

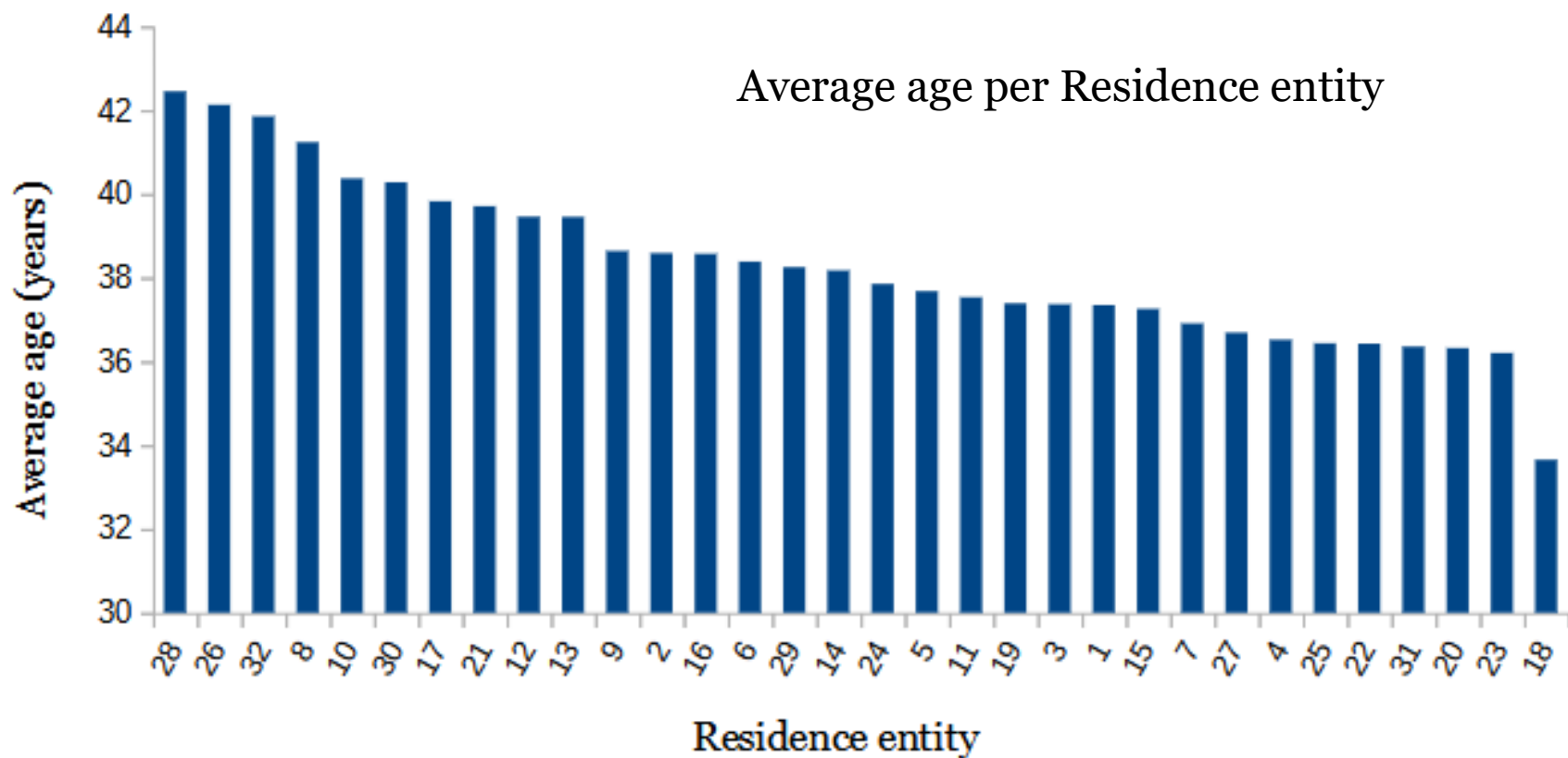
# Report - Module 1

## Covid data

Catalina Ramírez

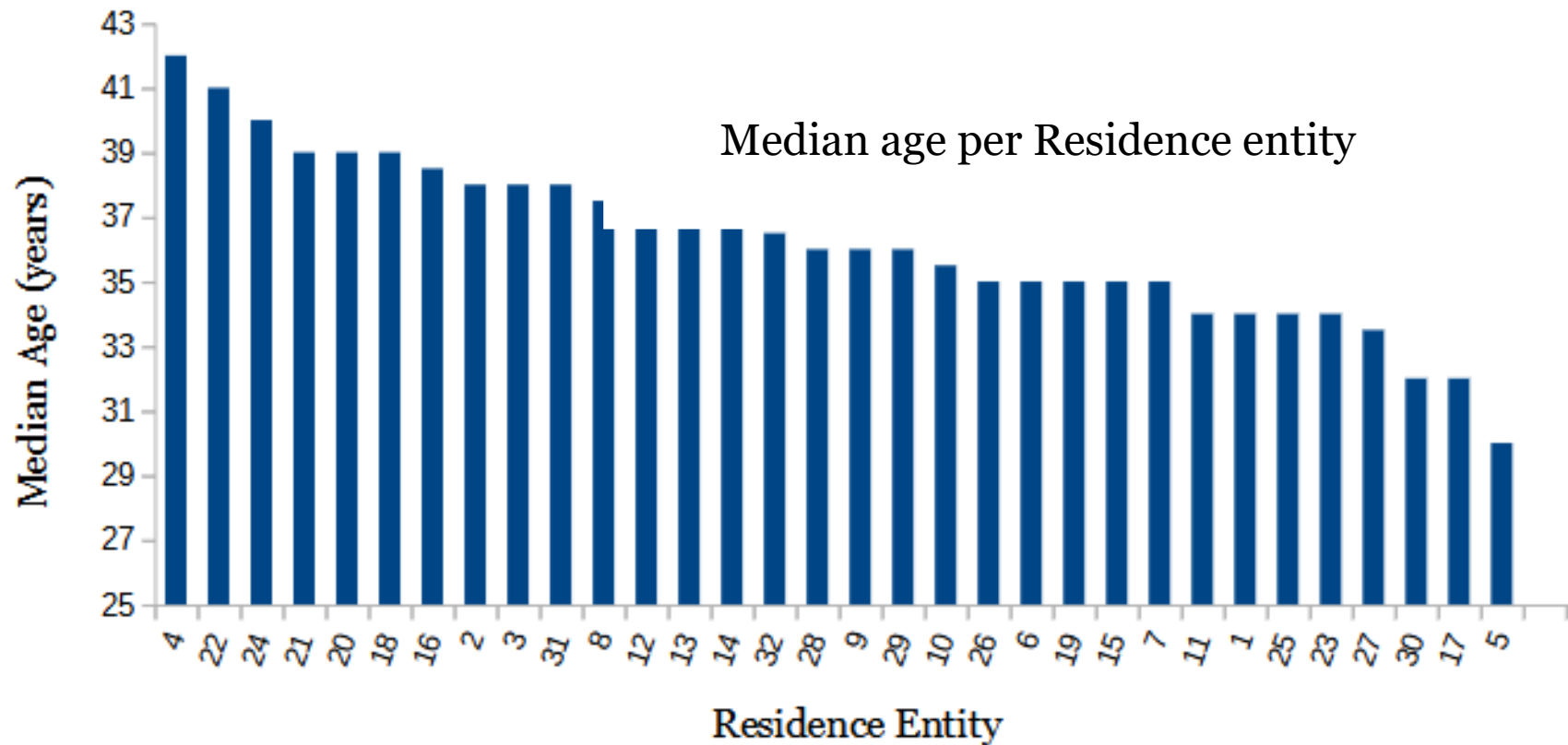


## Statistics related to the age (1)





## Statistics related to the age (2)





## Statistics related to the age (3)





## Statistics related to the days

Days: Number of days between the day someone shows symptoms and they are hospitalized



Average days	2.7	2.9
Median days	2	2
Mode days	0	0



# Probability (1)

Probability of getting a positive result in the antigen test

30.3%





## Probability (2)

Probability of getting a positive result in the antigen test given the patient was in contact with a diagnosed case with SARS Cov-2

The formula to compute this conditional probability is given by:

$$P(A|B)=P(A,B) / P(B)$$

Where:

