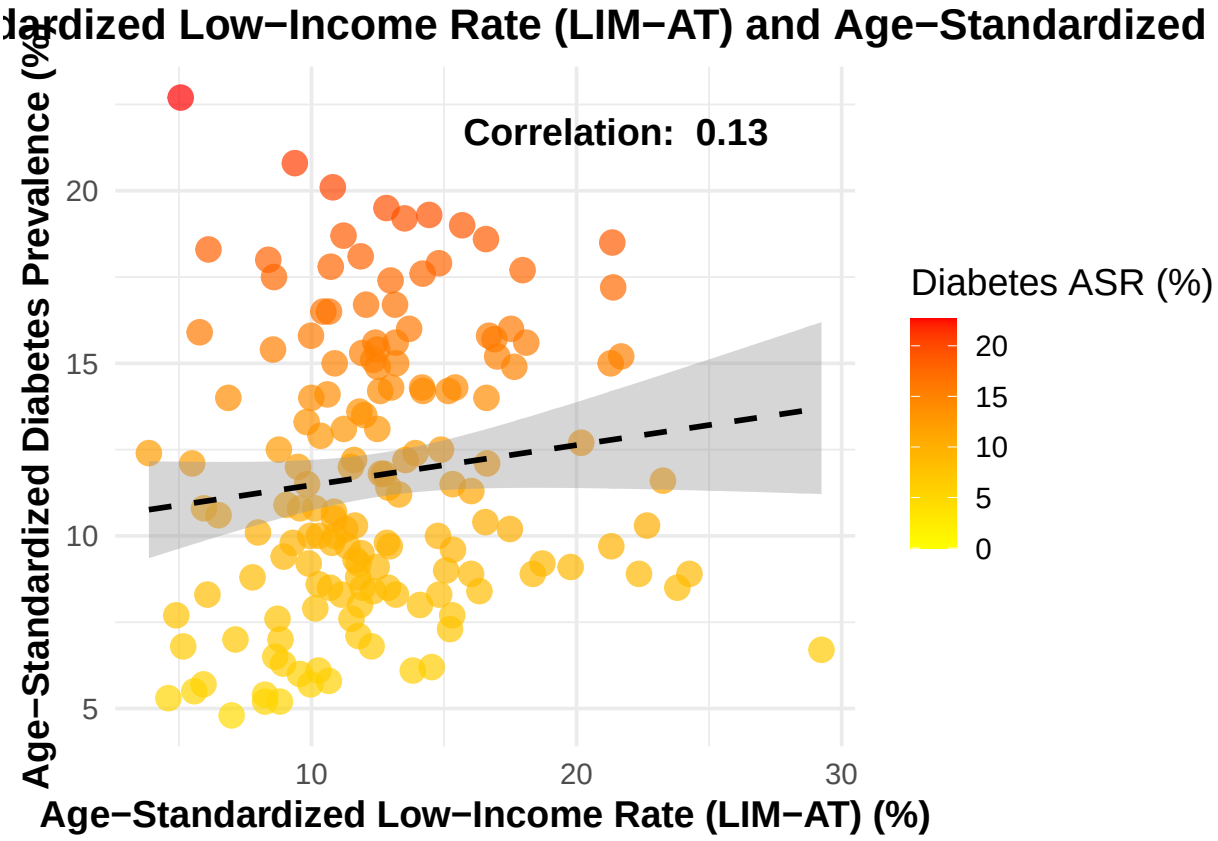
Metric	Value
Age-Standardized Low-Income Rate Min	3.87
Age-Standardized Low-Income Rate Q1	9.95
Age-Standardized Low-Income Rate Median	11.92
Age-Standardized Low-Income Rate Mean	12.57
Age-Standardized Low-Income Rate Q3	14.81
Age-Standardized Low-Income Rate Max	29.24
Age-Standardized Diabetes Prevalence Min	4.80
Age-Standardized Diabetes Prevalence Q1	8.65
