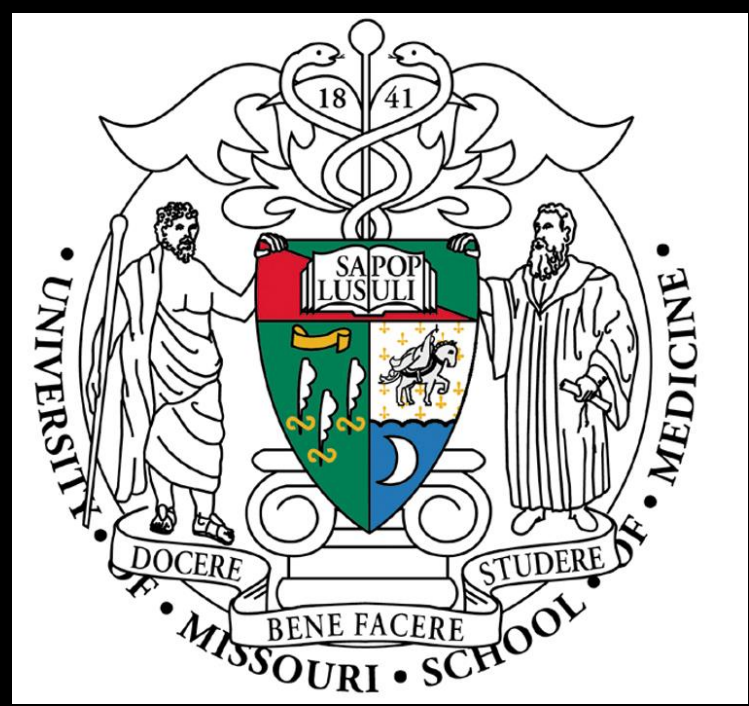




# COGNITIVE ERRORS AT BEDSIDE LEADING TO MISDIAGNOSIS OF GUILLAIN-BARRE SYNDROME

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## BACKGROUND

Guillain-Barré Syndrome (GBS) is an autoimmune disorder presenting with rapid onset progressive weakness.

Studies have shown immunotherapy within 2 weeks of symptom onset have significantly lower morbidity and long term disability. It is imperative to diagnose and treat GBS early.

This study examined factors that have led to delays in diagnosing GBS.

## AIM

- To identify:
1. The types of cognitive biases at bedside that resulted in diagnostic error of GBS
  2. Clinical factors which led to the cognitive error.

