

# Systemic Administration of Glucocorticoids in Guizhou Province, China: a Survey among Hospital Pharmacies



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## BACKGROUND

Glucocorticoids (GCs) are widely used in treatment of many diseases (e.g. rheumatic immune diseases, asthma, infectious diseases, allergic disease, hematological disease, and organ transplantation, etc.). Irrational GCs use, especially as systemic medication, is associated with an array of side effects like metabolism disorders, infection exacerbation, digestive complication, osteoporosis, mental disorders, cataract, glaucoma and so on.

## OBJECTIVE

To investigate the status of GCs use as systemic medication in Guizhou Province, China and evaluate the effectiveness of current management interventions for GCs.

## METHODS

- The study was based on the Quality Control Center of Guizhou Pharmacy Administration and conducted by sending questionnaires to the member hospitals within Guizhou Province.
- Chi-square test and analysis of variance were used in univariate analysis, while logistic regression and multiple linear regression were applied in multivariate analysis.

## RESULTS

- This survey included 282 hospitals in Guizhou Province (Figure 1).
- The average number of prescriptions on systemic use of GCs was 2.18 [95%CI (credible interval: 1.83-2.59)] per 100 outpatients prescriptions, with an average dose of 10.19 (95%CI: 8.50-12.21) mg per visit (calculated by hydrocortisone) in 2018 (Figure 2 and Figure 3).
- Fifty-one hospitals (18.82%), especially in Grass-roots Healthcare Centers (GHC) (34/51), considered fever and pain caused by common infections as the main indication for systemic administration of GCs. (Figure 4)
- Multivariate analyses suggested that current management interventions for GCs had little effect on the rational use of GCs ( $P > 0.05$ ).

## CONCLUSION

The status of irrational use of GCs in Guizhou Province is alerting, especially in GHC. It is necessary to restrict the indication for GCs use and improve the management.