Age-Standardized Diabetes Prevalence Median	11.05
Age-Standardized Diabetes Prevalence Mean	11.77
Age-Standardized Diabetes Prevalence Q3	15.00
Age-Standardized Diabetes Prevalence Max	22.70

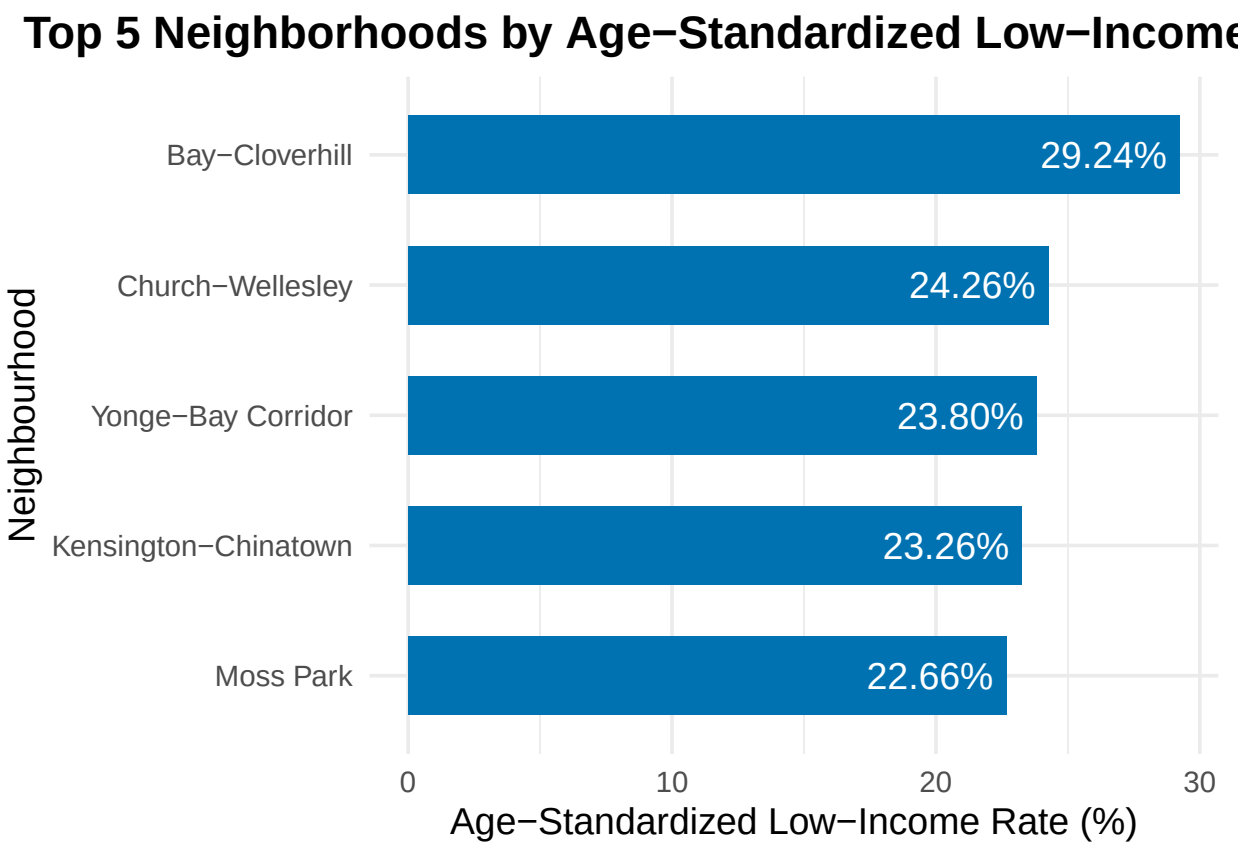
```
##  Neighbourhood        asr_lim_at      diabetes_asr
##  Length:158         Min.   : 3.866   Min.   : 4.80
##  Class :character   1st Qu.: 9.951   1st Qu.: 8.65
##  Mode  :character   Median :11.921   Median :11.05
```

