

AN AUDIT OF GROWTH CHART USE IN A SCOTTISH DISTRICT GENERAL HOSPITAL

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Introduction

The Royal College of Paediatrics and Child Health¹ highlights the importance of growth as a measurement of health and wellbeing in children. Growth measurements in children can only be evaluated if plotted on a growth chart. The use of growth charts was reviewed in Forth Valley Royal Hospital Paediatric department in two cycles over 10 days in all clinics held in the paediatric outpatient department.

Criteria to be Assessed

We felt that:

1. Every child attending a paediatric clinic should have an appropriate growth chart present in the case notes.
2. The height and weight of every child at clinic should be documented in the case notes.
3. The height and weight of every child at clinic should be plotted on an appropriate growth chart.

Standard set

We proposed that the following standards for growth chart use would be appropriate:

1. 90% of children should have a growth chart present in the case notes.
2. 90% of children should have their height and weight recorded.
3. 90% of children should have their height and weight plotted on an appropriate growth chart.

Method

Two cycles of the audit were performed, one year apart.

In the first audit in 2017 case notes of 57 children who attended 15 clinics in one week were reviewed.

In the second cycle in 2018, case notes of 164 children attending 25 clinics over 10 days were reviewed.

Information recorded included: type of clinic; consultant; age and gender of patient; height and weight recorded in case notes; growth chart completion.

Results

57.3% of the children seen were male. This was similar to the first cycle of audit. The mean age of the patients seen was 7 years and 3 months (age range 17 days to 17.1 years).

78.6% of the children seen in clinics had height and weight recorded in case notes.

However, only 51.8% of children had growth data plotted on the growth chart. If surgical clinics were excluded from the data, 98.6% of children had height and weight recorded in case notes at clinic visit.

62% of the children attending clinics excluding surgical clinics had a growth chart completed in clinic. In the first cycle of audit in the previous year only 31% of children who attended clinics had growth charts plotted.

