Gender Distribution Analysis

gender	stroke category	Values		had stroke			Grand Total		
	no stroke			had stroke			Grand Total		
	Count	Row %	Column %	Count	Row %	Column %	Count	Row %	Column %
female	2853	95.29%	58.70%	141	4.71%	56.63%	2994	100.00%	58.60%
male	2007	94.89%	41.30%	108	5.11%	43.37%	2115	100.00%	41.40%
Grand Total	**4860**	**95.13%**	**100.00%**	**249**	**4.87%**	**100.00%**	**5109**	**100.00%**	**100.00%**

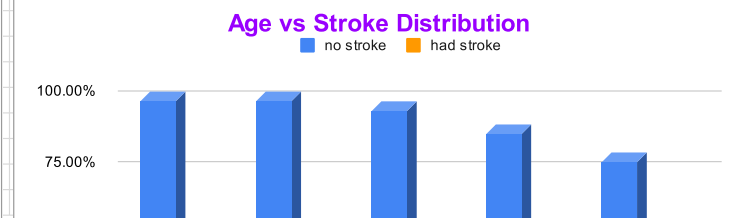### Gender Distribution

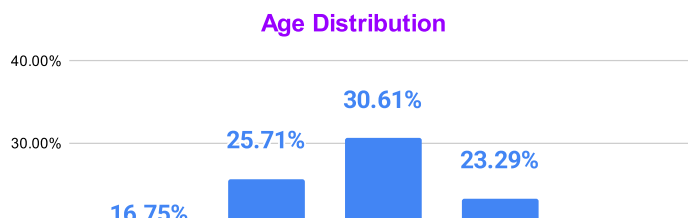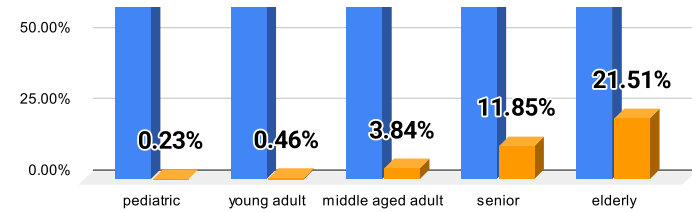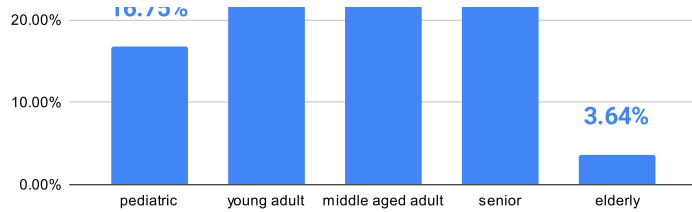### Gender vs Stroke Distribution
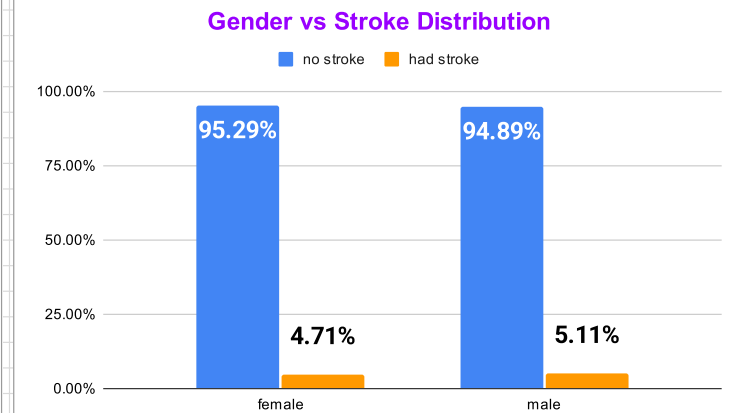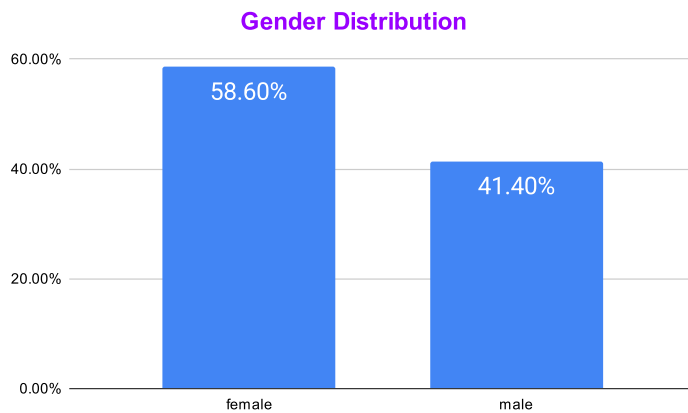
Insights

