Background Despite regulatory advances, lack of age-appropriate formulations (AAF) remains a challenge in paediatric practice. 3D-printing of oral dosage forms (ODFs) offers potential for AAFs for children. Optimising drug release from 3D-printed ODFs is an important technological step. Despite the abundant use of polyethylene oxides (PEOs) and their extensive use as an ODFs is an important technological step. Despite the abundant use of polyethylene oxides (PEOs) and their extensive use as an acceptability of tablets in CYP. This feasibility study aimed to investigate the swallowability and acceptability of different sized placebo tablets in CYP aged 4–12.

Method Participants were asked to swallow three different sized placebo tablets; 6 mm, 8 mm and 10 mm, smallest to largest. Both healthy children and NHS patients were recruited. The researcher observed and recorded children’s facial expressions as they swallowed each tablet. Following administration, an internal inspection of the mouth was conducted to identify any residue or non-swallowed tablet. Participants completed a questionnaire about the acceptability of each tablet. For analysis participants were stratified by age: 4–8 and 9–12 years.

Results 55 participants were recruited to the study, 30 children were in the younger group, of which 23% had taken a tablet before. 84% of the 25 older children had previously taken a tablet. 100% of participants attempted to swallow the 6mm tablet, with 67% of younger children and all older children successfully swallowing the tablet. All participants in the older group attempted to swallow the 8 mm and 10 mm tablet with 100% successfully swallowing the 8 mm and 96% successfully swallowing the 10 mm tablet. 77% of younger children attempted to swallow the 8 mm tablet, with 91% succeeding. 70% of younger children attempted the 10mm tablet, with 95% succeeding.

Conclusion This study demonstrates that tablets of 6mm, 8mm and 10mm are potentially an acceptable formulation for children aged 4–12 years.

REFERENCES

Disclosure(s) Nothing to disclose

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3D PRINTED POLYETHYLENE OXIDE ORAL DOSES WITH INNOVATIVE ‘RADIATOR-LIKE’ DESIGN: IMPACT OF MOLECULAR WEIGHT ON MECHANICAL AND RHEOLOGICAL PROPERTIES AND DRUG RELEASE

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Background It can be challenging to administer medicines to children and young people (CYP); due to the lack of available age-appropriate formulations. Developing medicines that are acceptable to CYP has the potential to improve treatment outcomes. Acceptability has been defined as “an overall ability of the patient and caregiver (defined as ‘user’) to use a medicinal product as intended”. There is limited evidence for the acceptability of tablets in CYP. This feasibility study aimed to investigate the swallowability and acceptability of different sized placebo tablets in CYP aged 4–12.

Method Participants were asked to swallow three different sized placebo tablets; 6 mm, 8 mm and 10 mm, smallest to largest. Both healthy children and NHS patients were recruited. The researcher observed and recorded children’s facial expressions as they swallowed each tablet. Following administration, an internal inspection of the mouth was conducted to identify any residue or non-swallowed tablet. Participants completed a questionnaire about the acceptability of each tablet. For analysis participants were stratified by age: 4–8 and 9–12 years.

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Conclusion This study demonstrates that tablets of 6mm, 8mm and 10mm are potentially an acceptable formulation for children aged 4–12 years.

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