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The impact of the introduction of icatibant on A&E attendances, hospital admissions and acute treatment episodes in patients with hereditary angioedema

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INTRODUCTION

- Hereditary angioedema (HAE) is a rare genetic disorder characterised by deficiency of C1 esterase inhibitor. Patients experience episodic attacks of subcutaneous and/or mucosal angioedema mediated by bradykinin.
- Rapid acute treatment of HAE attacks has been reported to reduce severity and duration of attacks¹.
- Icatibant, a bradykinin receptor inhibitor, licensed for acute treatment of HAE attacks can be self-administered at home via subcutaneous injection. We introduced icatibant onto our formulary in 2013.
- Prior to 2013 patients needed to attend A&E to receive C1 esterase inhibitor due to lack of a home C1 esterase inhibitor service. This often led to delays in treatment and some patients choosing not to treat their attacks.
- We report here, the impact of the introduction of icatibant via homecare on A&E attendance, hospital admissions and acute treatment episodes where medication was administered.

METHODS

- The A&E admissions system, pharmacy records and medical notes of HAE patients on icatibant who had a Leeds area postcode (LSXX) were retrospectively reviewed.
- Data was collected for 1 year prior to a patient starting on icatibant (Year 1) and for 1 year after (Year 2).

RESULTS

- A&E attendance and hospital admissions were significantly reduced in the year following icatibant introduction.
- No patient had an increase in A&E attendance in Year 2.
- Patients received more treatment for acute attacks in Year 2 vs. Year 1.
- Both patients who stopped oral prophylaxis had an increase in acute attacks and treatment usage. However, neither attended A&E or were admitted to hospital in Year 2. Their data has been excluded from the treatment episode data as they were significant outliers.

Table 1: Patient Demographics

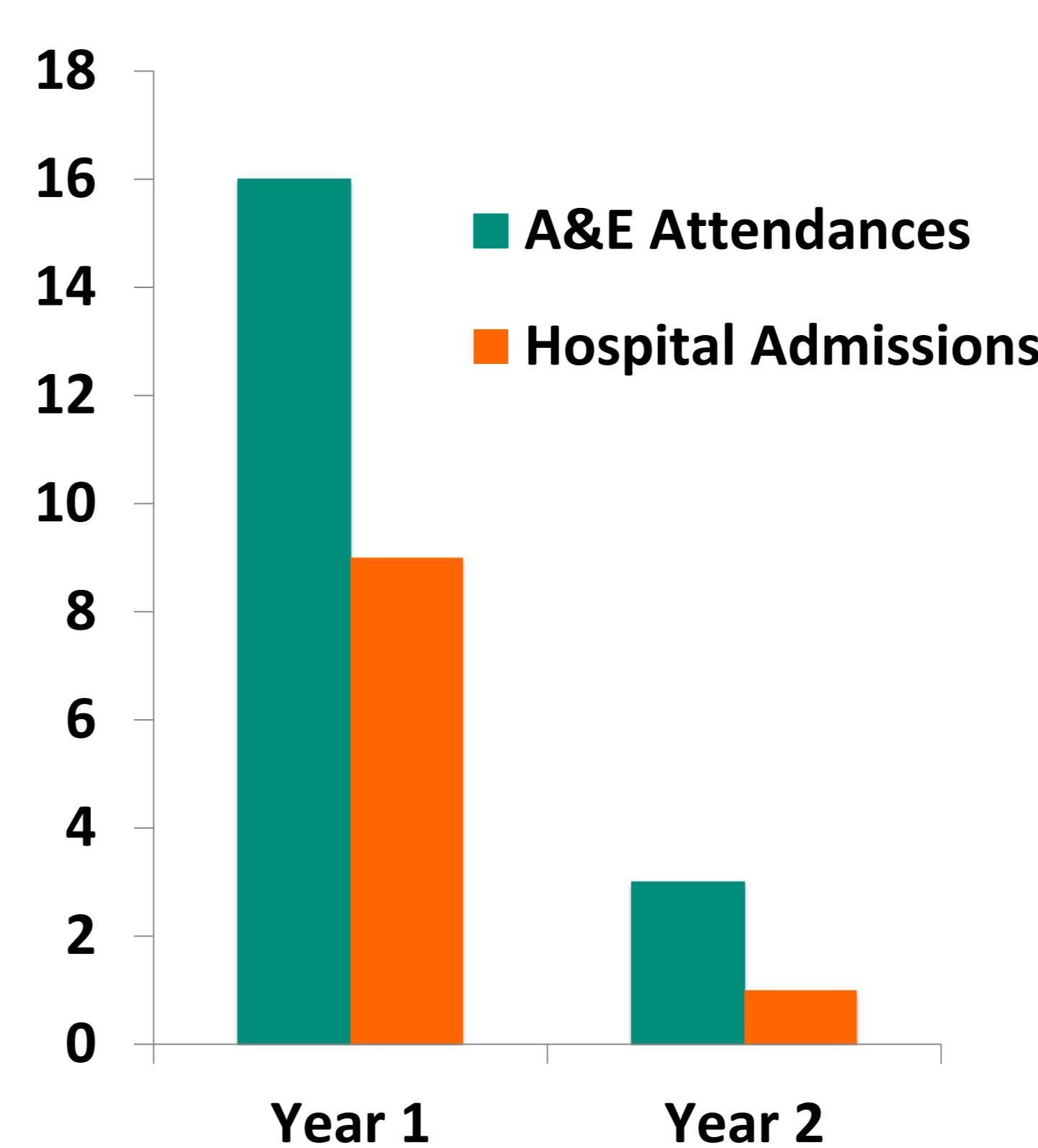
Demographic	n (%)
Total no. of patients	20
Age (years)	
Mean ± SD	45±15
(range)	(25-84)
Sex	
Male	3 (15%)
Female	17 (85%)
No. of patients on oral prophylaxis* pre-icatibant	13 (65%)
No of patients on oral prophylaxis* post-icatibant	11 (55%)

