

# Diabetic Medication Changes In Hospitalized COPD Patients Treated With Steroids:

## A Single Center Experience

Sujata Panthi, MD

Baptist Memorial Hospital Desoto, Southaven, Mississippi, USA

### Background

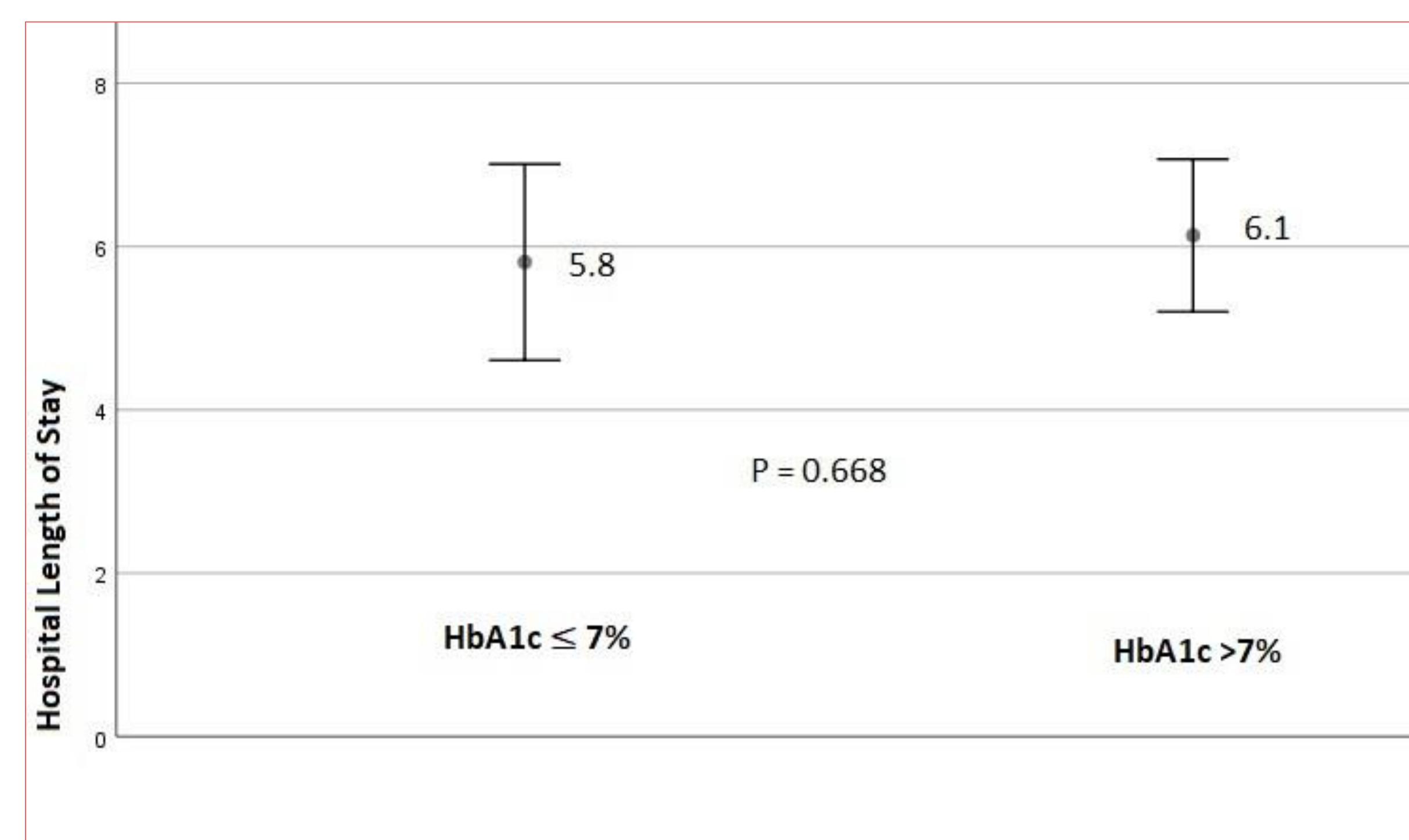
- Prevalence of patients with both diabetes and COPD is high in the US population.
- Steroid-induced hyperglycemia frequently poses a challenge in managing these patients with COPD exacerbation in hospital.
- There have not been studies to look into how this impacts diabetic medications on discharge.

### Methodology

- Retrospective chart review was performed for patients with DM admitted for COPD exacerbation in a community hospital in the year 2018.
- Demographic parameters; blood sugar on admission, after steroid administration and before discharge; and HbA1c were noted.
- Diabetic medication changes (Non-insulin and insulin) on discharge as compared to admission were noted.
- Data analysis was done using IBM SPSS Statistics 25.

