

THE SAFETY OF STEROID REPLACEMENT AND PATIENTS' KNOWLEDGE

Ali Ahmed, Enis Mumdzic, Suha Atabani, Paul Wolfson, Malik Mohamed

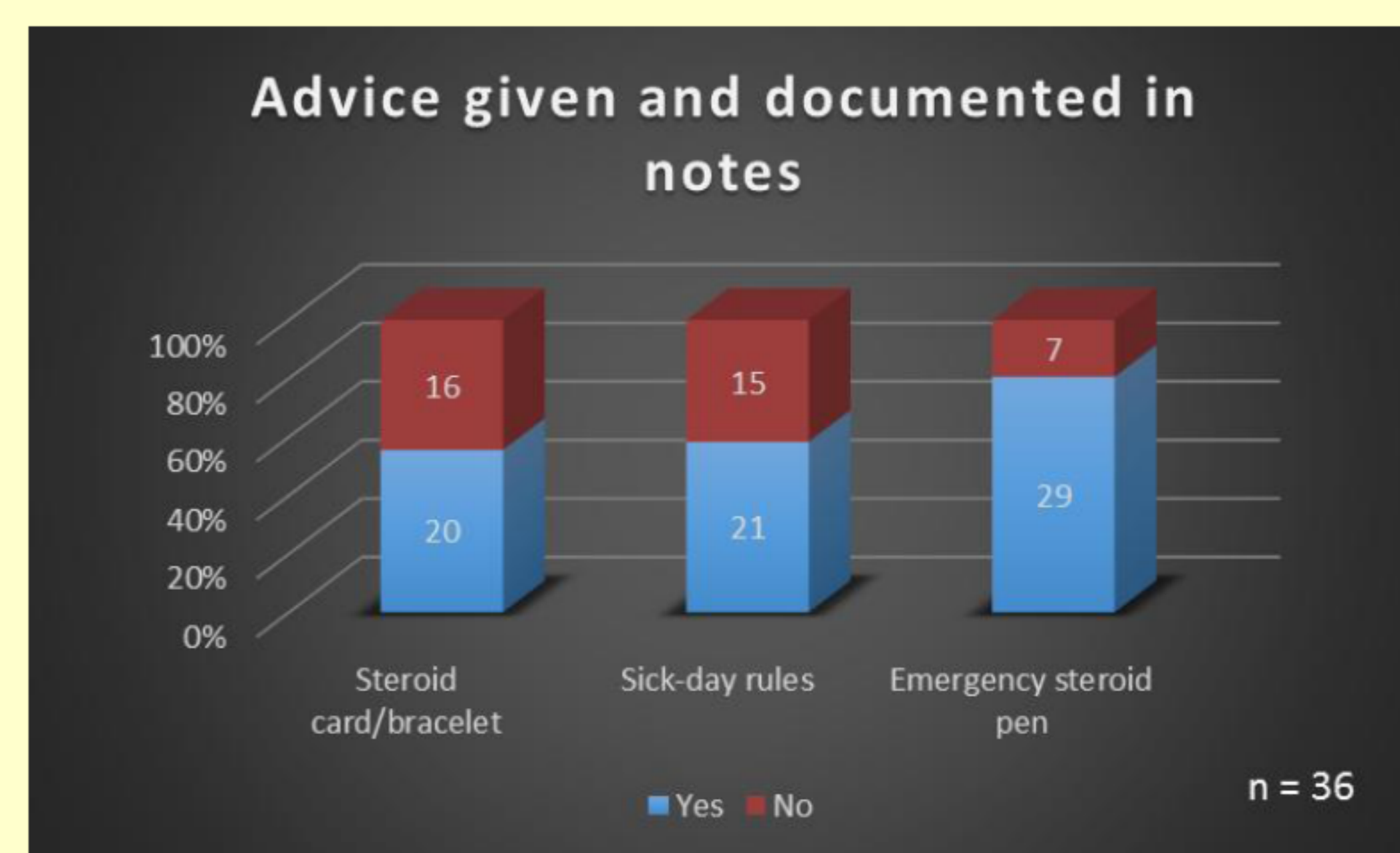
