REFERENCES

1. SPC. Clonidine 25 mg tablets BP. Summary of Product Characteristics 2015. Retrieved June 27, 2019, from Electronic Medicines Compendium: <https://www.medicines.org.uk>
2. Basker S, Singh G, Jacob R. Clonidine in paediatrics - a review. *Indian J Anaesth* 2009;**53**:270–80.
3. SPC. Catapres-TTS. Summary of Product Characteristics 2016. Retrieved June 27, 2019, from <https://docs.boehringer-ingelheim.com/Prescribing%20Information/Pls/Catapres%20TTS/CatapresTTS.pdf>
4. Sica DA, Grubbs R. Transdermal clonidine: therapeutic considerations. *The Journal of Clinical Hypertension* 2005;**7**:558–562.

SP8

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

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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 tablet¹, and an internal inspection of the mouth was conducted by the researcher to identify any residue or non-swallowed tablet.² 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. In addition, they were asked which tablet felt better in the mouth as a comparison of mouthfeel between the GMP manufactured coated tablets (CAT study tablets) and the 3D printed tablets.

Results A total of 30 participants were recruited to the CAT 3D Study, 87% of whom successfully swallowed the 3D printed tablet that they attempted to take. Attributes of the 3D printed tablets were scored as acceptable by the following percentage of participants – swallowability (80%), mouthfeel/texture (87%), volume (80%), acceptability (83%) and taste (93%). 77% of children advised they would be happy to take

the tablet 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

1. Zeinstra GG, Koelen MA, Colindres D, *et al.* Facial expressions in school-aged children are a good indicator of 'dislikes', but not of 'likes'. *Food Quality and Preference* 2009 December 2009; **20**:620–624.
2. Klingmann V, Spomer N, Lerch C, *et al.* Favorable acceptance of mini-tablets compared with syrup: a randomized controlled trial in infants and preschool children. *The Journal of Pediatrics* 2013 December 2013; **163**:1728–1732.e1.

SP9

THE KIDZMED PROJECT PART 1: PILL POPPING HEROES

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Background There are large groups of children where families have problems obtaining ongoing supplies of their children's medicines in primary care due to them being high risk and complex, unlicensed, off label or expensive. The KidzMeds project was established 'For all children to get the right medicine at the right dose at the right time with the right monitoring with minimum fuss wherever they live.'

Tablets are safer, more convenient and cheaper than liquid medications. Children often remain on liquid due to habit, reluctance and parental and staff not knowing how to convert. The idea of converting came from initial HIV medications which were only available in tablets¹; children as young as 3 years could be taught.^{2 3}

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 dosette 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