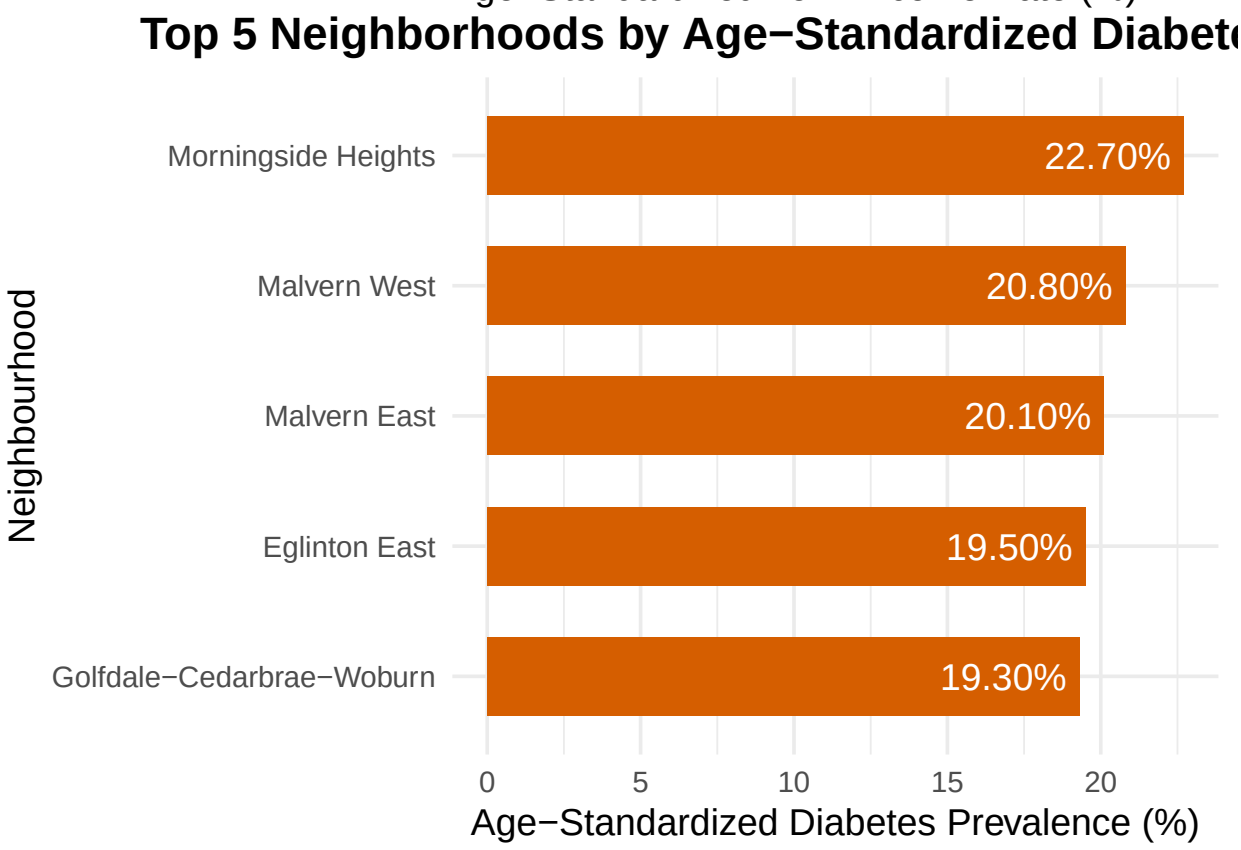
```
##                     Mean   :12.566   Mean   :11.77
##                     3rd Qu.:14.815   3rd Qu.:15.00
##                     Max.   :29.241   Max.   :22.70
```

```
## [1] "Correlation between Age-Standardized Low-Income Rate and Age-Standardized Diabetes Prevalence:
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

