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Adolescent participation in HTA: the identification of appropriate proxies for adolescent user needs of medical devices

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Background & Objectives

The use of proxy users by industry is useful for both health technology design and assessment.

Adolescents are a key group who frequently suffer from under-representation: 'their' input is often largely provided by proxies.

Adolescents as a specific user group are known to be poor compliers with medical treatment recommendations.

Relevant proxies for adolescent users of medical devices currently include; healthy adolescents, parents, carers and a variety of clinical staff.

There can be long term economic benefit to medical device manufacturers when technology adequately meets the needs of younger users.

The aim of this study was to investigate the opinions of healthy adolescent participants on the design of a number of current medical devices

Methods

What do teenagers think of current medical device design?

Methods to target the inclusion of adolescents in medical device R&D.

How can we compare data from adolescent users with proxy user data?

Workshop method and activity interviews developed. Designed to be appropriate and engaging for teenage participants.

AMDAT tool developed to provide a data capture technique to enable direct comparison of data from adolescent and proxy users.

Medical devices that meet the requirements and needs of adolescents (identified through the involvement of real users and, where appropriate, proxy users) will help address the issue of poor compliance and improve long term health outcomes.

Workshop

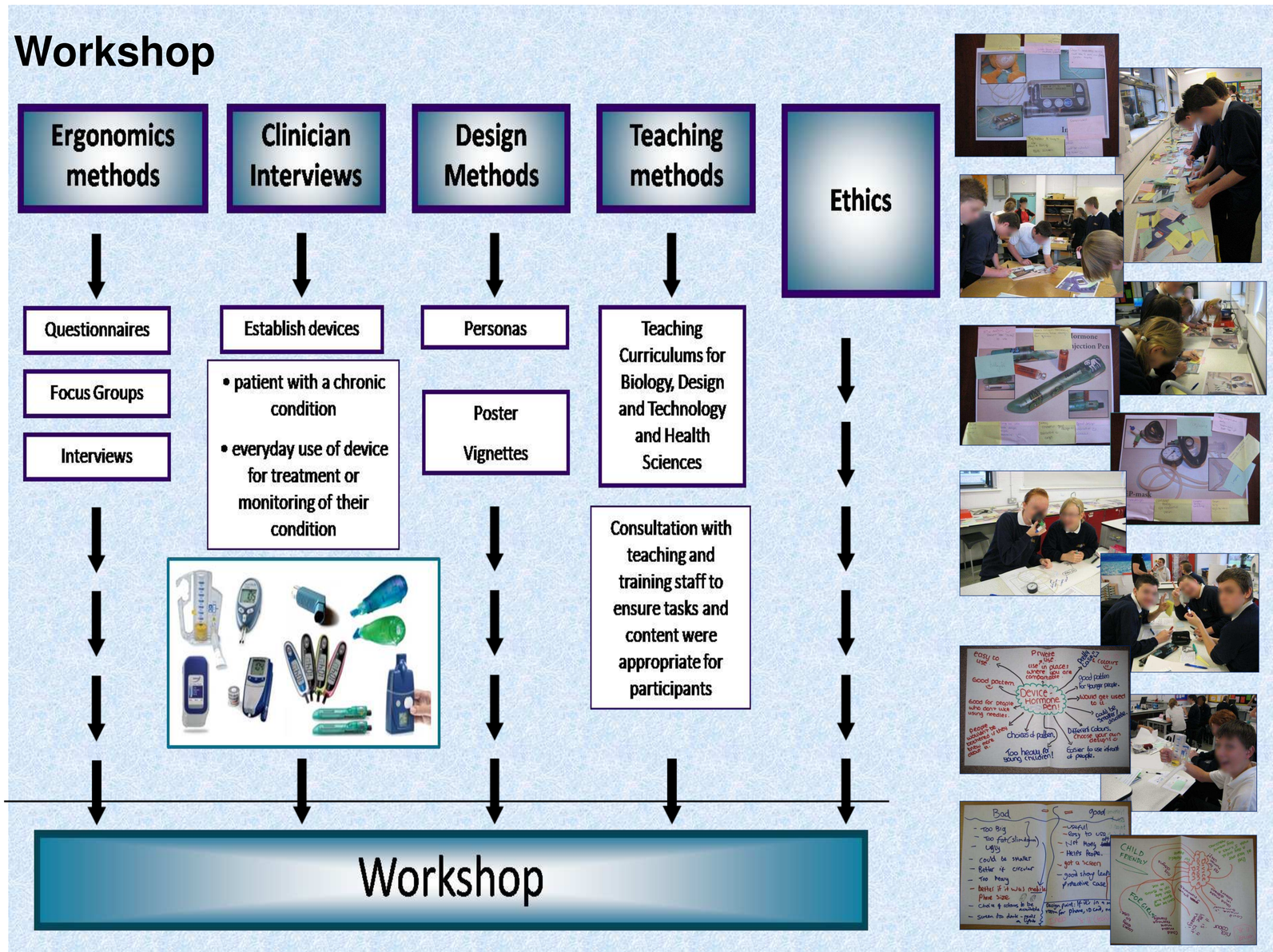

Fig 1. Workshop development diagram

AMDAT (Adolescent Medical Device Assessment Tool)

Triangulation of literature review data, interview data from clinicians and adults working with children, and workshop data with healthy adolescents, helped to identify characteristics of adolescent user needs (Figure 2).