A = getting a positive result in the antigen test

B= contact with a diagnosed case with SARS Cov-2



Key 1	It satisfies B, It does not satisfy A	$\rightarrow P(A,B)=0$
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Then, it is no possible to determine the probability  $P(A,B)$

Finally is no possible to compute  $P(A|B)=P(A,B) / P(B)$  and answer the question



End of report



# Notes

1. I wrote the report in English to practice, I hope it is fine for you
2. I used the latest LibreOffice Calc to do the exercise because I do not have any access to an Excel source. There are a few different syntax and methods. Thus, it is possible that you will not be able to see some functions or methods when opening the file “sampleDatosCovid\_report.”  
Then, I attach some print screens of the file in the next pages.

	A	B	C	D	E	F	G	H	I	J	K	L	
1		Data											
2	ENTIDAD	Average - EDAD	Median - EDAD	Mode - EDAD									
3	1	37.3461538461538	34	30									
4	2	38.5845410628019	38	20									
5	3	37.3641304347826	38	30									
6	4	36.5178571428571	42	21									
7	5	37.6779661016949	30	35									
8	6	38.3818181818182	35	28									
9	7	36.90625	35	21									
10	8	41.2349397590361	37.5	45									
11	9	38.6367321484253	36	29									
12	10	40.3693693693694	35.5	28									
13	11	37.5323741007194	34	28									
14	12	39.4551724137931	37	28									
15	13	39.4516129032258	37	43									
16	14	38.17125382263	37	33									
17	15	37.2535477767266	35	30									
18	16	38.57	38.5	28									
19	17	39.824644549763	32	44									
20	18	33.6515151515151	39	24									
21	19	37.3858921161826	35	24									
22	20	36.3181818181818	39	31									
23	21	39.7081545064378	39	27									
24	22	36.4238410596027	41	24									
25	23	36.2014925373134	34	28									
26	24	37.8511326860841	40	32									

#### Process

On the "muestrasDatosCovid" sheet following the next steps:

1. Insert → Pivot table → Dialog box
2. Drag "ENTIDAD\_RES" from available fields into the row field box
3. Drag "EDAD" from available fields into the data field box
4. double click over "EDAD" → new dialog box → select the operation to perform for example MEDIAN
5. Go to option and add total rows
6. Since LibreOffice Calc does not have MODE as an option in the pivot table, follow:
  - 6.1 Select the "EDAD" data from the first sheet where "ENTIDAD\_RES" == each value of "ENTIDAD\_RES" in the pivot table
  - 6.2 Apply MODE() to the IF result (6.1)
 
$$\text{MODE}(\text{IF}(\$muestraDatosCovid.H:\$muestraDatosCovid.H=A3, \$muestraDatosCovid.P: \$muestraDatosCovid.P))$$

	A	B	C	D	E	F	G	H
1		Data						
2	SEXO	Average - DIAS_SINTOMAS_INGRESO	Median - DIAS_SINTOMAS_INGRESO	Mode - DIAS_SINTOMAS_INGRESO				
3	1	2.71783496007098	2	0	mujer			
4	2	2.85005170630817	2	0	hombre			
5	Total Result	2.77889207258835	2					
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

#### Process

On the "muestrasDatosCovid" sheet following the next steps:

1. Create the column "DIAS\_SINTOMAS\_INGRESO" as the difference between "FECHA\_INGRESO - FECHA\_SINTOMAS"
2. Insert → Pivot table → Dialog box
3. Drag "SEXO" from available fields into the row field box
4. Drag "DIAS\_SINTOMAS\_INGRESO" from available fields into the data field box
5. double click over "DIAS\_SINTOMAS\_INGRESO" → new dialog box → select the operation to perform for example MEDIAN
6. Since LibreOffice Calc does not have MODE as an option in the pivot table, follow:
  - 6.1 Select the "DIAS\_SINTOMAS\_INGRESO" data from the first sheet where "SEXO" == each value of "SEXO" in the pivot table
  - 6.2 Apply MODE() to the IF result (6.1)  
`MODE(IF($muestrasDatosCovid.F:$muestrasDatosCovid.F=A3, $muestrasDatosCovid.P: $muestrasDatosCovid.AO))`