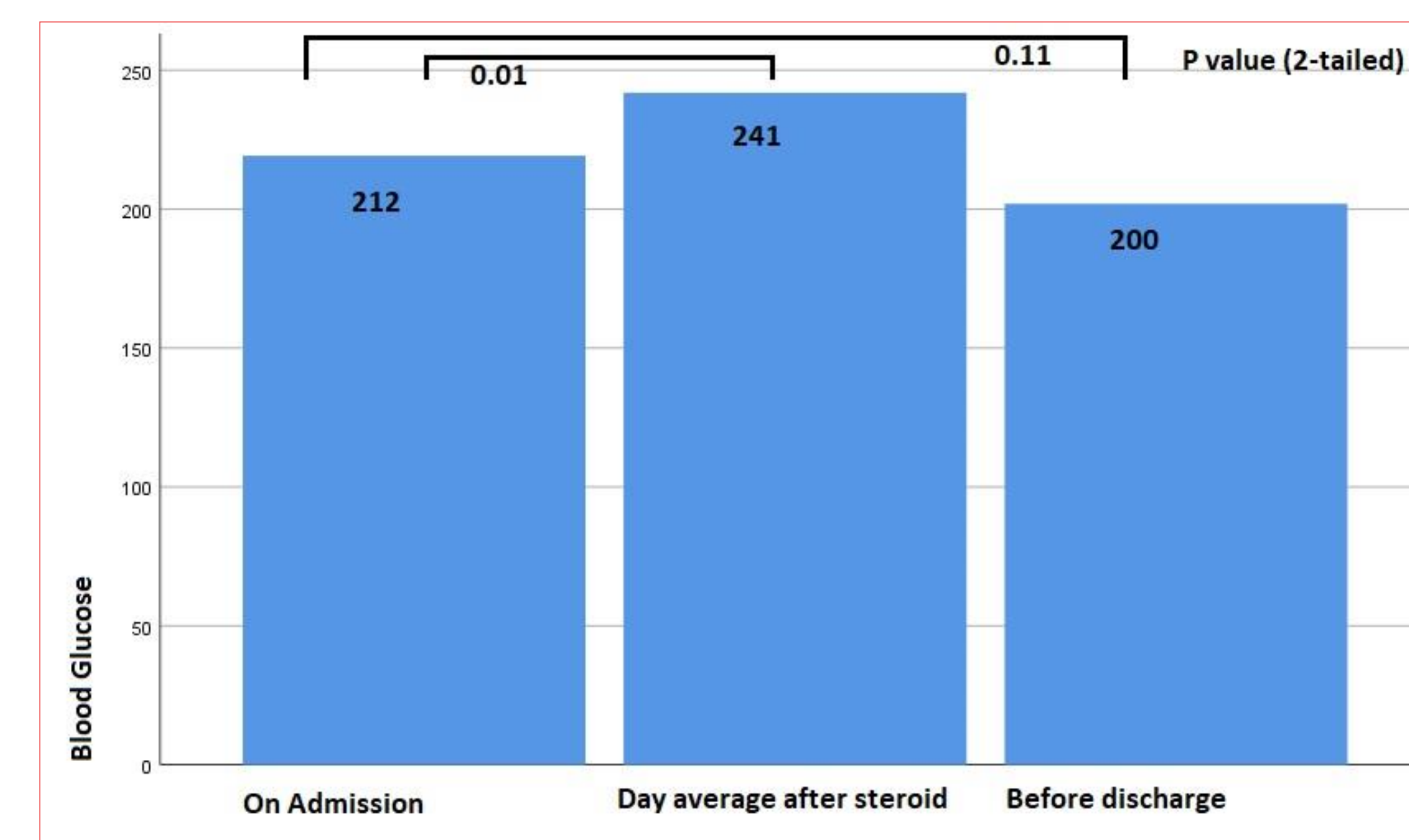
### Results

- A total of 363 patients with a mean age of 67 ( $\pm$  11.8) were studied.
- HbA1C was available for 178 patients with mean 7.67% ( $\pm$  1.62). 62.3% had HbA1c more than 7%.
- Compared to the admission blood sugar, there was an increase in blood sugar (BS) after steroid administration, but no increase in BS on discharge day.
- There was no difference in increases in blood sugar in patients with HbA1c >7% compared to one with  $\leq$ 7% (P 0.88, Student T-test).



### Results

- On discharge, 4% of the patients had either increase or a new start of non-insulin diabetic medications.
- The 6.1% of all patients were newly started on insulin regimens and 5.8% of patients had pre-existing insulin dose increased.
- Overall, medication escalation (addition or increase in insulin/non-insulin diabetic medication) was seen in 21.8% and 19.1% of patients with hemoglobin A1c of >7% and  $\leq$  7% respectively (OR 1.18, 95% CI 0.55 – 2.51).
- There was no difference in hospital stay length in patients with HbA1c > 7% or  $\leq$ 7%.



### Results

- Of the patients with HbA1c  $\leq$ 7% (N = 67), 3% had an increase in pre-existing insulin regimen, and 9% had a new start of insulin regimen.

### Conclusion

- Majority of the diabetic patients with COPD in the study had uncontrolled diabetes.
- Addition or increase of diabetic medication on discharge on patients with controlled diabetes (HbA1c  $\leq$ 7%) based on the steroid-induced hyperglycemia has potential adverse consequences like hypoglycemia, which needs further studies.
- Patients who had their medication changed on discharge should follow up with PCP or GP for adjustment of their medication as soon as steroid regimen is completed.