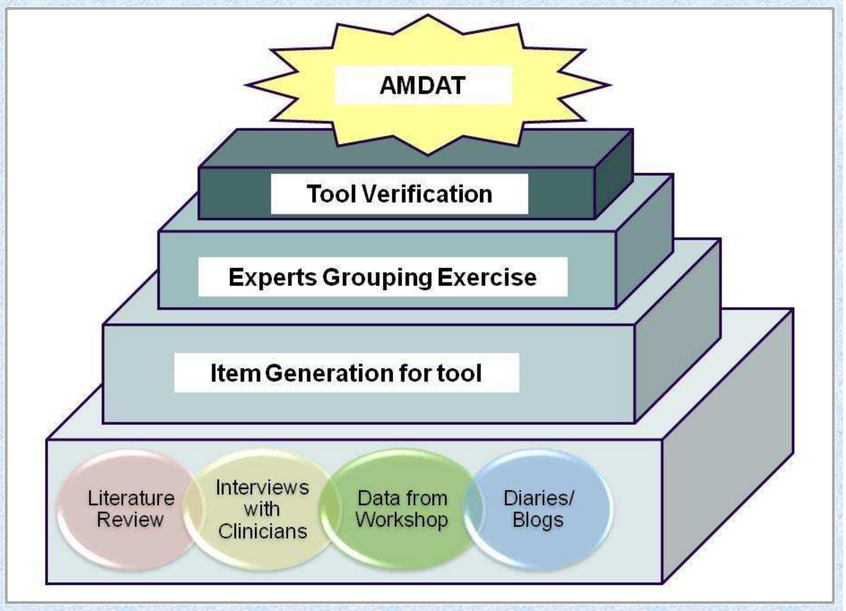

Fig 2. AMDAT development pyramid

Excluding clinical effectiveness, six heuristics of user needs were identified; Portability and Practicality, Social Acceptance, Maintenance, Ease of Use, Aesthetics and Adherence to regular and correct use.

Figure. 3 presents an output from AMDAT, demonstrating how real user and proxy views can be directly compared using the heuristic categories. This output will enable manufacturers to decide if proxy user input adequately represents the views of adolescent users.

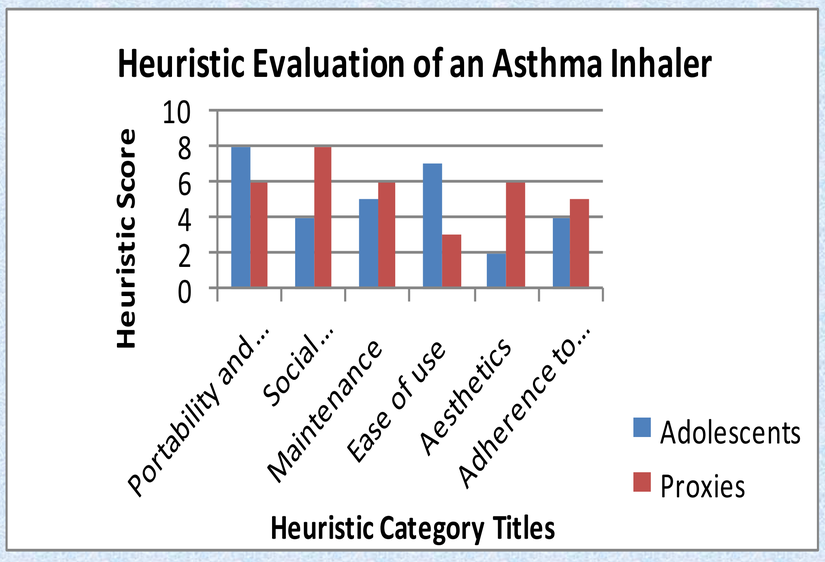

Fig 3. AMDAT example output

Conclusions

Although the use of 'real' users is the gold standard, it is not always feasible for industry to involve adolescent users in device design or assessment processes. When proxies have to be utilised, the next best solution is to have a thorough understanding of which proxy user groups provide the most valid information.
By utilising different methods to understand proxy users and include real users in the design process, manufacturers of medical devices can improve their capture of user requirements; producing devices which are designed more inclusively for younger users.

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