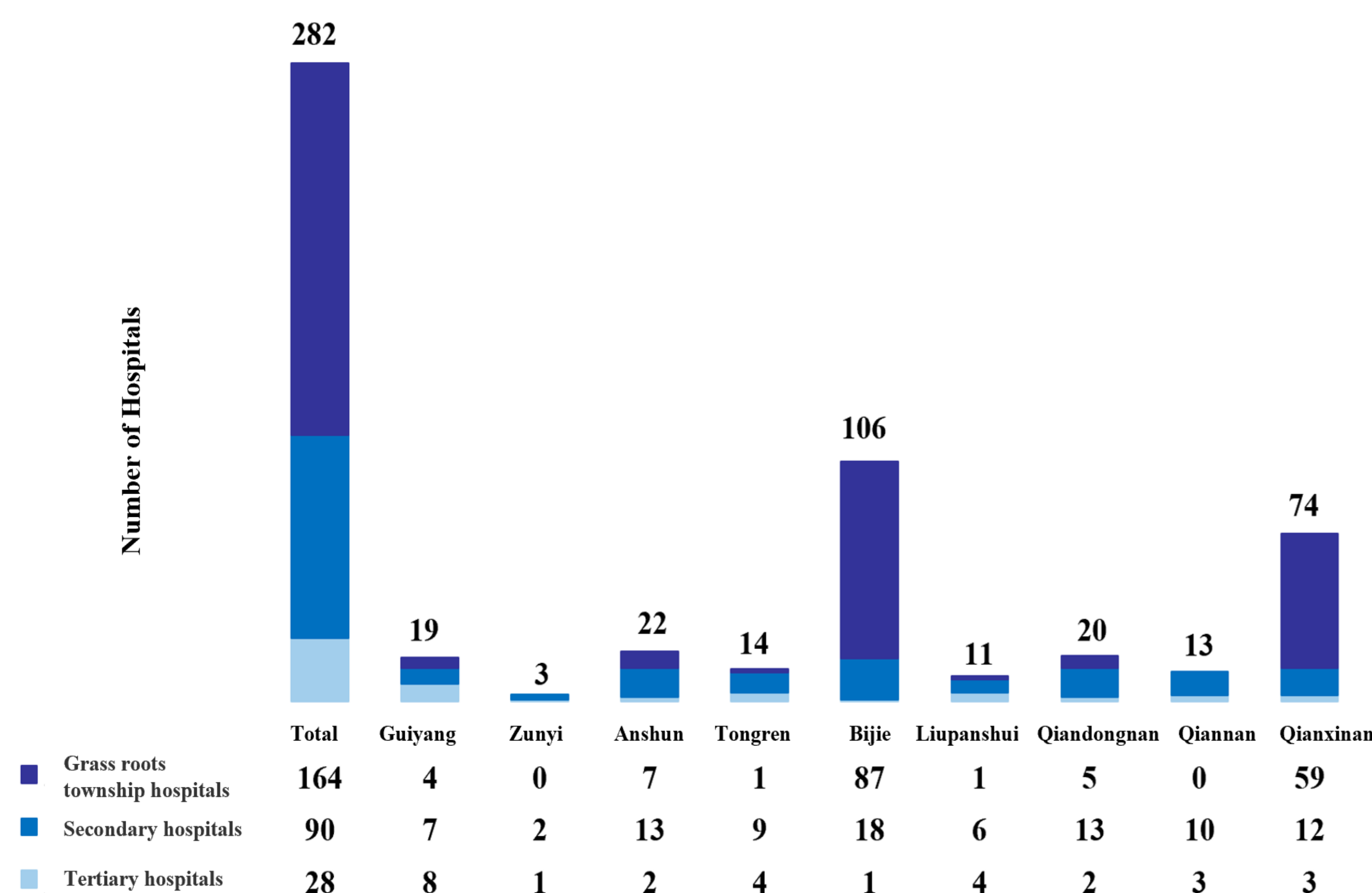


Figure 1. The distribution of hospitals investigated in Guizhou Province (n=282)