*Oral prophylaxis = stanozolol, danazol or tranexamic acid

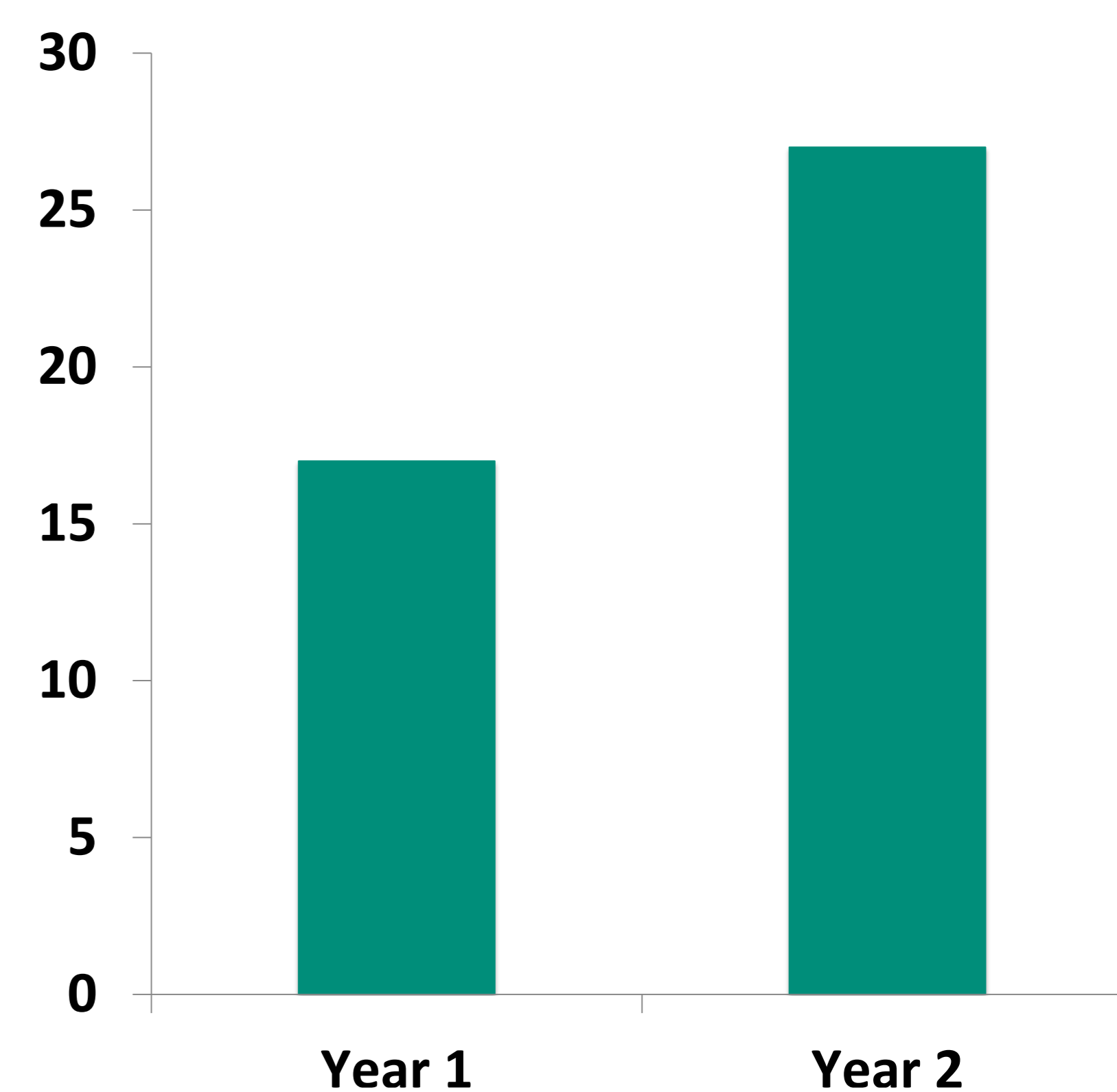
Table 2: Results

	Year 1 (before icatibant)	Year 2 (post icatibant)	% change (p)
Total no. of A&E attendances	16	3	- 81 (<0.02)
No. of hospital admissions	9	1	- 89 (=0.1)
C1 esterase inhibitor usage (units)	21,000	5000	- 76 (<0.05)
No. of icatibant syringes	0	42	-
No. of treatment episodes where treatment was administered	17	27	+ 59 (=0.1)

Graph 1: Change in A&E attendance & Hospital admissions



Graph 2: Change in number of acute attacks where treatment was given



PATIENT EXPERIENCE

My symptoms now resolve much quicker

Previously I would only go to A&E for facial angioedema and would wait at home for any other angioedema

Home treatment has been a life saver

It has improved the quality of my life

CONCLUSION

- Home treatment with icatibant for acute attacks of HAE leads to a reduction in A&E attendance and hospital admissions despite an increase in the number of acute attacks where treatment is administered. It also results in improved patient experience.

REFERENCES

- Maurer M, Aberer W, Bouillet L *et al* (2013). Hereditary angioedema attacks resolve faster and are shorter after early icatibant treatment. *PLoS One*; 8(2)e53773.

In relation to this presentation, I declare the following, real or perceived conflicts of interest - This work was undertaken using a research grant from Shire Pharmaceuticals.