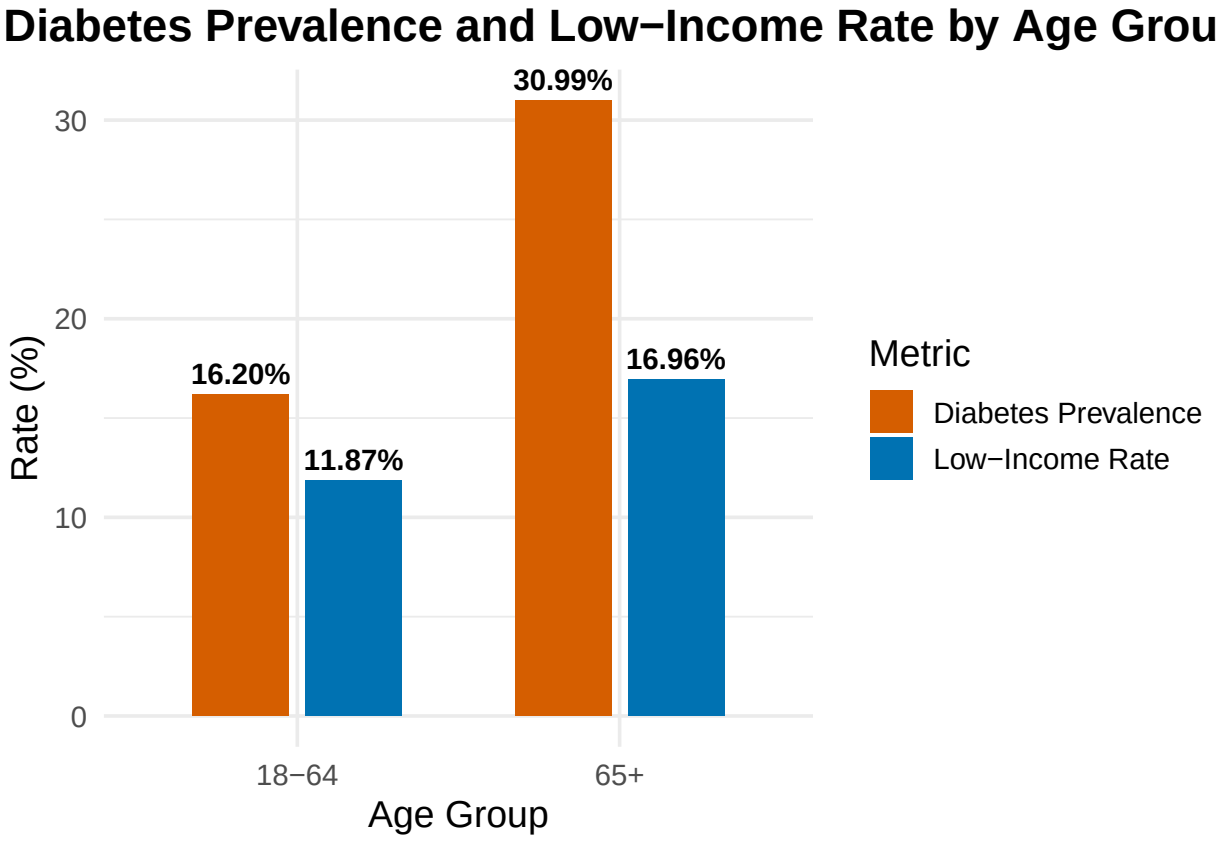







```
## Raw Prevalence Summary:
```

```
## Diabetes Prevalence (18-64): 16.2 %
## Diabetes Prevalence (65+): 30.99 %
## Low-Income Rate (18-64): 11.87 %
## Low-Income Rate (65+): 16.96 %
##
## Attaching package: 'reshape2'
## The following object is masked from 'package:tidyr':
##
##     smiths
```



hborhoods by Diabetes Prevalence (Threshold: 6.1%)