1. The female patients (58.60%) outnumber the male patients (41.40%) in this dataset.

2. The bar chart visualization shows that male patients' risk of having a stroke is 5.11% while the female patients have a 4.71% risk of having a stroke. The values are very similar when comparing the probability of having a stroke.

Age Distribution Analysis

age helper	age	stroke category	Values		had stroke			Grand Total		
		no stroke			had stroke			Grand Total		
		Count	Row %	Column %	Count	Row %	Column %	Count	Row %	Column %
1	pediatric	854	99.77%	17.57%	2	0.23%	0.80%	856	100.00%	16.75%
2	young adult	1308	99.54%	26.91%	6	0.46%	2.41%	1314	100.00%	25.71%
3	middle aged adul	1504	96.16%	30.94%	60	3.84%	24.10%	1564	100.00%	30.61%
4	senior	1049	88.15%	21.58%	141	11.85%	56.63%	1190	100.00%	23.29%
5	elderly	146	78.49%	3.00%	40	21.51%	16.06%	186	100.00%	3.64%
Grand Total		**4861**	**95.13%**	**100.00%**	**249**	**4.87%**	**100.00%**	**5110**	**100.00%**	**100.00%**

Age Distribution

Age vs Stroke Distribution

Hypertension Distribution Analysis

stroke category	Values						Grand Total		
	no stroke			had stroke					
hypertension	Count	Row %	Column %	Count	Row %	Column %	Count	Row %	Column %
no hypertension	4429	96.03%	91.11%	183	3.97%	73.49%	4612	100.00%	90.25%
have hypertension	432	86.75%	8.89%	66	13.25%	26.51%	498	100.00%	9.75%
Grand Total	**4861**	**95.13%**	**100.00%**	**249**	**4.87%**	**100.00%**	**5110**	**100.00%**	**100.00%**

Hypertension Distribution

Nearly 1 in 10 patients in the group is diagnosed with hypertension
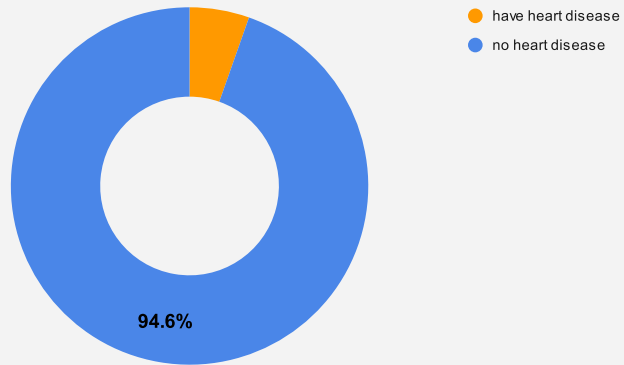

Hypertension vs Stroke

Heart Disease Distribution Analysis

heart disease	stroke category no stroke Count	Values Row %	 Column %	had stroke Count	 Row %	 Column %	Grand Total Count	 Row %	 Column %
have heart disease	229	82.97%	4.71%	47	17.03%	18.88%	276	100.00%	5.40%
no heart disease	4632	95.82%	95.29%	202	4.18%	81.12%	4834	100.00%	94.60%
Grand Total	**4861**	**95.13%**	**100.00%**	**249**	**4.87%**	**100.00%**	**5110**	**100.00%**	**100.00%**

