

ER Wait times at ABC Hospital Chain

Sai Valluri

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Introduction

This document provides the Descriptive Statistics of the Mean Wait Times in ABC Hospital's Main and three of it's Sattelite Campuses.

day	variable	value
1	Main	120.08
2	Main	81.90
3	Main	78.79
4	Main	63.83
5	Main	79.77
6	Main	47.94
7	Main	79.88
8	Main	48.63
9	Main	55.43
10	Main	64.06
11	Main	64.99
12	Main	53.82
13	Main	62.43
14	Main	65.07
15	Main	81.02
1	Satellite.1	30.75
2	Satellite.1	61.83
3	Satellite.1	26.40
4	Satellite.1	53.84
5	Satellite.1	72.30
6	Satellite.1	53.09
7	Satellite.1	27.67
8	Satellite.1	52.46
9	Satellite.1	10.64
10	Satellite.1	53.50
11	Satellite.1	37.28
12	Satellite.1	34.31
13	Satellite.1	66.00
14	Satellite.1	8.99
15	Satellite.1	29.75
1	Satellite.2	75.86
2	Satellite.2	37.88
3	Satellite.2	68.73

day	variable	value
4	Satellite.2	51.08
5	Satellite.2	50.21
6	Satellite.2	58.47
7	Satellite.2	86.29
8	Satellite.2	62.90
9	Satellite.2	44.84
10	Satellite.2	64.17
11	Satellite.2	50.68
12	Satellite.2	47.97
13	Satellite.2	60.57
14	Satellite.2	58.37
15	Satellite.2	30.40
1	Satellite.3	54.05
2	Satellite.3	38.82
3	Satellite.3	36.85
4	Satellite.3	32.83
5	Satellite.3	52.94
6	Satellite.3	34.13
7	Satellite.3	69.37
8	Satellite.3	78.52
9	Satellite.3	55.95
10	Satellite.3	49.61
11	Satellite.3	66.40
12	Satellite.3	76.06
13	Satellite.3	11.37
14	Satellite.3	83.51
15	Satellite.3	39.17

Descriptive Statistics

##			
##			
##	day	variable	value
##	-----	-----	-----
##	1	Main	120.1
##	2	Main	81.9
##	3	Main	78.79
##	4	Main	63.83
##	5	Main	79.77
##	6	Main	47.94
##	7	Main	79.88
##	8	Main	48.63

##	9	Main	55.43
##	10	Main	64.06
##	11	Main	64.99
##	12	Main	53.82
##	13	Main	62.43
##	14	Main	65.07
##	15	Main	81.02
##	1	Satellite.1	30.75
##	2	Satellite.1	61.83
##	3	Satellite.1	26.4
##	4	Satellite.1	53.84
##	5	Satellite.1	72.3
##	6	Satellite.1	53.09
##	7	Satellite.1	27.67
##	8	Satellite.1	52.46
##	9	Satellite.1	10.64
##	10	Satellite.1	53.5
##	11	Satellite.1	37.28
##	12	Satellite.1	34.31
##	13	Satellite.1	66
##	14	Satellite.1	8.99
##	15	Satellite.1	29.75
##	1	Satellite.2	75.86
##	2	Satellite.2	37.88
##	3	Satellite.2	68.73
##	4	Satellite.2	51.08
##	5	Satellite.2	50.21
##	6	Satellite.2	58.47
##	7	Satellite.2	86.29
##	8	Satellite.2	62.9
##	9	Satellite.2	44.84
##	10	Satellite.2	64.17
##	11	Satellite.2	50.68
##	12	Satellite.2	47.97
##	13	Satellite.2	60.57
##	14	Satellite.2	58.37
##	15	Satellite.2	30.4
##	1	Satellite.3	54.05
##	2	Satellite.3	38.82
##	3	Satellite.3	36.85
##	4	Satellite.3	32.83
##	5	Satellite.3	52.94
##	6	Satellite.3	34.13
##	7	Satellite.3	69.37

```
## 8  Satellite.3  78.52
## 9  Satellite.3  55.95
## 10 Satellite.3  49.61
## 11 Satellite.3  66.4
## 12 Satellite.3  76.06
## 13 Satellite.3  11.37
## 14 Satellite.3  83.51
## 15 Satellite.3  39.17
##
## Table: Descriptive Statistics
```

ANOVA

The ANOVA test was conducted to determine if there is any statistical difference between the mean wait times between the four campuses. The calculation below shows a p-Value of 0.000859. Thus, we reject the Null Hypotheses. We can say with 95% confidence level that the Mean ER Wait times in the four campuses are not the same.