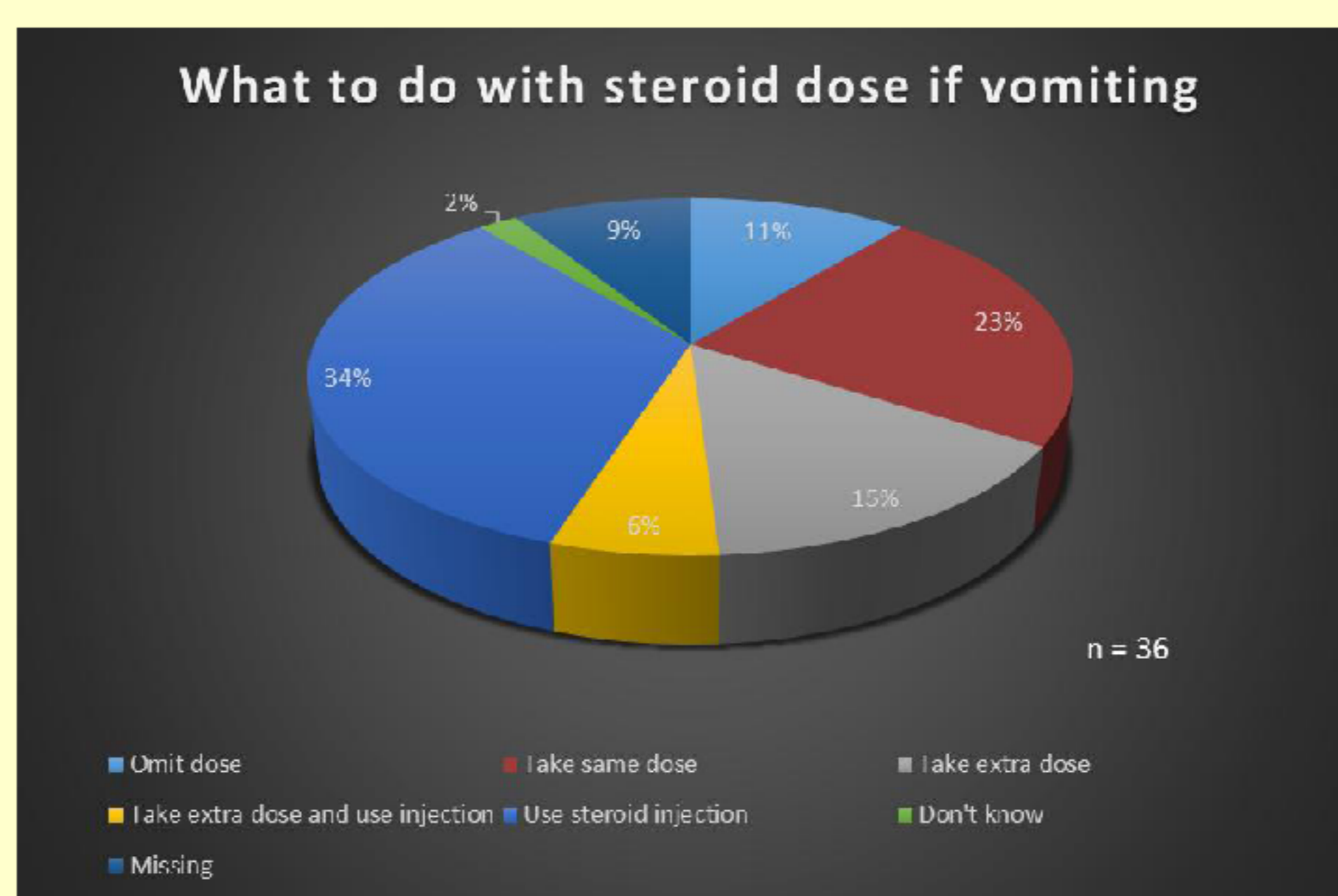
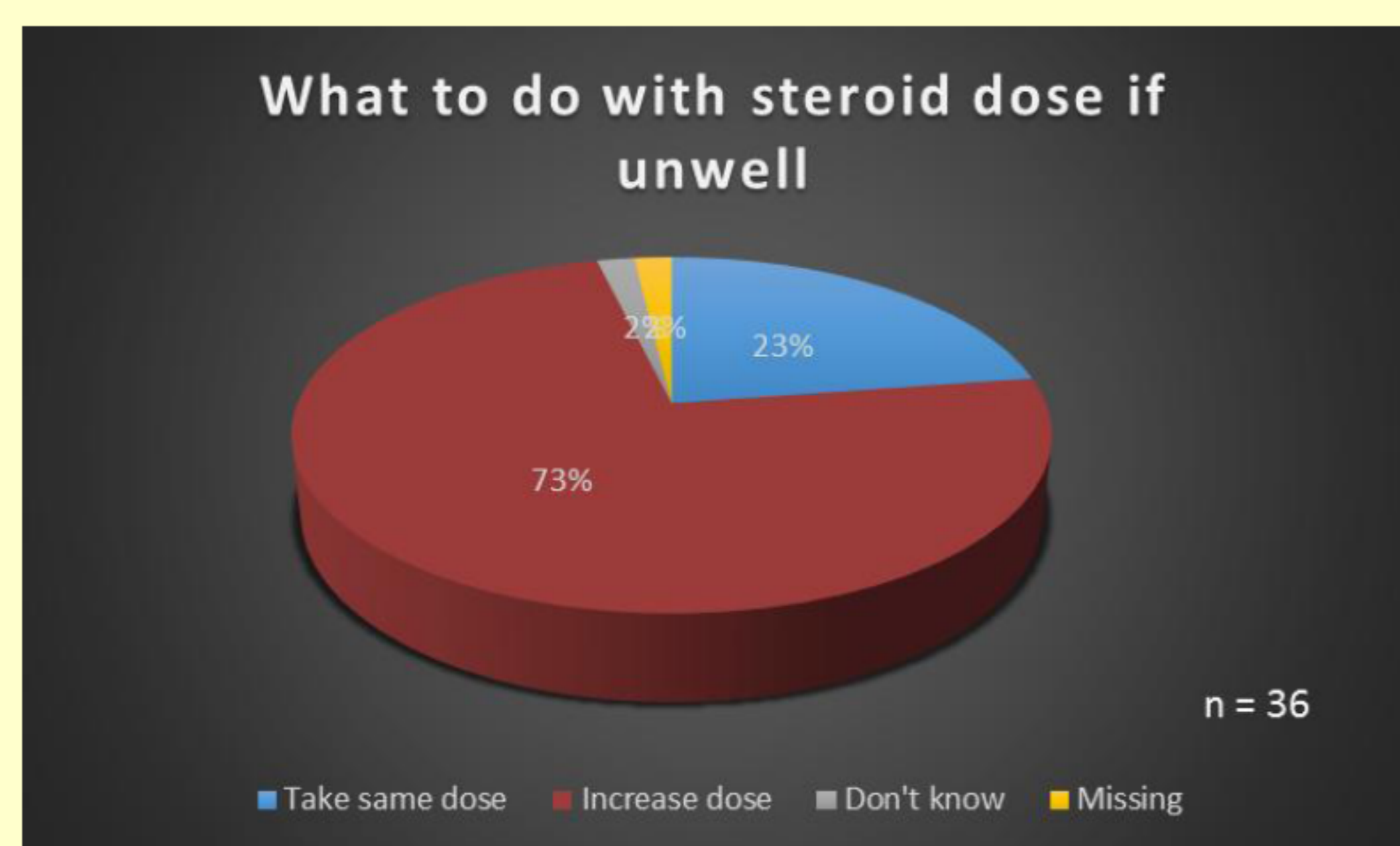
Hull Royal Infirmary; Barnsley Hospital; Christie Hospital; Watford General Hospital; Scunthorpe General Hospital

