

eHealth Tools for Asthma Care in Adolescents



Asthma is a chronic lung disease prevalent among adolescents, yet most interventions have focused on the care of child and adult sufferers. A new systematic review (van Buul et al. 2020) has assessed effectiveness of the few mobile apps/online tools developed for asthma self-management in adolescents who, as noted by the review team, have different needs compared to adult or paediatric patients.

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The review team – composed of researchers from the Netherlands, UK and China – have found that such eHealth tools are safe and effective in helping adolescents manage and control asthma, specifically in improving adherence to medications and healthcare visits.

"Adolescents found the applications and websites easy to use and were positive about eHealth," the reviewers point out. "Therefore, physicians can consider using eHealth in daily practice in this patient group, as stand-alone intervention or as blended care."

Data from a 2014 UK national study indicated that two-thirds of asthma deaths could have been prevented if patients, for example, had been provided with adequate personalised asthma action plans.

Adolescents represent a special group of patients as they undergo developmental transitions in cognition, knowledge, behaviour and identity. These transitions or changes could affect the cognitive and behavioural skills that are needed for asthma self-management, according to the review team, who suggest that adolescents with asthma should be consulted in the design and creation of eHealth tools for use by this patient population. That's a "promising route" to ensure development of acceptable and effective eHealth interventions, the review team explains.

In all, 25 empirical (quantitative and qualitative) studies – representing 19 eHealth interventions – were included in this systematic review. Four of these interventions were blended (ie, combining eHealth and face-to-face contact), while seven were theory-based. The most included features in the eHealth apps/tools, according to the reviewers, are self-monitoring, a reminder function and sharing information with healthcare providers.

Based on their findings, the review team says eHealth interventions can be further improved by tailoring them to adolescents' needs, such as gamification, customisation and the possibility to share information with others.

Also, as noted by the reviewers, adolescents are not wont to use eHealth tools without the advice or encouragement of their doctors. "As such, the use of eHealth interventions that improve self-management should be stimulated by physicians, who should, in turn, be motivated themselves to prescribe or advise eHealth interventions," the reviewers wrote.

Source: [ScienceDirect](#)

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Published on : Mon, 17 Aug 2020