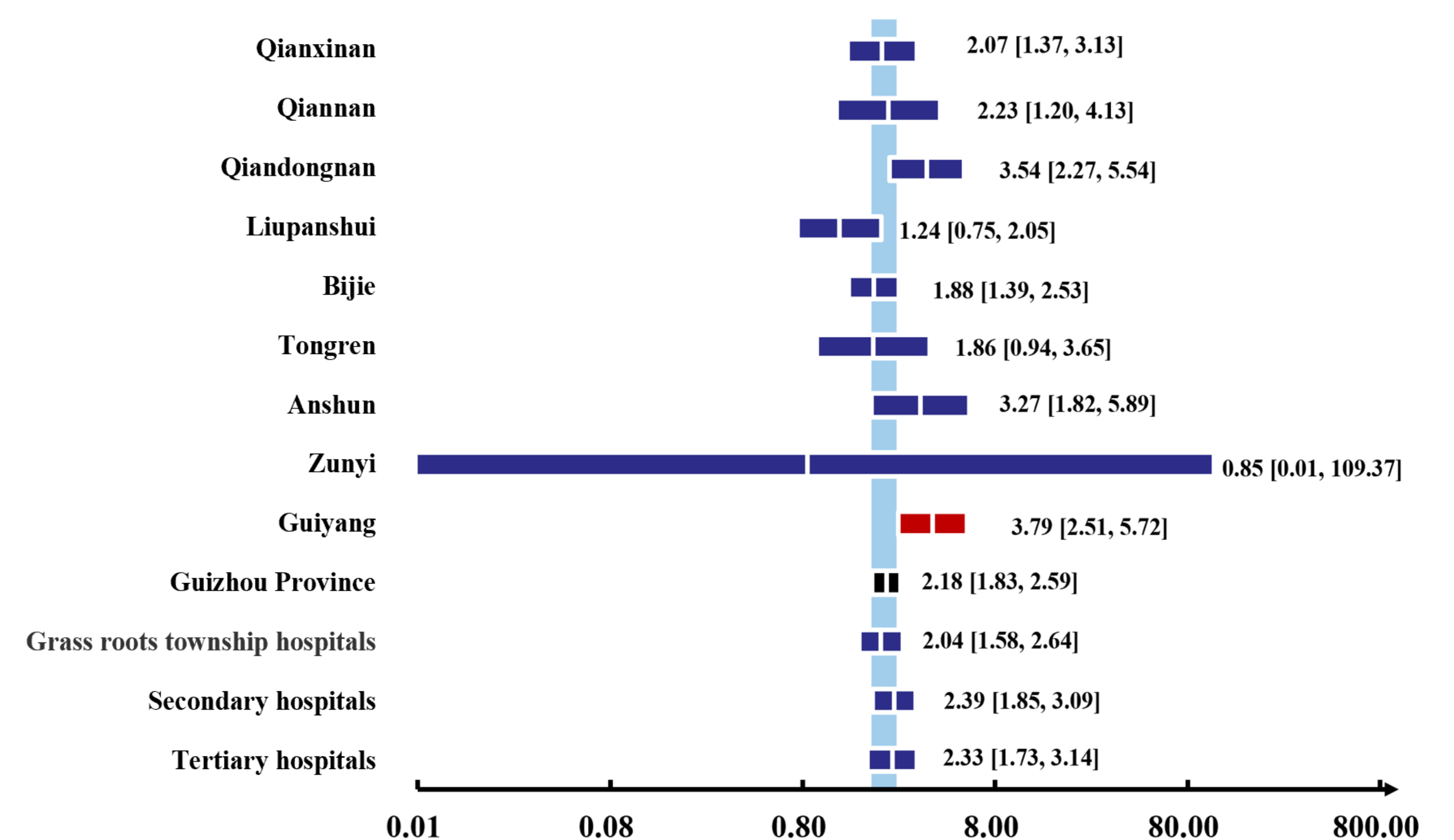


Figure 2. The distribution of outpatient prescriptions including glucocorticoids. (n=264)

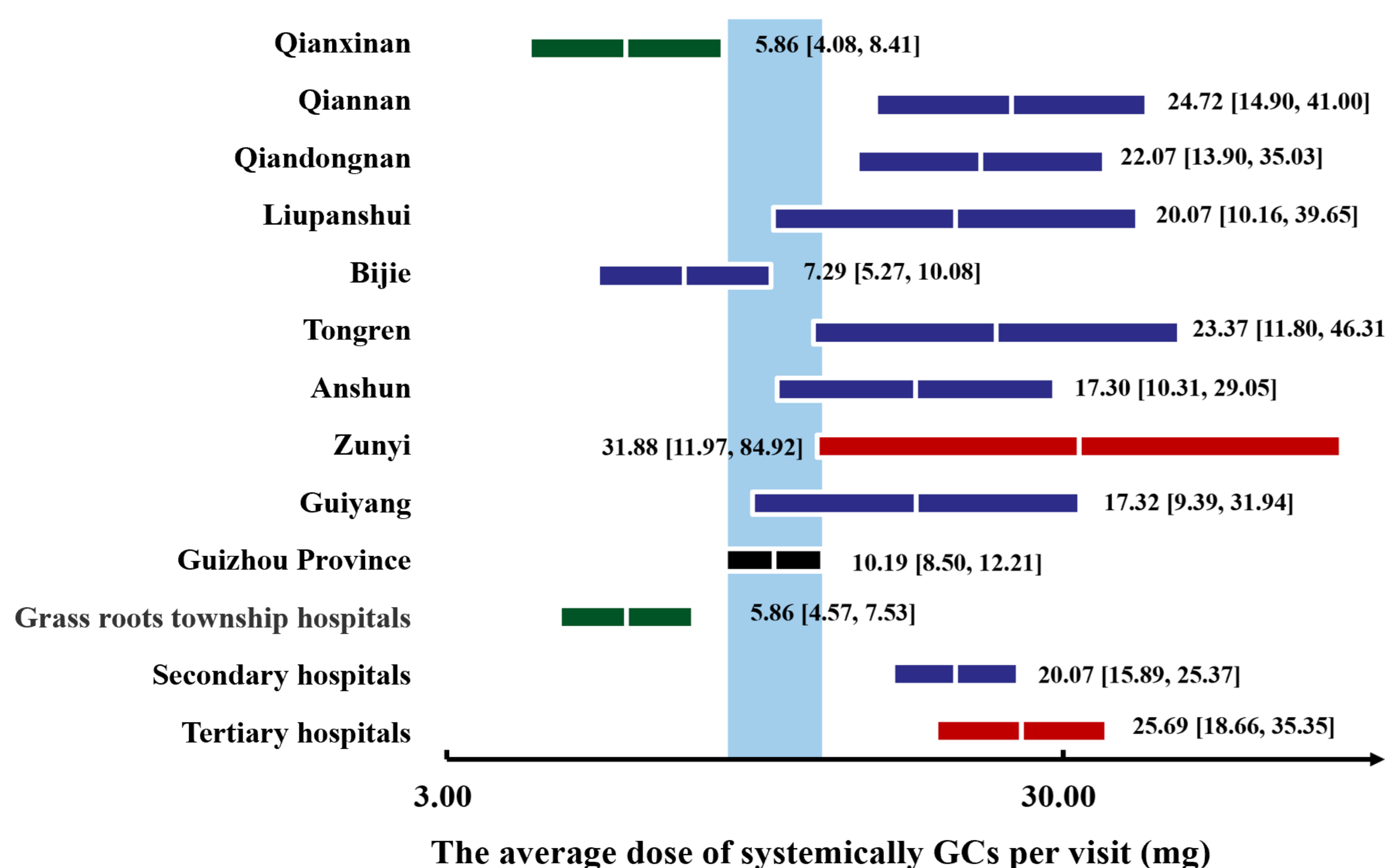


Figure 3. The distribution of the average dose of glucocorticoids. (n=271)