Table 2: Analysis of Variance Model # Tukey-Kramer test

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
variable	3	6312	2104	6.372	0.000859
Residuals	56	18493	330.2	NA	NA

```
## Warning in pander.default(ER.tukey): No
## pander.method for "TukeyHSD", reverting to
## default.No pander.method for "multicomp",
## reverting to default.
```

- **variable:**

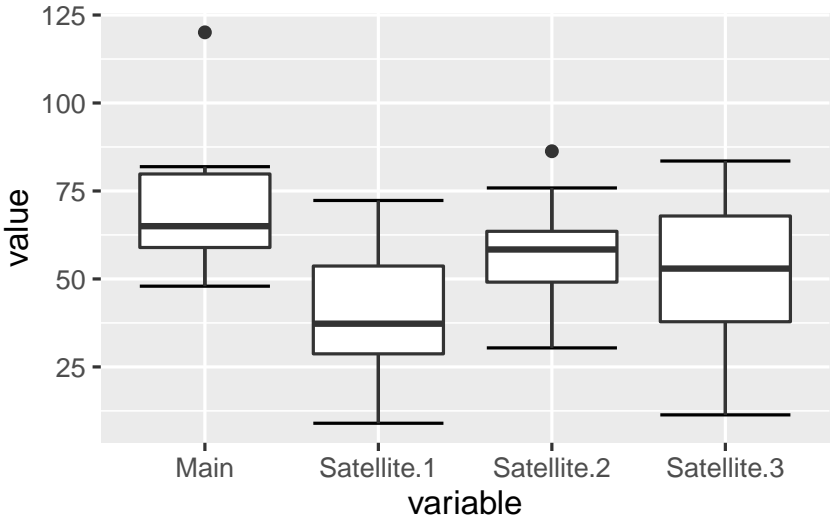
	diff	lwr	upr	p adj
Satellite.1-Main	-	-	-11.02	0.0003814
	28.59	46.16		
Satellite.2-Main	-	-	4.289	0.1997
	13.28	30.85		
Satellite.3-Main	-	-	-0.3003	0.04479
	17.87	35.44		

	diff	lwr	upr	p adj
Satellite.2-Satellite.1	15.31	- 2.263	32.88	0.1087
Satellite.3-Satellite.1	10.72	- 6.852	28.29	0.3785
Satellite.3-Satellite.2	- 4.589	- 22.16	12.98	0.8999

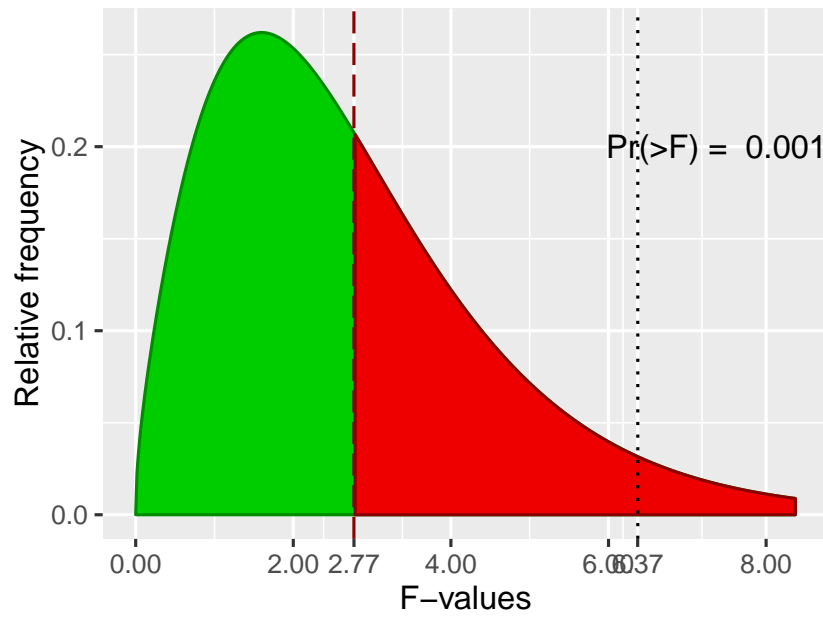
Levene Test

Table 4: Levene’s Test for Homogeneity of Variance (center = median) # Boxplot

	Df	F value	Pr(>F)
group	3	0.8201	0.4883
	56	NA	NA



f Distribution



References