Heart Disease Distribution

- have heart disease
- no heart disease

94.6%

Heart Disease vs Stroke Distribution

- no stroke
- had stroke

100.00%
75.00%
50.00%
25.00%
0.00%

17.03%   (have heart disease)
4.18%   (no heart disease)
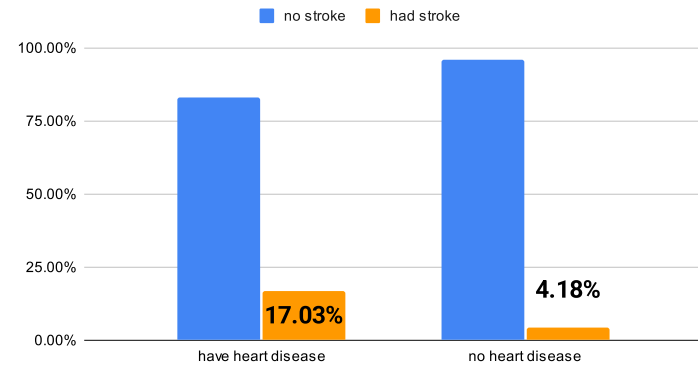
Insights

* Only 5.4% of the data represents patients with heart disease.

* Patients with heart disease posts a risk of 17.03% of having a stroke - this is the highest risk percentage that we have observed so far.

* Patients with heart disease is a little more than four times as likely to have a stroke than patients with no heart disease (4.18%)
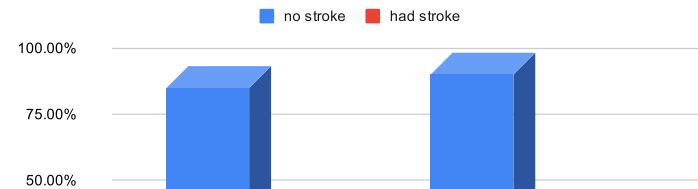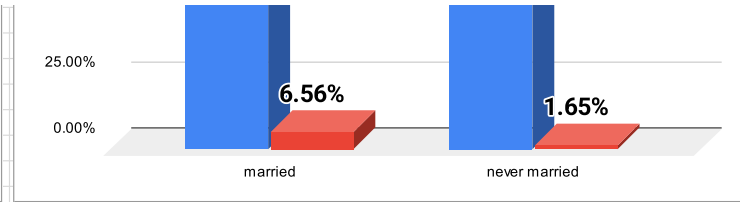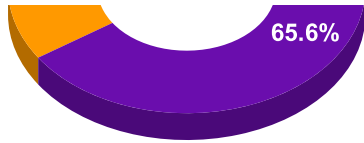
Heart Disease Distribution Analysis

ever married	stroke category no stroke Count	Values Row %	 Column %	had stroke Count	 Row %	 Column %	Grand Total Count	 Row %	 Column %
married	3133	93.44%	64.45%	220	6.56%	88.35%	3353	100.00%	65.62%
never married	1728	98.35%	35.55%	29	1.65%	11.65%	1757	100.00%	34.38%
Grand Total	**4861**	**95.13%**	**100.00%**	**249**	**4.87%**	**100.00%**	**5110**	**100.00%**	**100.00%**

Ever Married Distribution

- married
- never married

34.4%

Ever Married vs Stroke Distribution

- no stroke
- had stroke

100.00%
75.00%
50.00%

65.6%

25.00%

6.56%

1.65%

0.00%

married   never married

Insights

* Married and once married patients make up **65.6%** of the data, which is **almost under twice** as much as the never married patients (**34.4%**)

* Married and once married patients have a **6.56%** likelyhood of having a stroke while only patients taht were never married only have a **1.65%** risk of having a stroke - around four times less likely to have a stroke.

Ever