Assessing the Harmonising Outcome Measures for Eczema (HOME) Core Outcome Set using the WHO International Clinical Trials Registry Platform

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Assessing the uptake of the eczema core outcomes and measurement instruments

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The HOME (Harmonising Outcome Measures for Eczema) initiative has recommended core outcome domains and corresponding instruments that should be measured and reported in all trials of atopic eczema treatments. The impact of these recommendations was not known with no formal quantification of their uptake in trials. The study provides quantitative results of the uptake of recommended

domains and corresponding instruments. Assessment has shown uptake has increased since the recommendation, but that there is still room for improvement.

The Harmonising Outcome Measures for Eczema (HOME) initiative has recommended a Core Outcome Set (COS) for atopic eczema clinical trials[1]. Adherence to this COS in future clinical trials of atopic eczema treatments will ensure outcomes are measured and reported consistently, thus allowing direct comparison and minimising bias[2]. The COS consists of domains (*what* should be measured) and instruments (*how* to measure it). In 2011 four core domains were agreed i) clinician-reported signs, ii) patient-reported symptoms, iii) dermatology-specific quality of life (QoL) and iv) long-term control. EASI (Eczema Area and Severity Index, 2013) and POEM (Patient Oriented Eczema Measure, 2015) are the agreed instruments for signs and symptoms, respectively. EASI combines the severity of the signs of eczema with the extent to which the body is affected[3], and POEM is a seven-item questionnaire that captures the frequency of symptoms of eczema experienced over the previous week[4]. Using the WHO International Clinical Trials Registry Platform (ICTRP), a network of international clinical trials registers, we sought to quantify uptake of the HOME core outcomes in clinical trials over time.

We included Phase III/IV treatment trials involving adults and/or children with atopic eczema registered within the WHO ICTRP between 24th January 2005 and 16th June 2018. We excluded trials of interventions for primary eczema prevention and those that never commenced. We independently screened records for eligibility (CMcW and RV) and extracted data for signs, symptoms and skin-related QoL domains. The long-term control domain was excluded because the HOME group had not defined this domain when we conducted our review. At the instrument level, EASI and POEM uptake was explored for clinician-reported signs and patient-reported symptoms, respectively. To assess change over time, trials were ordered by registration date and divided into five-year blocks, from which the percentage of trials reporting the COS over the previous five-year period was calculated (figure 1).

177/241 eligible records were identified. The included trials were registered in ten different trial registries, with 122/177 registered on ClinicalTrials.gov (69%). 120/177 were registered prospectively (68%), 122/177 were industry-sponsored (69%) and 111/177 were multi-centre trials (63%). The median sample size was 150 (interquartile range 53-375). Trial participants comprised adults only (54/177; 31%), children only (72/177; 41%) and adults and children (51/177; 29%). The average overall collection of the COS (signs, symptoms and QoL) from 2005-2018 was 25% (45/177), increasing to 33% (4/12) in the year 2018. EASI and POEM collection also increased, in 2018 they were used in 92% (11/12) and 17% (2/12) of trials respectively (see figure 1).

We found an increase in the proportion of atopic eczema treatment trials that included the recommended domains of signs, symptoms and dermatology-specific QoL, with uptake of the specific instruments of EASI and POEM. The overall increase in patient-reported symptoms and QoL could reflect increasing recognition of the importance of patient-reported outcomes in trials. Uptake of the QoL domain has remained low, it is worth noting that QoL instruments were recommended in 2019, after our data collection had taken place.

The inclusion of core domains in atopic eczema trials was already increasing at the time of the initial HOME domain recommendations in 2012. This may be because the eDelphi consensus on domains published in 2010 encouraged their inclusion even before the HOME consensus publication in 2012[5].

Whilst uptake of a COS and associated instruments is a step forward, it is not, by itself, sufficient. Unless domains and instruments are measured at comparable time points and data presented in a suitable format for meta-analysis, difficulties in synthesising data will remain. HOME have begun to address this by recommending that all trials, for each primary outcome, report mean and standard deviation at baseline and end of treatment as a minimum[6].

In summary, we present a systematic assessment of the uptake of the HOME COS. The published COS and instruments, agreed by a consensus methodology encompassing all stakeholders in the decision-making process, appears to have supported adoption of the HOME recommendations by the research community. Other COS development groups should be encouraged by these findings. Further work is needed by funders, journal editors and systematic reviewers to promote and mandate use of COSs.

Declarations

The initial results regarding uptake were presented as a poster at the COMET (Core Outcome Measures in Effectiveness Trials) conference November 2018, Amsterdam.

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