

Growth Hormone Treatment Adherence in Patients From an Emerging Economy Country: 1-year Real-world Data From the easypod™ connect eHealth Platform

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INTRODUCTION

- Poor adherence to long-term treatment with growth hormone (GH) is known to affect final growth and other clinical outcomes.¹
- Adherence to GH treatment has always been difficult to monitor and is usually assessed by patient testimony or prescription records.²
- The easypod™ electromechanical injection device, in combination with the easypod™ connect platform, electronically records and transmits, in real time, accurate, objective records of the date, time and dose injected for patients receiving GH to treat growth disorders, limiting the scope for misreporting and allowing physicians to accurately monitor patient behaviour.³

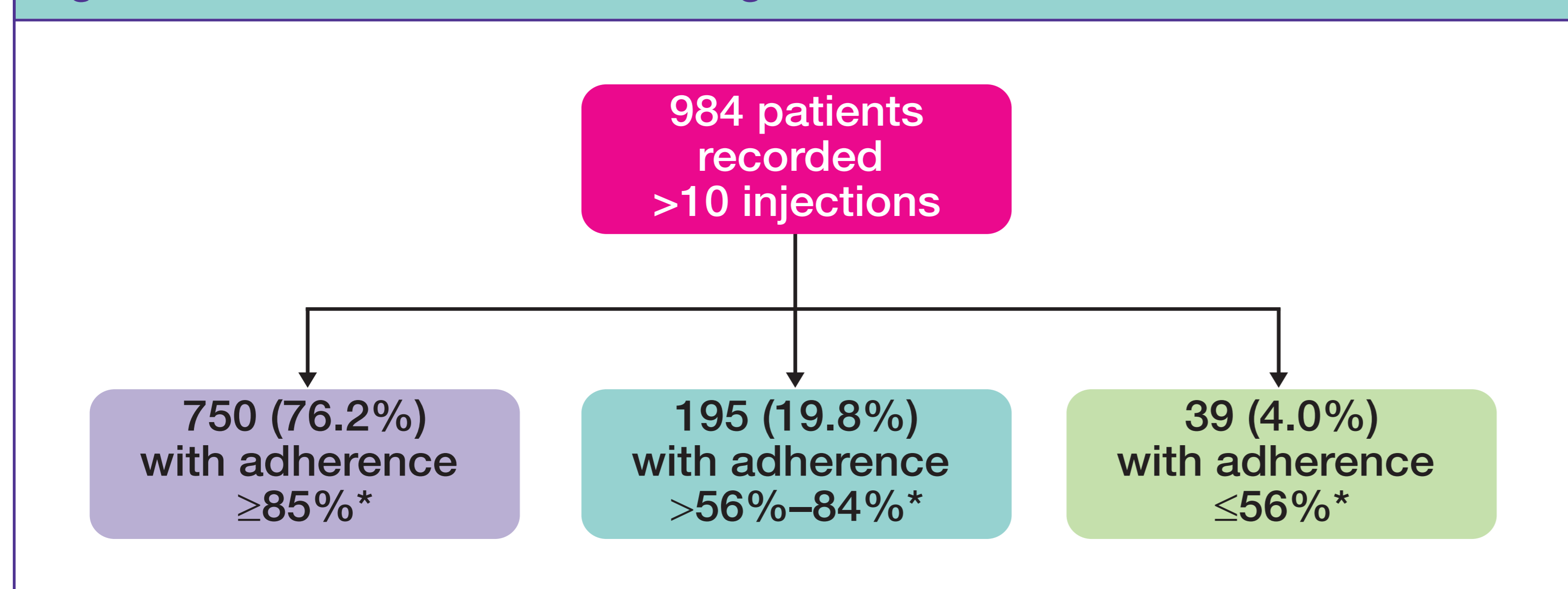
OBJECTIVE

- To assess the level of adherence in Brazilian patients treated with Saizen® using the easypod™ connect platform in a real world setting.
- This exploratory cross-sectional descriptive analysis will describe the adherence patterns observed in these patients at specific time points.

METHODS

- Data from the past 48 months were downloaded on 15th February 2019 from easypod™ connect. The period of recorded data varied, according to the individual's treatment duration.
- Data were stratified by age, gender and device engagement. Patient adherence was calculated as mg Saizen® injected vs mg Saizen® prescribed and categorized as high [$\geq 85\%$], intermediate [$>56\% - 84\%$] or low [$\leq 56\%$]. Only data after the 10th injection registered were analysed. Puberty cut-off points were 10 years for girls and 12 years for boys.

Figure 1. Patient Numbers According to Adherence Rates



*The duration of available data varied from patient to patient.