OBJECTIVES

1. To assess patients' knowledge of steroid management during acute illness and stressful condition.
2. To evaluate whether there is a relation between patients' knowledge and admission with documented Adrenal Crisis.
3. To improve medical access to information about patients on steroid at Emergency Department

METHODS

1. Self-completed patients' questionnaire of consecutive 53 hypoadrenal patients on longterm steroid replacement attending our general endocrine clinic.
2. The questionnaire consists of 8 main domains testing patients' knowledge of their on-going steroid treatment, steroid sick day rules, use of emergency steroid injection, need for steroid cover during surgical procedure, and self-held safety alert methods.
3. We reviewed participants clinical notes for documentation of advice given by the medical team, and any documented hospital admissions for proven or suspected Adrenal Crisis over the study period.



RESULTS

1. The three most common diagnoses of adrenal insufficiency in this audit accounting for 47% of the 53 patients studied were Addison's Disease, Surgical Hypopituitarism and non-tumorous ACTH deficiency. Thirty three of participants (62%) had a diagnosis of hypoadrenalism for more than 5 years, with only 5% being on steroid replacement for < 12 months.
2. Most patients were on multiple daily dose Hydrocortisone replacement (79%), and only (21%) were on once daily Prednisolone.
3. While the majority of participants opted for continuing steroids during illness, only 41% would double or increase the dose. In case of recurrent vomiting, only 40% suggested the need for steroid injection.
4. Half of participants were aware of the need for extra steroids during surgical procedures.
5. A fifth did not carry a steroid card, and half did not wear any bracelet or have an emergency steroid injection.
6. Only 42% of 36 reviewed notes showed documented advice regarding emergency steroid injection and steroid card/med alert information while 80% regarding sick-day rules. Only one of the patients from the study presented with Addisonian Crisis in the previous 3-year period.

CONCLUSIONS

1. This audit revealed considerable gaps in the knowledge and education of patient's on long term steroid replacement.
2. More effort is required to improve patients and medical practitioners awareness with the importance of Steroid Sick Day rules principles using new educational methods.
3. Following this study, we introduced:
 - i. a checklist to be completed by clinicians to ensure patients' education and knowledge about.
 - ii. We introduced electronic steroid alert message for all patients on long term steroids registered at our local hospital.
 - iii. We also suggested adopting a smart phone application advising patients about all aspects of steroid use.

References

1. Addison's Clinical Advisory Panel Guidance
2. Grossman A, Johannsson G, Quinkler M and Zelissen P. Perspectives on the management of adrenal insufficiency: clinical insights from across Europe. *European Journal of Endocrinology*. 2013;169:165-175.