Aims A growing body of research has shown that robots can be effective in improving the social communication skills of children with ASD, however randomised controlled trials (RCTs) are lacking. This feasibility RCT examined whether it is possible to deliver a social skills intervention using the Kasper robot with children with ASD within the NHS.

Method Children with ASD aged between 5–10 took part in six therapy sessions targeting key social communication skills with a therapist. Children were randomised to therapy using the robot or with the therapist only. Parental stress and the child’s social skills were assessed at three time points, using parent-reported questionnaires and video analysis.

Results The criteria for recruitment and data collection were met. Forty-five percent of those sent details of the study (42/94) agreed to take part. Of these, 38 were randomised and four withdrew prior to randomisation: an attrition rate of 26%. More than 80% of the questionnaires were completed. Some technical issues arose, which could be addressed in a full-scale study. Feedback from parents and clinicians was positive.

Conclusion The findings confirm the feasibility of a full-scale trial to determine whether Kasper is an effective social skills intervention for children with ASD in an NHS setting.

Comorbidity was seen in 48 patients (69%): Autism spectrum disorder was commonest (16), Developmental coordination disorder (13), Learning disability (10) and other conditions e.g. Conduct disorder, tic disorder, dyslexia.

Guanfacine was discontinued in 36 patients (51%), the commonest side effect was sedation in 20 patients (29%) and other reasons for discontinuation included headaches, aggressive behaviour and ineffective control of ADHD symptoms.

The success rate was 98.8% in teenage girls.

The dose range was 1 mg (19) to 6 mg (1), and most patients (36) needed 2 to 3 mg for effective control of symptoms.

Conclusion It is small observational study and would be useful to have larger studies comparing the side effects and efficacy of low-dose Guanfacine in teenage girls specifically across different regions.

Recommendations Low-dose polytherapy regimes along with stimulant medication which would minimise side effects and improve overall efficacy should be explored in UK as is proven to be effective in other countries.