Chart showing growth chart completion against type of clinic

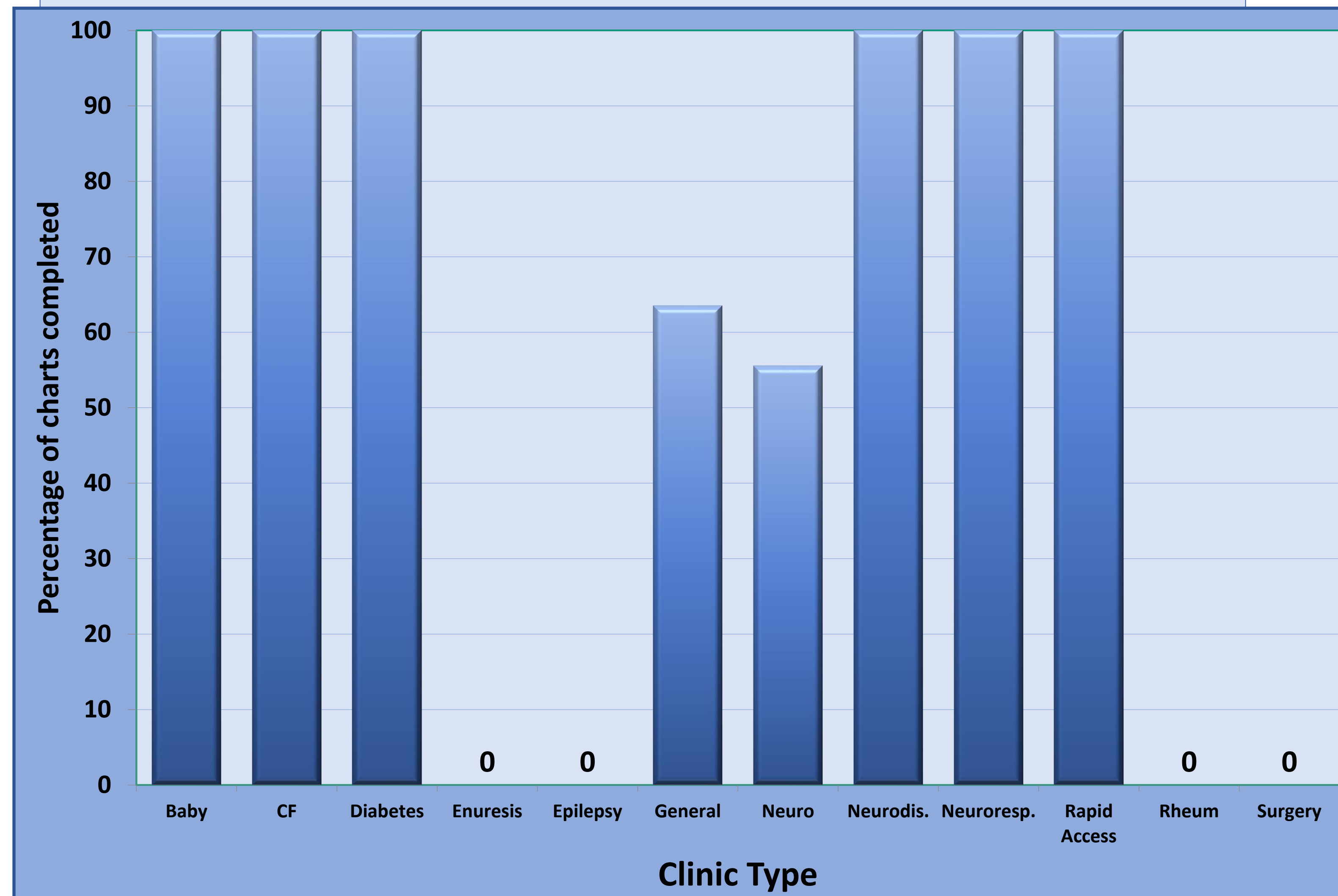


Chart showing growth chart completion by doctor

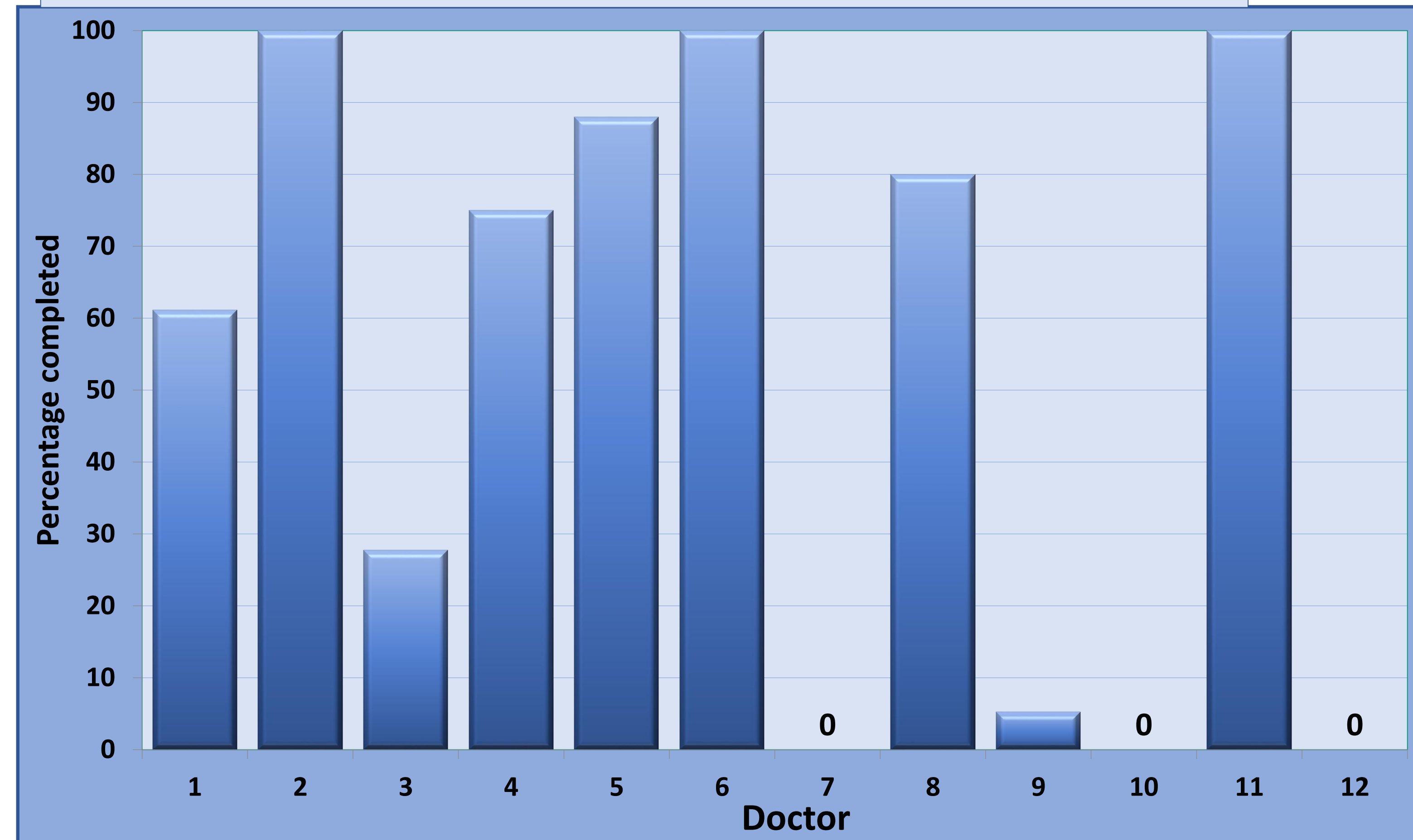
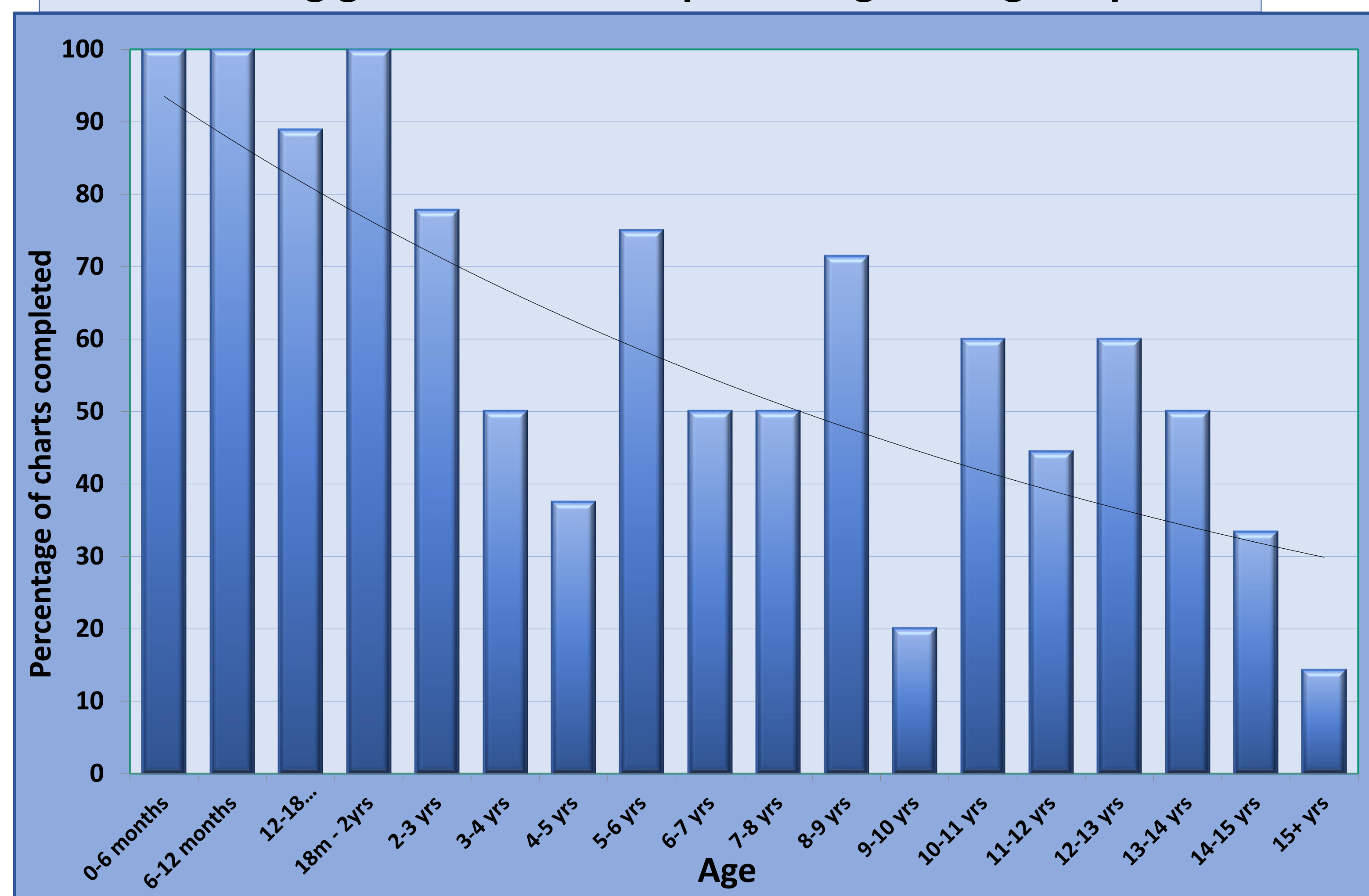


