

Topic 2

Where are we going? What are we going to be doing?



Descriptive statistics presents measures and pictures that we can use to get a “feeling” about a set of data.

Measures

Mean
Median
Mode
Range
Quartiles
Standard deviation
Variance
Correlation
Regression equations
Percentiles
Frequency tables
Proportions

Graphs

Bar plots
Histograms
Box plots
Pie charts
Dot plots
Stem and leaf charts
Scatter plots
Line charts

There are times when we can look at all of the values that concern us. “All of the values” refers to a population.



Measures of a population are called population parameters.

There are times when we cannot or choose not to look at all of the values that concern us but we can look at a portion of those values. The “portion” is called a sample.



Measures of a sample are called sample statistics.

Inferential statistics gives us a way to look at a **measure in a sample**, called a **sample statistic**, and from that measure to “**infer**” something about the corresponding **measure in the population**, called a **population parameter**.

In order to do such inference we need to understand and use some basic **probability** statements.

Michigan Government Data
Count of Confirmed COVID-19 Cases by Date of Onset*

Date	Cases
1-Mar	12
2-Mar	12
3-Mar	21
4-Mar	23
5-Mar	27
6-Mar	39
7-Mar	46
8-Mar	56
9-Mar	120
10-Mar	146
11-Mar	191
12-Mar	258
13-Mar	346
14-Mar	355
15-Mar	454
16-Mar	684
17-Mar	755
18-Mar	847
19-Mar	717
20-Mar	909
21-Mar	776

Date	Cases
22-Mar	780
23-Mar	1186
24-Mar	1059
25-Mar	1151
26-Mar	1111
27-Mar	1284
28-Mar	1027
29-Mar	911
30-Mar	1542
31-Mar	1259
1-Apr	1490
2-Apr	1077
3-Apr	1159
4-Apr	954
5-Apr	826
6-Apr	1244
7-Apr	1079
8-Apr	1017
9-Apr	938
10-Apr	981
11-Apr	754

Date	Cases
12-Apr	627
13-Apr	945
14-Apr	806
15-Apr	848
16-Apr	837
17-Apr	801
18-Apr	652
19-Apr	502
20-Apr	828
21-Apr	995
22-Apr	1032
23-Apr	802
24-Apr	887
25-Apr	446
26-Apr	428
27-Apr	818
28-Apr	704
29-Apr	857
30-Apr	845
1-May	586
2-May	320

Date	Cases
3-May	293
4-May	563
5-May	500
6-May	397
7-May	404
8-May	280
9-May	166
10-May	111
11-May	87
12-May	31

Sunday

*or lab specimen collection date if onset date is not available, or by referral date if lab specimen date is not available