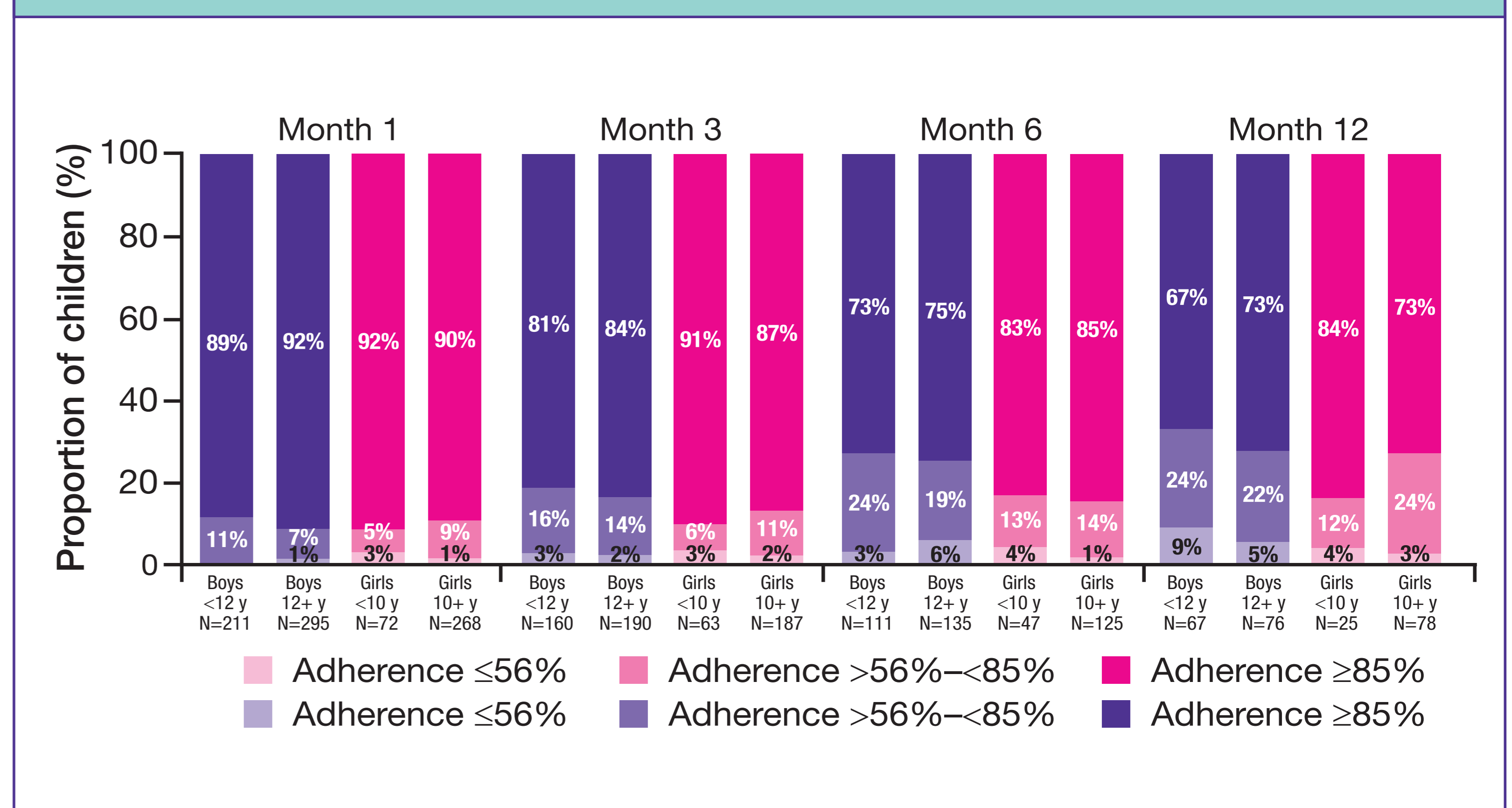
RESULTS

- In total, 984 patients recorded >10 injections. Overall, there were 750 patients (76.2%), 195 (19.8%) and 39 (4.0%) in the high, intermediate and low-adherence categories, respectively. (Figure 1, Table 1)
- Although a slight decrease in adherence was recorded over time, 178 of 246 (72.4%) patients were still in the high-adherence category at month 12. After 12 months there was no difference in high-adherence rates between pre-pubertal (66/92 [71.7%]) and pubertal patients (112/154 [72.7%]).
- However, more girls had high-adherence rates than boys (78/103 [75.7%] vs 100/143 [69.9%]), and this difference was mainly in the pre-pubertal group: girls (21/25 [84.0%]) vs boys (45/67 [67.2%]). Figure 2. The proportion of pubertal girls vs boys was comparable (57/78 [73.1%] vs 55/76 [72.4%]). Patients in the high-adherence category had the highest mean number of data transmissions at 12 months (6.4 [SD 8.4]) compared with the intermediate and low adherence categories (4.1 [SD 4.7] and 4.1 [SD 5.1]) respectively.

Table 1. Overall Patient Demographics According to Adherence Rates

Patient characteristic	Patient (Adherence $\geq 85\%$)	Patient (Adherence $>56\% - <85\%$)	Patient (Adherence $\leq 56\%$)
Male average age (years)	12.0	12.4	12.2
No. of boys <12 years	185 (76%)	45 (19%)	13 (5%)
No. of boys 12+ years	267 (75%)	76 (21%)	12 (4%)
Female average age (years)	11.4	12.4	11.4
No. of girls <10 years	66 (78%)	15 (18%)	3 (4%)
No. of girls 10+ years	232 (77%)	59 (19%)	11 (4%)
Number of transmissions	3445	1039	105

Figure 2. Adherence at 1, 3, 6 and 12 months



CONCLUSIONS

- This is the first analysis of adherence exclusively in Brazilian patients using easypod™ connect in a real-world clinical setting. Overall, the majority of patients were in the high-adherence category
- Adherence was higher in pre-pubertal girls than boys, but comparable in pubertal patients
- After 12 months, 28% of patients were in low or intermediate categories, demonstrating that adherence is an issue that needs to be addressed continuously with families and patients. Through our validated method of recording adherence, we can address an unmet need in r-hGH therapy

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DISCLOSURES

PB and CS are employees of Merck Medical Affairs, an affiliate of Merck KGaA, Darmstadt, Germany; EK is an employee of Merck Healthcare KGaA, Darmstadt, Germany.

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