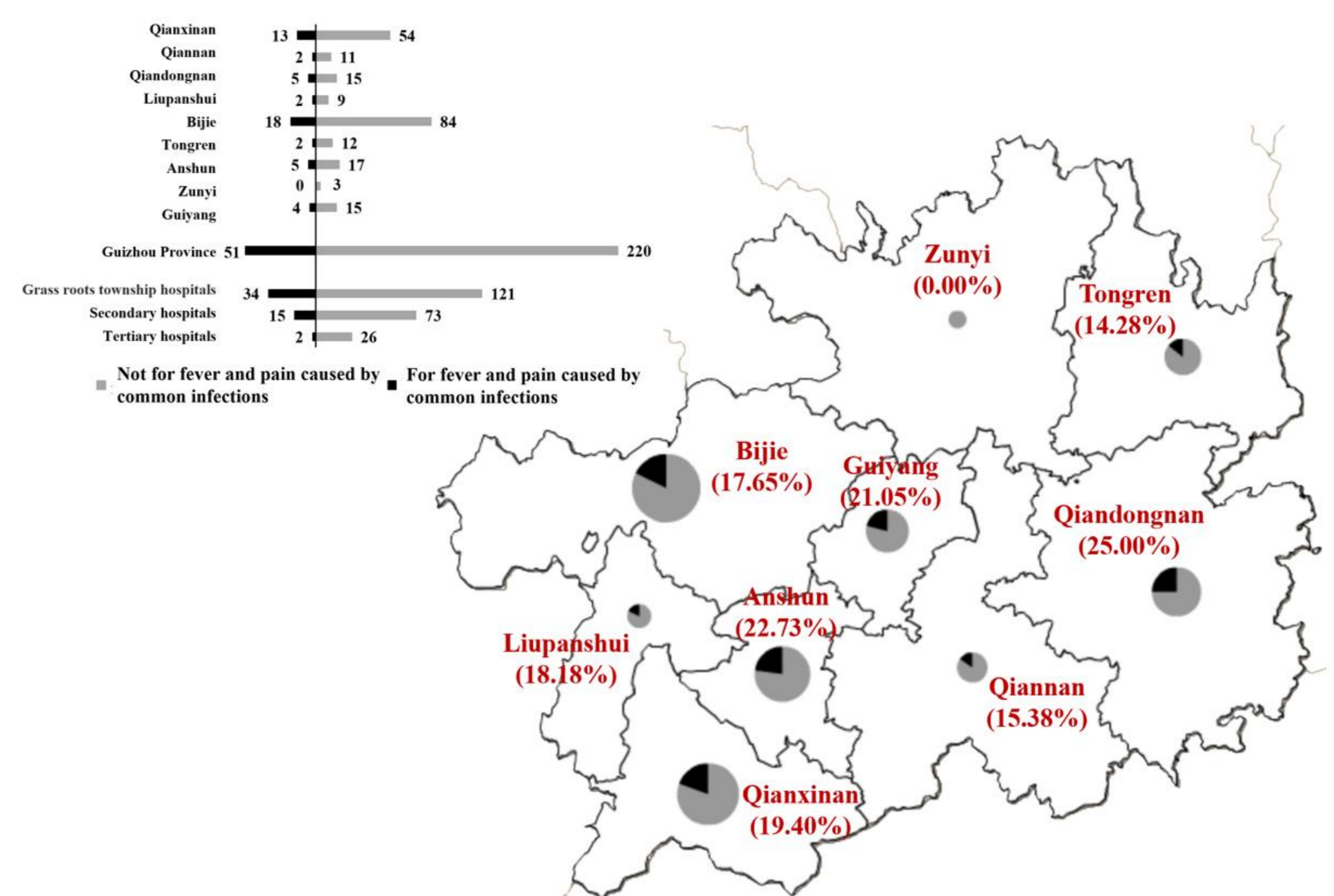


Fig 4. The situation of glucocorticoids used for fever and pain caused by common infections. (n=271)

## ACKNOWLEDGEMENT

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