

A Structured Transition Programme is Associated with Improved Health-Related Outcomes in Type 1 Diabetes.

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Introduction

Transition in healthcare is used to describe the process of preparing, planning and moving from children's to adult services. Effective transition between paediatric and adult care has a major impact on long term outcomes for all patients with a long term medical condition; including type 1 diabetes (T1DM) and has been recognised as an area requiring improvement and investment. T1DM is a common chronic disease with a devastating impact upon both the daily activity of children and young people (YP) diagnosed and their families.

Evaluation of the **Ready Steady Go** Programme (RSG) has been limited. In this retrospective review of patients' records, outcome data is presented that demonstrate measurable benefit to individuals and the health service in terms of improved control of their disease and cost-savings.

Health-related outcomes (Hospital admissions, HbA1c levels and cholesterol levels) and documentation of healthcare advice and guidance are evaluated following the introduction of RSG.

Methods

Case notes were reviewed for all YP under the care of the paediatric diabetes services at Southampton Children's Hospital whose care was transferred from paediatric to adult services between the dates of 2011 and 2014.

Demographic and clinical information; including hospital attendances, lipid profiles, and HbA1c measurements were obtained from the electronic case notes covering 2-years prior and 2-years post-transfer to adults services.

Notes were reviewed for documentation of advice and conversations held between YP and professionals in 6 domains: alcohol; driving; adult services; smoking; contraception; and complications of T1DM.

Results

106 subjects' case notes were reviewed; 71 patients had undergone the RSG programme (RSG) and 35 had not (non-RSG). The baseline characteristics between the groups were similar.

YP that underwent **Ready Steady, Go!**...

...experienced fewer non-elective, diabetes-related hospital admissions post transition (Non-RSG p=1.00; RSG p=0.008).

...did not experience the characteristic rise in HbA1c levels at transition, unlike those not on the programme (RSG p=0.629; non-RSG p=0.023).

...showed lower non-HDL cholesterol concentrations post-transfer of care (RSG p=0.049; non-RSG group p=0.921).

Documentation of all topics evaluated improved (see figure 2); being statistically significant for contraceptive advice (75.5%, v. 41.7%; p=0.005).

The Ready Steady Go Programme

'Ready Steady Go' (RSG) is a holistic, generic transition programme that has been developed at Southampton Children's Hospital to address the challenges transition presents. RSG is initiated through a series of questionnaires introduced to the YP and carer in a stepwise fashion. Questions are deliberately broad and issues raised are addressed in manageable pieces at an appropriate pace.

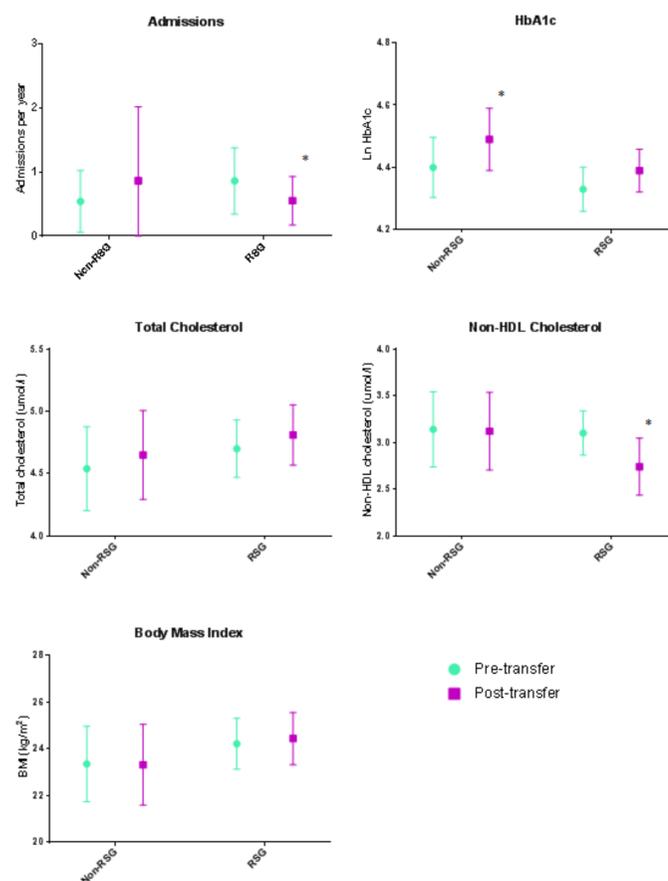


Figure 1. Comparison between RSG and non-RSG groups for examined variables. The RSG programme showed a relative improvement in non-elective, diabetes-related hospital admissions; HbA1c; and non-HDL-cholesterol.

Discussion and Conclusion

This is the first time that hard outcome data has been presented supporting the use of the RSG tool, and demonstrates a relative reduction in HbA1c and non-HDL cholesterol post transition.

This study reports an improvement in non-elective, diabetes-related hospital admissions for YP using RSG. It can be hypothesised that such improvements would be long-lasting due to improved patient-education that a formalised programme may afford.

Limitations to the study include the retrospective nature of the review of data, and the non-parallel nature of the two groups, i.e., that the non-RSG groups were those children who had been transitioned prior to the introduction of the RSG programme. As a result the reported improvements cannot be guaranteed to be as a result of the RSG programme as other improvements in the care of these YP may be contributory.

Many articles surrounding transition, including this one are retrospective in nature, and therefore associated with similar limitations. Prospective trials are required to further strengthen the evidence-base of transition programmes; including the RSG programme.

In conclusion, these data suggest that a structured transition programme provides measurable benefit in hard biological measures. Such a structured programme may be of benefit to improve transition outcome for all children with chronic diseases into adult services.

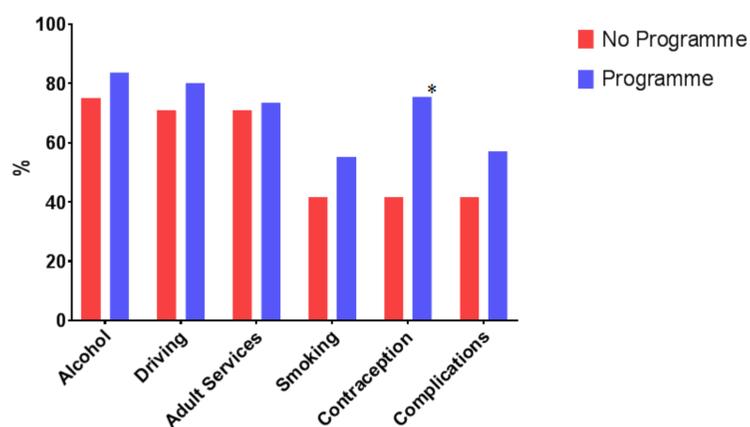


Figure 2. Documentation of those who underwent the RSG programme and those that did not. There was increased documentation in all topics evaluated, with statistical significance for contraceptive advice.