REFERENCES

SP8 CREATING ACCEPTABLE TABLETS 3D (CAT 3D): A FEASIBILITY STUDY TO EVALUATE THE MOUTHFEEL OF 3D PRINTED TABLETS IN CHILDREN AND YOUNG PEOPLE

1Louise Bracken*, 1Emma McDonough, 1Joanne Shakeshaft, 2Fiona Wilson, 2Udeme Ohia, 3Mohamed A Alhnan, 2Rob Habashy, 2Robert Forbes, 1Matthew Peak. 1Paediatric Medicines Research Unit, Alder Hey Children’s NHS Foundation Trust; 2NIHR Alder Hey Clinical Research Facility, Alder Hey Children’s NHS Foundation Trust; 3School of Cancer and Pharmaceutical Sciences, Kings College; 4School of Pharmacy and Biomedical Science, University of Central Lancashire

Aim To evaluate the feasibility of a study investigating the mouthfeel of different sized 3D printed placebo solid dosage forms (SDFs) in children and young people (CYP) aged 4–12 years.

Method All participants in the CAT 3D Study had previously participated in the Creating Acceptable Tablets (CAT) Study, a feasibility study which assessed the swallowability and acceptability of different sized placebo tablets, and therefore only attempted to swallow one 3D printed tablet. If the participant had successfully swallowed all three tablet sizes in the CAT Study (6 mm, 8 mm, 10 mm) they were then randomised to receive any of the 3D printed tablets – 6 mm, 8 mm or 10 mm diameter. If a participant had not successfully swallowed all tablet sizes, they were allocated a 3D printed tablet of equal size to the largest tablet they had successfully swallowed in the CAT Study. Following informed consent, participants were shown a short video demonstrating how to swallow a tablet. Participants were then provided with the sample 3D tablet and 150 mL of still water in a cup. The volume of water required to swallow the tablet was measured, and further water was provided, where requested. The researcher observed and recorded the child’s facial expressions as they swallowed the tablet; and, an internal inspection of the mouth was conducted by the researcher to identify any residue or non-swallowed tablet. The participants assessed the swallowability, acceptability, mouthfeel and taste of the sample using a 5-point hedonic facial scale on a participant questionnaire. Faces 1–3 on the hedonic scale were deemed acceptable to the participant. The participants were also asked if the 3D printed tablet was a medicine, would they be willing to take it every day if it were a medicine. Participants were also asked which tablets felt better in the mouth – the CAT tablets or the 3D printed CAT 3D tablets, and the most popular response was that both felt ok (43%).

Conclusions The data from this study shows that 3D printed SDFs may be a suitable dosage form for children aged 4–12 years. The results from this feasibility study will be used to inform a larger, definitive study looking at the mouthfeel of 3D printed tablets in children.

REFERENCES

SP9 THE KIDZMED PROJECT PART 1: PILL POPPING HEROES

Nicolia Vasey*, Vincent Tse, Ailsa Pickering, Emma Lim. Great North Children’s Hospital, Newcastle Upon Tyne

Aim Quality improvement project to teach children and young people (CYP) on long term medication how to take tablet medication in an out-patient setting.

Method Working with families and our teams we created an interactive training package with video (http://northernpaediatrics.com/kidzmed/) and comic poster. We ran interactive hour-long training sessions for staff. Using positive reinforcement and play, the trainer sat facing the learner with sweets or dummy filled capsules of increasing sizes, from size 3 (15 mm) to size 00 (23 mm).

Over the next 12 weeks in one team we embedded a process for children ≥5 years attending complex renal clinics to be converted from liquid to tablet medication unless contraindicated (e.g. swallowing or cognitive impairment).

Outcome measures included successful conversion rate, patient and staff feedback and cost savings.

We overcame practical barriers by placing easily accessible ‘switching kits’ in clinic filled with the necessary dummy pills, awards and certificates. To increase confidence, we created a sealed dotsette box with common medications so children could see the size of tablets they needed to swallow. Working with the clinical team we standardised processes (e.g. how to round doses, pre-screening clinic lists and creating prompts). Results Over three months, 90 CYP were seen in 13 multi-disciplinary renal clinics, 25 were suitable for conversion to tablet medication. 21 CYP (median age 8.4 years range 5.1 to 15.5) were successfully converted (only one patient required