Chart showing growth chart completion against age of patient



Discussion

Growth chart use is seen as an important part of the general assessment of a child's health and well being.

However, this audit demonstrated that in spite of this, growth chart use is significantly lower than was expected.

Despite the height and weight being clearly documented in case notes of children attending clinics, less than two thirds of case notes had growth charts plotted.

Surgical clinics tended not to measure children.

Other clinics where children were not measured were neurodisability clinics, where measurement of children is challenging.

There was also significant variation of growth chart completion between doctors. This may in part be related to the subspecialty of the doctors.

Growth chart use may be improved by the introduction of electronic growth charts.

However, having electronic growth charts in place does not necessarily imply that clinicians will look at the charts when assessing children.

Ensuring ongoing education remains important. Growth chart use can be improved by ongoing education of all clinicians, highlighting growth as an important aspect of a child's health assessment. Online learning modules such as the SPEG LearnPro module are useful educational tools and their use should be encouraged. (See ESPE Poster number 222-P3)

References

1. Royal College of Paediatrics and Child Health. *What are growth charts and why do we need them?* Available from: https://www.rcpch.ac.uk/sites/default/files/What_are_growth_charts.pdf
2. Garza C, de Onis M, for the WHO Multicentre Growth reference Study Group (2004). Rationale for developing a new international growth reference. *Food and Nutrition Bulletin*, 25(Suppl 1): S5-S14