BSPED National Growth Hormone (GH) Audit: Trends in prescribing from 2013-2016

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The authors declare no potential conflict of interest.

BACKGROUND

Prescribing of recombinant human GH for growth failure in UK children is based on guidance from the National Institute of Clinical Excellence. In 2013, the BSPED initiated this national audit of children/adolescents newly-prescribed GH to monitor trends in NHS prescribing practice. Here we have examined these trends from 2013 to 2016.

METHODS

Anonymised data provided by NHS consultants who initiate GH treatment in patients ≤16.0years age was analysed for diagnostic indication and age at treatment start.

RESULTS

Of 85 centres enrolled, 22 tertiary paediatric endocrine and 54 secondary paediatric services submitted data (89%). GH was started in 3757 patients during the 4 year period. The percentage of patients starting GH for unlicensed conditions decreased from 2013 to 2016 [Figure 1]. Unlicensed prescribing includes idiopathic short stature, genetic syndromes, chronic inflammatory conditions and low IGF1/GH resistance. GHD (60%) followed by small for gestational age (SGA) (18%) were the most common licensed indications for starting GH [Table 1].

The median age of patients starting GH was 7.6 years (range 0.1-16.0) and 25% were ≥11years age. Patients with Prader Willi Syndrome (PWS) were significantly younger compared to other indications (p<0.0001) and were followed by the SGA group (p<0.0001) [Table 1]. GH was started in the first 2 years in 46% children with PWS [Figure 1].

Figure 1: Trend in no. (% in each year) of patients starting GH for licensed vs unlicensed conditions

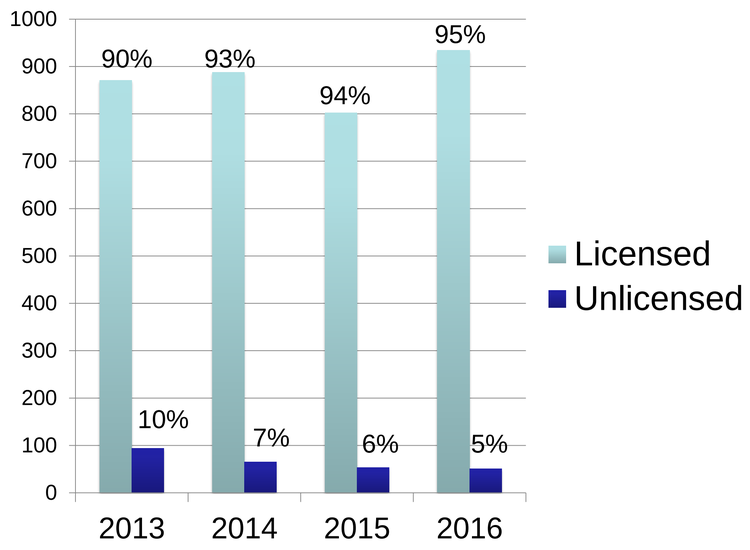

Figure 2: No. starting GH for GHD, TS, SGA and PWS by age bands

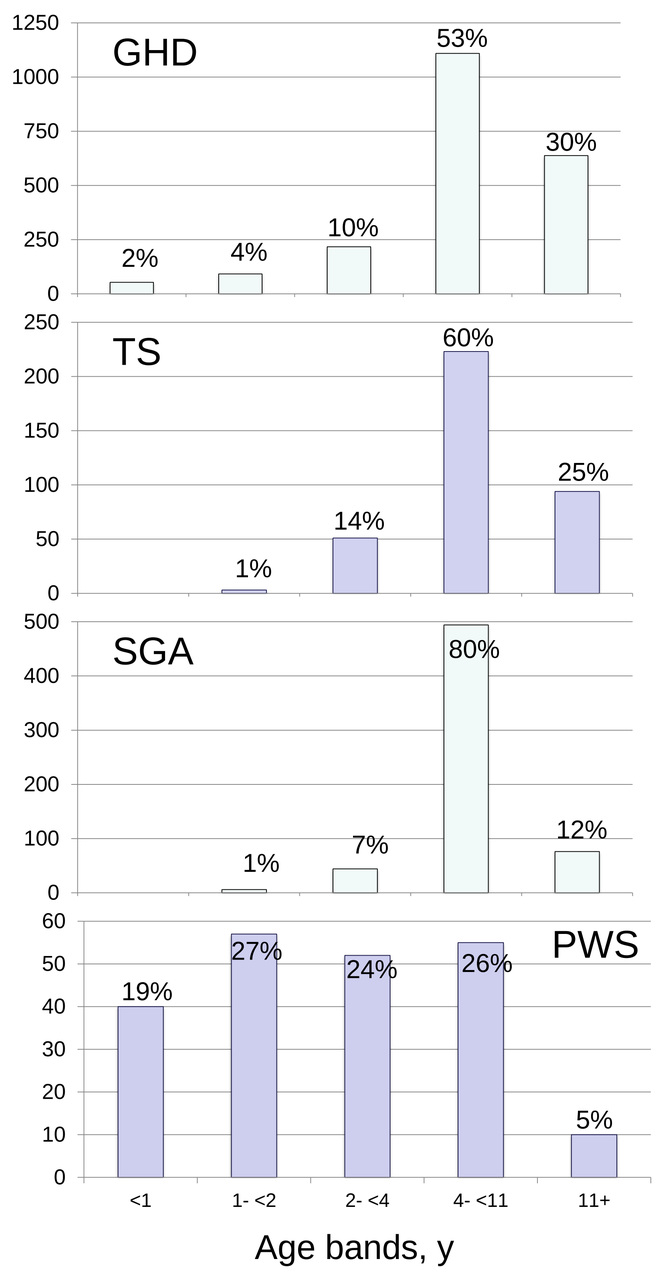

Table 1. No. (% by year) and median age (range) at start of GH treatment

No.(%)	GHD	Turner	PWS	CRI	SGA	SHOXd	Unlicensed
2013	536 (55)	85 (9)	61 (6)	35 (4)	144 (15)	10 (1)	**94 (10)**
2014	537 (56)	104 (11)	53 (6)	24 (3)	150 (16)	20 (2)	65 (7)
2015	481 (56)	85 (10)	50 (6)	22 (3)	149 (17)	16 (2)	53 (6)
2016	559 (57)	98 (10)	50 (5)	23 (2)	177 (18)	26 (3)	**50 (5)**
Total	2113	372	214	104	620	72	262
Median age, y (range)	8.5 (0.1-16)	7.3 (1.3-16)*3	**2.2** (0.2-15.1)*1	9.0 (1.0-15.6)	**6.2** (1.3-15.6)*2	8.7 (1.6-15)	9.2 (1.4-15.8)

*1PWS younger than other groups (p<0.0001). *2SGA younger than all except PWS (p<0.0001). *3TS younger than GHD (p=0.035).

CONCLUSION

The most common indication for GH is GHD, followed by SGA, TS, PWS, CRI and SHOX deficiency.
Compared to other indications, GH is initiated at a significantly younger age in children with PWS.
Unlicensed prescribing has declined by half in this 4 year period.