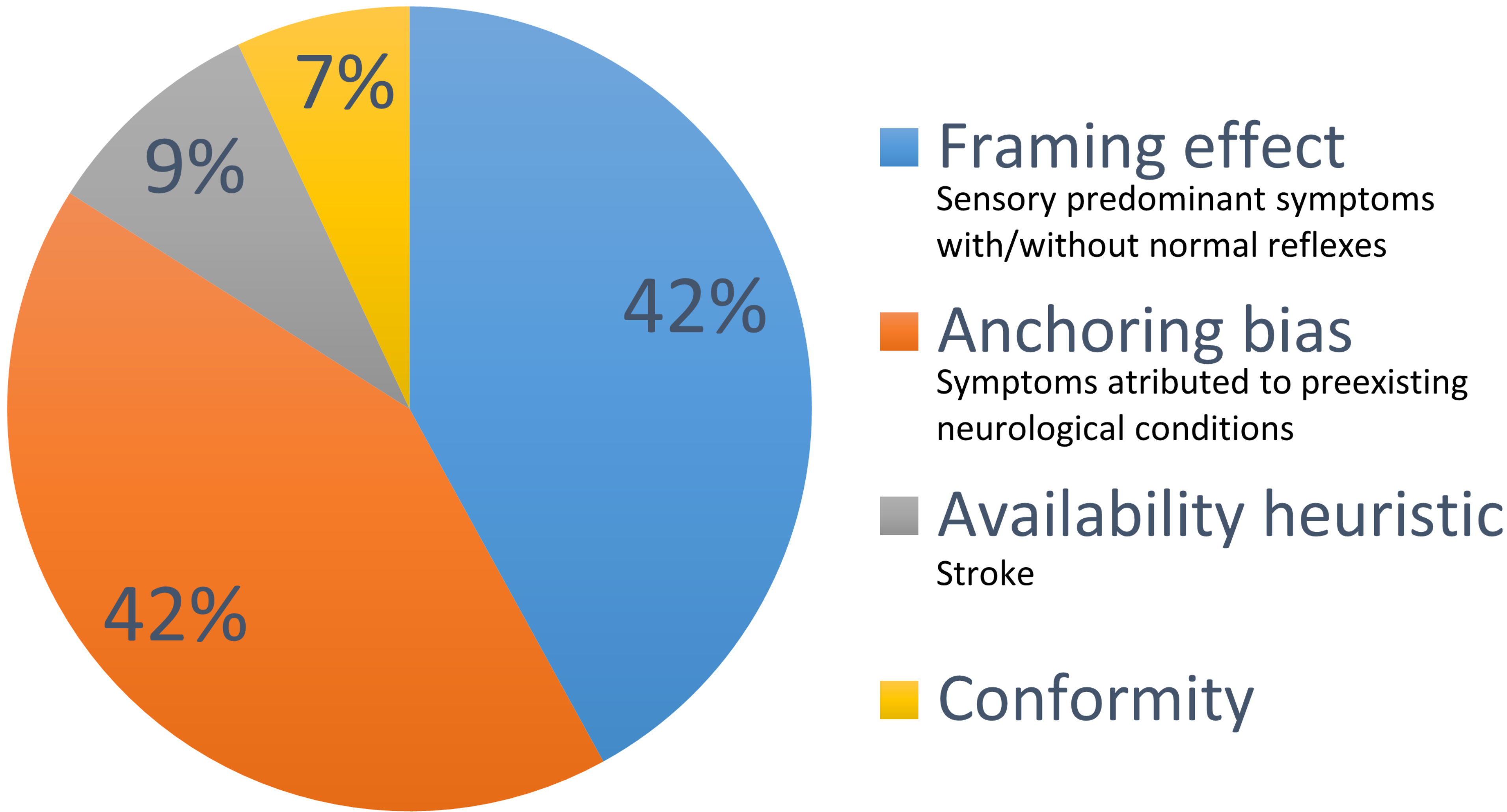
## METHODS

Retrospective study of 250 patient charts (from 2011-2017) with ICD-9 code of 357.0. Those patients who met our definition of ‘misdiagnosis’ were included and chart reviewed for the cause of misdiagnosis.

We defined diagnostic error as treatment delayed more than 2 weeks from onset of symptoms due to initially misdiagnosis

## RESULTS

### COGNITIVE ERRORS THAT LEAD TO THE MISDIAGNOSES OF GBS



### PATIENT DEMOGRAPHICS

Number of Patients Enrolled	40
Age	36 year (SD=+/-17)
Gender	Male=24, Female=16
Treatment delay	3-63 days

### ALTERNATIVE DIAGNOSIS

No Diagnosis	20
Peripheral Neuropathy	5
Lumbosacral Radiculopathy	4
Stroke/fatigue/anxiety	11

### ACKNOWLEDGEMENTS & REFERENCES

- This project was supported by a Summer Research Fellowship from the Office of Medical Research, MU School of Medicine.
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## CONCLUSIONS

Common causes of diagnostic delay in GBS included

- Presence of sensory predominant symptoms with normal reflexes
- Preexisting neurological conditions
- Over reliance on diagnosing conditions like stroke, anxiety in the emergency room
- Not questioning a previous opinion

## DISCUSSION

- Misdiagnosis is a major problem in GBS due to the varying presentation of the disease and overlapping symptoms with other diseases.
- Misdiagnosing GBS can be catastrophic as treatment delays lead to increased morbidity and long term mortality.
- The National Academy of Medicine has identified diagnostic errors as one of the leading cases of patient death.
- Misdiagnoses have led to incorrect treatment involving antiplatelet or anticoagulants
- Understanding cognitive errors at bedside may provide one of the ways to understand and learn about diagnostic errors.